BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

BP PRODUCTS NORTH AMERICA INC.,	)	
Petitioner,	)	PCB 25-061
	)	Permit Appeal
v.	)	1191150001—Madison County
	)	ILD980700967
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	Log No. B-147R2
	)	RCRA Administrative Record—24D
Respondent.	)	

NOTICE OF FILING

TO: Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield IL 62794-9276
epa.dlc@illinois.gov
Melanie.Jarvis@Illinois.gov

Clerk
Illinois Pollution Control Board
100 West Randolph Street, Suite 11-500
Chicago, Illinois 60601-3218

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 RCRA Permit, a copy of which is herewith served upon you.

Dated: September 8, 2025

Respectfully submitted,

BP PRODUCTS NORTH AMERICA INC.

By: /s/ Alexander J. Bandza

BARNES & THORNBURG LLP
One N. Wacker Drive, Suite 4400
Chicago, IL 60606-2833
(312) 357-1313
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Attorney for BP Products North America Inc.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

BP PRODUCTS NORTH AMERICA INC.,	)	
Petitioner,	)	PCB 25-061
	)	Permit Appeal
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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	Log No. B-147R2
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Respondent.	)	

BP PRODUCTS NORTH AMERICA INC.'s PETITION TO APPEAL ILLINOIS EPA's ISSUANCE OF A 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 the remedial activities at the Wood River, Illinois, Main Plant Property ("**Property**").[1]

In support of this Petition, BPPNA respectfully states as follows:[2]

I. RECORD OF APPEAL

1. Illinois EPA issued the draft Permit on September 25, 2024 ("**Draft**"). (**Ex. A.**)

2. BPPNA provided its comments to the Draft on November 13, 2024. (**Ex. B.**)

3. Illinois EPA issued the Permit on April 29, 2025.[3] (**Ex. C.**)

[1] BPPNA and Illinois EPA are individually a "Party" and collectively, the "Parties."

[2] BPPNA reserves its rights to further amend this Petition based on subsequent filings in this matter.

[3] In this document, before issuing the final Permit language, Illinois EPA set forth a Response to Comments ("**RTC**").

II. THIS APPEAL IS TIMELY FILED

4. On May 13, 2025, the Parties timely filed a 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 June 5, 2025, the Board granted this extension request so as to allow BPPNA up to and until September 8, 2025 to timely file an appeal. (*See* PCB 25-61 Order (June 5, 2025).) This appeal is timely filed.

III. BACKGROUND

6. An oil refinery operated at the Property from 1908 to 1981, and a portion of the Property was used to produce petroleum additives from 1957 to 1996. (Ex. A, Fact Sheet, at 1-2.)

7. BPPNA has completed corrective action at two areas in the northeast comer of the Property, and, with Illinois EPA's concurrence, donated two parcels to the City of Wood River: (1) a 9.56-acre parcel, which extends from the ground surface to a horizontal plane approximately 23 feet below ground surface (ft-bgs) at elevation of 418 feet above mean sea level (ft above MSL); and (2) a 7.5-acre parcel, which extends from the ground surface to a horizontal plane approximately 15 ft-bgs at elevation of 428 ft above MSL (collectively, the "**Donated Parcels**"). BPPNA continues to own both subsurface areas below 15 and 23 ft-bgs. (*Id.* at 2.)

8. In 2016, Kinder Morgan Phoenix Holdings, LLC purchased an approximately 118.25-acre three-dimensional parcel of the Property above elevation 408 ft above MSL. (*Id.*)

9. The Property is being remediated and has been divided into nineteen Land Reuse Areas ("**Areas**") which will be investigated and remediated on an Area-by-Area basis. (*Id.*)

10. Five of these Areas are subject to Environmental Land Use Controls ("**ELUCs**") and associated "No Further Action" ("**NFA**") determinations (collectively, the "**NFA Parcels**"):

a. Area 1 is subject to an ELUC recorded on January 23, 2003 (**Ex. D**);

b. Area 15 is subject to an ELUC recorded on October 1, 2004 (**Ex. E**);

c. Area 4 is subject to an ELUC recorded on July 13, 2005 (**Ex. F**);

d. Area 18 is subject to an ELUC recorded on December 12, 2015 (**Ex. G**); and

e. Area 2 is subject to an ELUC recorded on June 5, 2017 (**Ex. H**).

IV. ARGUMENT

11. BPPNA sets forth its argument below in two 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 legal perspective, in the Permit.

A. Relevant Statutory Background

12. 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).

13. 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).

14. In response to the Draft, 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).

15. 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).

16. 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. Legally Inappropriate Conditions in the Permit

1. Condition II.A.6

17. The applicable Permit extract is as follows:

> "As 35 IAC Part 742 was amended to include indoor inhalation exposure route, all SWMUs which obtained no further action for corrective action as listed in Condition II.B.1[4] must be evaluated for the indoor inhalation pathway and meet all updated remediation standards to meet the requirements of 35 IAC Part 742."

18. BPPNA commented on this provision in the Draft. (*See* RTC at 5.)

19. BPPNA completed all regulatory requirements to obtain NFA determinations on the NFA Parcels that were in place when Illinois EPA rendered its NFA determinations.

20. The Illinois EPA's requirement now that BPPNA undertake additional work on areas that, by the Agency's own terms, required "No Further Action," is unfair and is plainly unconstitutional under well-settled Illinois law.

21. Illinois EPA's requirements that came into effect after NFA letters and ELUCs were issued for the NFA Parcels constitute impermissible retroactive lawmaking and application, violate BPPNA's due process rights, and contravene Illinois law against *ex post facto* laws.

[4] Areas 1-19 are listed in Condition II.B.1.

2. Condition II.A.15

22. The applicable Permit extract is as follows:

> "Based on the results of the investigative efforts, additional investigation and remediation, as necessary, may be required at any SWMUs or AOC to protect human health and the environment to meet the remedial objectives in accordance with 35 IAC Part 742."

23. BPPNA commented on this provision in the Draft. (*See* RTC at 5.)

24. BPPNA completed all regulatory requirements to obtain NFA determinations on the NFA Parcels that were in place when Illinois EPA rendered its NFA determinations.

25. The Illinois EPA's requirement now that BPPNA undertake additional work on areas that, by the Agency's own terms, required "No Further Action," is unfair and is plainly unconstitutional under well-settled Illinois law.

26. Illinois EPA's requirements that came into effect after NFA letters and ELUCs were issued for the NFA Parcels constitute impermissible retroactive lawmaking and application, violate BPPNA's due process rights, and contravene Illinois law against *ex post facto* laws.

3. Condition II.D.1.b

27. The applicable Permit extract is as follows:

> "The Permittee must meet the applicable indoor inhalation remediation objectives both on-site and the impacted off-site properties in accordance with 35 IAC Part 742. . . . Additional evaluation for the indoor inhalation exposure route requirements must be met for all SWMUs and PRSs [Product Release Sites] listed in Condition II.B."

28. BPPNA commented on this provision in the Draft. (*See* RTC at 10.)

29. BPPNA completed all regulatory requirements to obtain NFA determinations on the NFA Parcels that were in place when Illinois EPA rendered its NFA determinations.

30. The Illinois EPA's requirement now that BPPNA undertake additional work on areas that, by the Agency's own terms, required "No Further Action," is unfair and is plainly

unconstitutional under well-settled Illinois law.

31. Illinois EPA's requirements that came into effect after NFA letters and ELUCs were issued for the NFA Parcels constitute impermissible retroactive lawmaking and application, violate BPPNA's due process rights, and contravene Illinois law against *ex post facto* laws.

WHEREFORE, for the reasons stated above, BPPNA requests that the Board: (1) order Illinois EPA to withdraw its requirements that BPPNA undertake additional work on the NFA Parcels, which are areas that, by the Agency's own terms, required "No Further Action," as described above; and (2) order any other relief that is just and proper.

Dated: September 8, 2025

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
Chicago, IL 60606-2833
(312) 357-1313
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 RCRA Permit, by e-mail upon the Illinois Environmental Protection Agency at the e-mail address of epa.dlc@illinois.gov and Melanie.Jarvis@Illinois.gov.
- That my e-mail address is abandza@btlaw.com.
- That the number of pages in the e-mail transmission is 7.
- That the e-mail transmission took place before 5:00 p.m. on the date of Sept. 8, 2025.

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

EXHIBIT A

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397
JB PRITZKER, GOVERNOR JAMES JENNINGS, ACTING DIRECTOR

217/524-3301

Certified Mail
Return Receipt Requested

SEP 25 2024

9589 0710 5270 0389 7094 92

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

Re: 1191150001 -- Madison County
BP Products North American Inc./Main Plant
ILD980700967
Log No. B-147R2
RCRA Administrative Record – 24D
Permit Draft

Dear Ms. Knapp:

Attached is a draft renewed Resource Conservation and Recovery Act (RCRA) corrective action permit (draft renewed RCRA permit) and fact sheet for the above-referenced facility. The draft renewed RCRA 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 (IAC) Section 705.144.

Under the provisions of 35 IAC 705.141(d), the draft renewed RCRA 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 renewed RCRA permit, fact sheet, and renewal application are available for review at the Wood River Public Library, 326 E. Ferguson Avenue, Wood River, Illinois and copies of the draft renewed RCRA permit and fact sheet are available 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 November 14, 2024.

During the comment period, the applicant or any interested party may submit comments to the Illinois EPA on the draft renewed RCRA permit. At the close of the comment period, the Illinois EPA will prepare a response to significant comments. The physical address of the Illinois EPA is scheduled to change in the coming months, but the Post Office Box will remain the same. Any comments on the draft renewed RCRA permit should include the Illinois EPA Post Office Box and may be submitted to:

Sarah Brubaker, Public Involvement Coordinator (#5)
Illinois Environmental Protection Agency
1021 N. Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
Sarah.Brubaker@illinois.gov

The Illinois EPA will issue a final renewed RCRA 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 renewed RCRA permit, please contact Amy Butler, P.G. at 217/558-4716. If you have questions regarding the other aspects of this permit, please contact Omar Faruk at 217/557-9764.

Sincerely,

Joshua L. Rhoades, P.G.
Permit Section Manager
Bureau of Land

JLR:OF:1191150001-RCRA-B147R2-Draft.docx
OF TNH AMB
Attachment: Fact Sheet
Draft Renewed RCRA Corrective Action Permit

cc: Norberto Gonzalez, U.S. EPA – Region V
Michelle Knapp, BP Products North America, Inc
Michael Hoffman, WSP USA Environment & Infrastructure, Inc
Starlet S. Wright, Sovereign Consulting, Inc.

FACT SHEET
for
DRAFT RENEWED RCRA CORRECTIVE ACTION PERMIT
BP Products North American Inc./Main Plant
Madison, Illinois
STATE ID NO. 1191150001
FEDERAL ID NO. ILD980700967
RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

This fact sheet has been prepared pursuant to the requirements of Title 35 Illinois Administrative Code (IAC) 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 Resource Conservation and Recovery Act (RCRA) corrective action permit (draft renewed RCRA permit). This draft renewed RCRA permit requires BP Main Plant (also referred to as the facility) to continue to provide corrective action for twenty-one (21) solid waste management units (SWMUs) and eight (8) Product Release Sites (PRSs) at this site. The draft renewed RCRA permit also redefines the permitted facility boundary subject to this RCRA permit. 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 renewed RCRA permit for BP Main Plant contains all of the standard conditions required by 35 IAC Parts 702, 703 and 724; and the applicable conditions of 35 IAC 724.201 and Section 3004(u) of RCRA for the completion of corrective action activities at the subject facility.

The BP Main Plant is an existing facility that has been under a RCRA permit (Log No. B-147) since first issued on September 30, 1993. A renewed RCRA permit was issued on March 4, 2011 (Log No. B-147R) and most recently was modified on May 29, 2018 (B-147R-M-17 and M-18). The March 4, 2011 renewed RCRA permit approved closure by removal for the former regulated units (South Flare Pit and North Cell of Spray Pond 1); therefore, the renewed RCRA permit was issued as a corrective action permit and post-closure care was no longer required. Currently there are no hazardous waste management units being operated or under post-closure at this facility. This draft renewed RCRA permit (Log No. B-147R2) contains requirements similar to those set forth in the original permit and previous renewed permit, updated as appropriate to reflect the current status of the facility and the applicable regulations.

II. DESCRIPTION OF FACILITY

1. General

The BP 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. BP operated a storage and distribution facility at the Main Plant Property for gasoline and petroleum distillates until 2016.

BP has completed the soil-portion of corrective action at two areas in the northeast corner of the site, and, with a concurrence from the Illinois EPA, donated the following two (2) parcels to the City of Wood River: (1) a 9.56-acre parcel, which extends from the ground surface to a horizontal plane approximately 23 feet below ground surface (ft-bgs) at elevation of 418 feet above mean sea level (ft above MSL); and (2) a 7.5-acre parcel, which extends from the ground surface to a horizontal plane approximately 15 ft-bgs at elevation of 428 ft above MSL. Both subsurface areas below 15 and 23 ft-bgs will remain under BP's ownership and are included within the permitted facility boundary.

In 2016, Kinder Morgan Phoenix Holdings, LLC (KMPH) purchased an approximate 118.25-acre three-dimensional parcel above elevation 408 ft above MSL of the BP Main Plant for the purpose of operating a storage and distribution facility for gasoline and petroleum distillates. This parcel of the BP Main Plant, now under the ownership of KMPH, has already been issued a separate RCRA Corrective Action permit (Log No. B-214 under the Illinois EPA site number: 1190505061)).

While both the BP 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 BP Main Plant is being remediated and redeveloped for industrial and commercial use. It has been divided into nineteen (19) Land Reuse Areas which will be investigated, remediated, reported on, and redeveloped on an Area-by-Area basis.

2. Site Description and Location

The BP Main Plant Property is located at Township 5 North, Range 9 West of the Third Principal Meridian, where it occupies all or parts of Sections 27, 28, 34, and the northeast corner of Section 33. The mailing address of the BP Main Plant Property is:

BP Products North America Inc./Main Plant
301 Evans Avenue, Post Office Box 167
Wood River, Illinois 62095

Most of the BP Main Plant Property (approximately the northern-most 80 percent) is in the City of Wood River. The remainder is located within the Village of Hartford. A site location map is provided as Attachment 1 to this fact sheet.

III. HAZARDOUS WASTE MANAGEMENT ACTIVITIES

There are currently no hazardous waste management units (HWMUs) being operated or

under post-closure care at the BP Main Plant. Two HWMUs at the BP Main Plant, the North Cell of Spray Pond 1 (NC-SP1), a surface impoundment that received reactive sulfide material (U189); and the South Flare Pit (SFP), the location of a former underground storage tank that contained various non-hazardous wastes, as well as wastes bearing hazardous waste characteristics (D001, D002, D003, D008, U189, and U122) have been certified as closed by removal.

In the late 1990s, and 2000s, BP conducted further investigation and remediation of the NC-SP1 and SFP HWMUs. Closure by removal reports were submitted for NC-SP1 in November 2002, and for the SFP in April 2005. A letter from the Illinois EPA dated January 7, 2008 granted approval for closure by removal of the NC-SP1 pending a Class 3 permit modification request to formally remove the unit from the Part B post-closure permit. This letter also granted approval for the soil-portion of the closure by removal determination for the SFP and requested further work on the groundwater portion for this unit. Subsequently, BP conducted this additional work, and based upon the Illinois EPA's review of the results of this work, the SFP was approved for closure by removal, subject to certain conditions.

IV. CORRECTIVE ACTION ACTIVITIES

A. Solid Waste Management Units (SWMUs)

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

The Illinois EPA issued a RCRA permit (Log No. B-147) on September 30, 1993 to Amoco Oil Company (now BP Main Plant) in Wood River, Illinois, which included, among other things, requirements to conduct corrective action on twenty-one (21) SWMUs and nine (9) PRSs. On, June 21, 2002, the Illinois EPA approved a plan to expand the scope of the corrective action program to include all recognized environmental conditions (RECs) at the facility. To accomplish this, the facility was divided into nineteen (19) Land Reuse Areas so that corrective action, and potential redevelopment could be addressed on an Area-by-Area basis. As the approximate 118.25-acre KMPH parcel (at and above 408 ft above MSL), which contained one of the PRSs (PRS 7), was removed from the facility subject to this permit, the number of PRSs requiring corrective action under this permit is now eight (8), while groundwater throughout the original permitted boundaries of the facility is still subject to corrective action. The requirements to addresses corrective action at these areas are included in Section II of this draft renewed RCRA permit.

B. Groundwater Corrective Action

Section II of this draft renewed RCRA permit also identifies groundwater corrective action requirements that must be completed as outlined in Section III. Hazardous constituents associated with historical activities at BP Main Plant have been detected

in the groundwater across the site in exceedance of the groundwater quality standards established in 35 IAC Part 620. Therefore, a corrective action program for groundwater meeting the requirements of 35 IAC 724.201 must be implemented at the facility. In addition to the corrective action necessary to treat or remove hazardous constituents released to groundwater, this draft renewed RCRA permit also requires the Permittee to implement a corrective action program for the groundwater present in the uppermost aquifer beneath the facility, and off-site as necessary.

The major components of the Groundwater Corrective Action Program in Section III include: (1) a Groundwater Management Zone (GMZ); (2) semi-annual groundwater monitoring through a network of wells installed both on-site and off-site; (3) removal and treatment of contaminated groundwater through hydraulic recovery and bioremediation systems; (4) control of the contaminated groundwater within the uppermost aquifer through a network of pumping wells (Cone of Depression (COD) wells); and (5) treatment and reduction of free phase and residual light nonaqueous phase liquid (LNAPL) via the bioremediation treatment systems. Groundwater is routinely sampled semi-annually for refinery-related constituents based on historical activities at the site, and results are reported semi-annually.

There are shallow fine-grained materials overlying much of the uppermost aquifer at this facility. The uppermost aquifer is a sand and gravel aquifer located approximately 30 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." The groundwater of the uppermost aquifer is classified as a Class I groundwater.

a. Parameters

Parameters monitored at the site and the respective concentration limits to be met are listed below. The following hazardous constituents and their concentration limits comprise the groundwater protection standards:

Hazardous Constituents	**Storet No.**	**Concentration Limits (mg/L)**
Metals		
Antimony	01097	0.006
Arsenic	01002	0.010
Barium	01007	2.0
Beryllium	01012	0.004
Cadmium	01027	0.005
Chromium	01034	0.1
Cobalt	01037	1.0
Lead	01051	0.0075
Mercury	71900	0.002
Nickel	01067	0.1
Selenium	01147	0.05
Vanadium	01087	0.049

Hazardous Constituents	Storet No.	Concentration Limits (mg/L)
VOCs		
1,2-Dichloroethane	34531	0.005
1,3-Dichlorobenzene	34561	0.0002
1,4-Dichlorobenzene	34571	0.075
2-Butanone (MEK)	81595	4.2
Benzene	34030	0.005
Carbon Disulfide	77041	0.7
Chlorobenzene	34301	0.1
Chloroform	32106	0.0002
Ethylbenzene	78113	0.7
Toluene	34010	1.0
Total Xylenes	34020	10.0
Methyl Tertiary-Butyl Ether	46491	0.07
Styrene	77128	0.1
SVOCs		
2,4-Dimethylphenol	34606	0.14
2,4-Dinitrophenol	34616	0.014
2-Methylphenol (o-cresol)	77152	0.35
4-Methylphenol (p-cresol)	77146	0.035
4-Nitrophenol	34646	--
Anthracene	34220	2.1
Benzo(a)anthracene	34526	0.00013
Benzo(a)pyrene	34247	0.0002
Benzo(b)fluoranthene	34230	0.00018
Benzo(k)fluoranthene	34242	0.00017
Bis(2-ethylhexyl) phthalate	39100	0.006
Butyl benzyl phthalate	34292	1.4
Chrysene	34320	0.0015
Dibenzo(a,h)anthracene	34556	0.0003
Diethyl phthalate	34336	5.6
Dimethyl phthalate	34341	--
Di-n-butyl phthalate	39110	0.7
Di-n-octyl phthalate	34596	0.14
Fluoranthene	34376	0.28
Naphthalene	34696	0.14
Phenanthrene	34461	0.21
Phenol	34466	0.1
Pyrene	34469	0.21
Pyridine	77045	0.007

-- Not available

C. Standard Permit Conditions

Section V of the draft renewed RCRA permit contains standard conditions that are regulatory requirements of 35 IAC Parts 702, 703 and 724. The standard conditions are of a general nature and are applicable to all hazardous waste management facilities regulated pursuant to an Illinois EPA RCRA permit. The standard conditions include the effectiveness of the permit, permit actions, permit severability, permit expiration, monitoring, retention of records, permit transfer, and compliance schedules.

V. CONSIDERED PERMIT ACTIONS OTHER THAN RCRA

A. Air

The air emissions from this site are regulated under RCRA, the Clean Air Act (CAA), the Illinois Environmental Protection Act (Act) and State regulations at Title 35: Environmental Protection, Subtitle B: Air Pollution. Under these regulations, it is required to obtain a permit to install or operate any process which is, or may be, a source of air pollutants. The only air emission source currently present at the facility is the groundwater remediation and treatment system. This system operates under a permit from Illinois EPA's Bureau of Air (Title V Air Permit No. 95060048).

B. Water

Discharge of any waste 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 Act. The groundwater remediation and treatment system at the facility has a permit from Illinois EPA's Bureau of Water (Permit No. 2020-EP-64994).

VI. PROCEDURES FOR REACHING A FINAL DECISION

Pursuant to 35 IAC 705.162(a)(2), the public is given at least forty-five (45) days to review the renewal application and comment on the draft renewed RCRA permit conditions prior to Illinois EPA taking any final permitting action on the renewal application for this draft renewed RCRA permit. The comment period will begin on September 30, 2024, the date of publication of the public notice in a major local newspaper of general circulation. The comment period will end on November 14, 2024.

Copies of the draft renewed RCRA permit, fact sheet, and renewal application, are available for review at:

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

Copies of the draft renewed RCRA permit and fact sheet are available on the Illinois EPA website.

The administrative record contains the renewal application, draft renewed RCRA 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 Sarah Brubaker, Illinois EPA Public Involvement Coordinator, at the address listed below. The physical address of Illinois EPA is scheduled to change in the coming months, but the Post Office Box will remain the same. Any comments on the draft renewed RCRA permit should include the Illinois EPA Post Office Box.

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 renewal application and draft renewed RCRA permit. 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 renewed RCRA permit, or to request a public hearing, please contact:

Sarah Brubaker, Public Involvement Coordinator (#5)
Illinois Environmental Protection Agency
1021 N. Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
Sarah.Brubaker@illinois.gov

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 (35) days 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

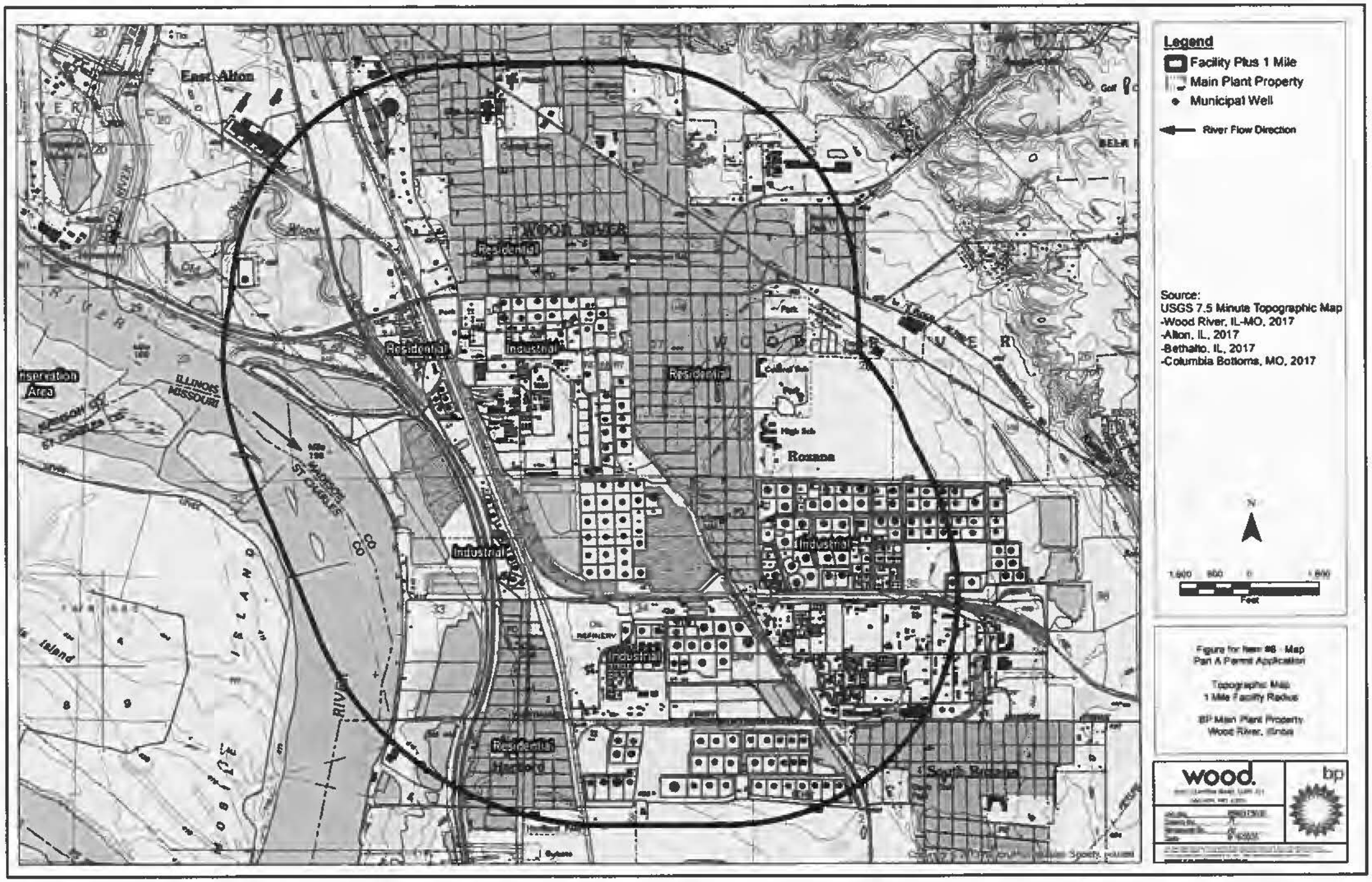
Fact Sheet

Draft Renewed RCRA Corrective Action Permit

Log No. B-147R2

ATTACHMENT 1

Site Location Map


East Alton
WOOD RIVER
Residential
Industrial
Residential
Residential
Industrial
Roxana
High Sch
Industrial
Industrial
Residential
Hartford
South Roxana
ILLINOIS
MISSOURI
RIVER
Legend
Facility Plus 1 Mile
Main Plant Property
Municipal Well
River Flow Direction
Source:
USGS 7.5 Minute Topographic Map
-Wood River, IL-MO, 2017
-Alton, IL, 2017
-Bethalto, IL, 2017
-Columbia Bottoms, MO, 2017
N
Feet
Figure for Item #8 - Map
Part A Permit Application
Topographic Map
1 Mile Facility Radius
BP Main Plant Property
Wood River, Illinois
wood.
bp

Fact Sheet

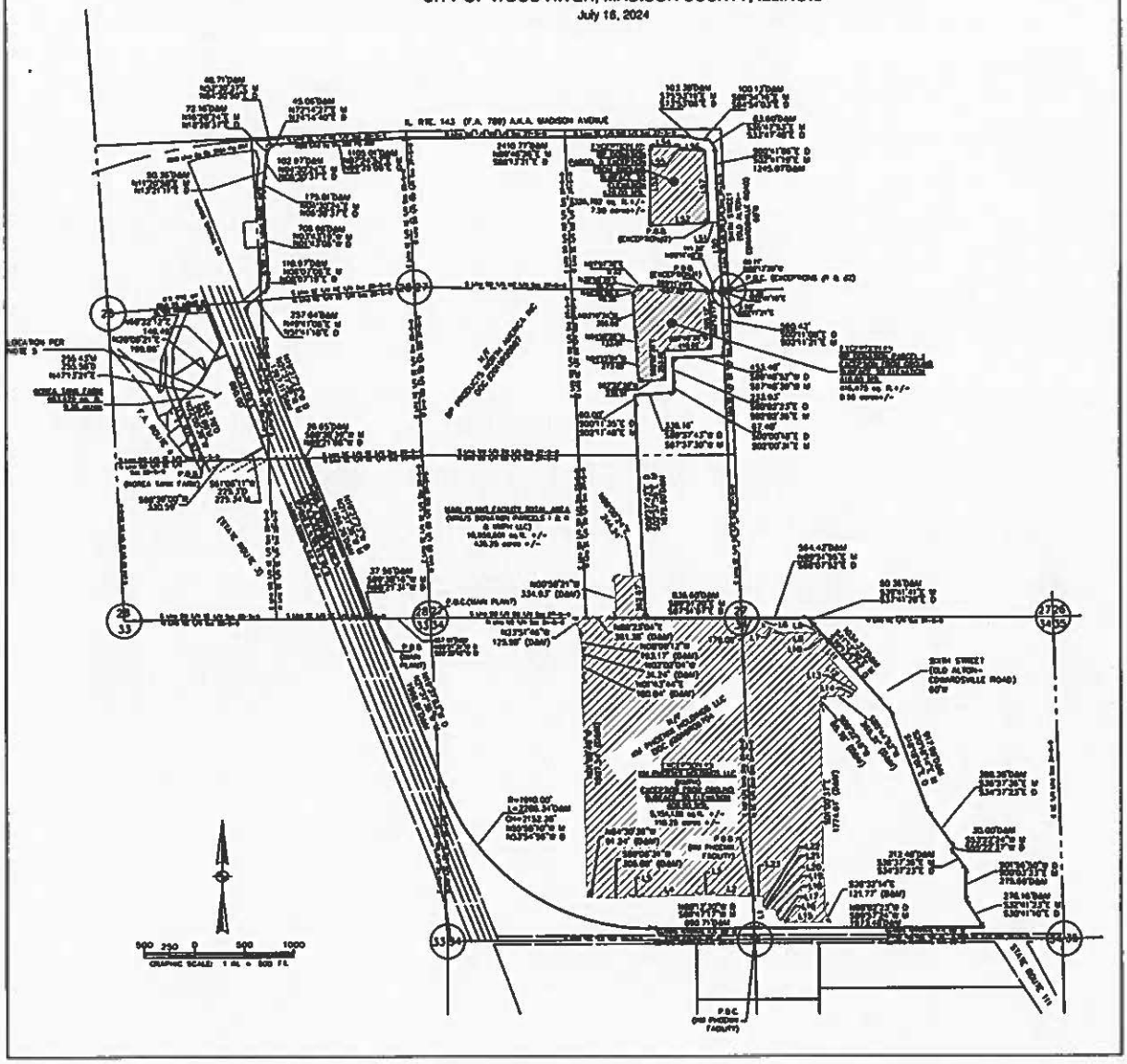
Draft Renewed RCRA Corrective Action Permit

Log No. B-147R2

ATTACHMENT 2

Site Layout Map

EXHIBIT: B.P. AMOCO MAIN PLANT A[illegible]EA TANK FARM WITH
DONATION PARCEL EXCEPTIONS PARCEL I & PARCEL II AND KI[illegible] MORGAN PHOENIX HOLDINGS, LLC EXCEPTION
BEING PART OF SECTIONS 27, 28, 33 AND 34, ALL IN TOWNSHIP 5 NORTH, RANGE 9 WEST OF THE THIRD PRINCIPAL MERIDIAN
CITY OF WOOD RIVER, MADISON COUNTY, ILLINOIS
July 16, 2024



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397
JB PRITZKER, GOVERNOR JAMES JENNINGS, ACTING DIRECTOR

RCRA CORRECTIVE ACTION PERMIT

1191150001 -- Madison County
BP Products North America, Inc./Main Plant
ILD 980700967
Log No. B-147R2
RCRA Administrative Record

Issue Date: DRAFT
Effective Date: DRAFT
Expiration 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 Resource Conservation and Recovery Act (RCRA) permit for corrective action 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:

Corrective Action: Twenty-one (21) Solid Waste Management Units (SWMUs) and eight (8) Product Release Sites (PRSs) in nineteen (19) Land Reuse Areas.
Groundwater Monitoring: Corrective action for the SWMUs and PRSs in Land Reuse Areas.

This RCRA permit consists of the conditions contained herein and those in 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 on the effective date of this RCRA 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 approved 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

Joshua L. Rhoades, P.G.
Permit Section Manager
Bureau of Land

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OF 7NH AMB

RCRA Corrective Action Permit

BP Products North America -- Main Plant Facility

Wood River, Illinois

Illinois EPA No. 1191150001

USEPA No: ILD980700967

RCRA Corrective Action Permit
BP Products North America/Main Plant

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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" (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

B. LOCATION

1. Location of the facility:

   The BP Products North America, Inc. (formerly Amoco) Main Plant facility is located at 301 Evans Avenue, Wood River, Madison County, Illinois.

2. Definition of facility covered by this Permit:

   a. The boundary of the facility subject to this permit has been modified to reflect the previous corrective action and permit decisions made under the previous permit (Log No. B-147R). The original permitted facility (approximately 570 acres) was previously parceled to remove three specific portions of land, by parceling horizontally and vertically, as described below:

      1) A 9.56-acre donated parcel which extends from the ground surface vertically downward to a subsurface horizontal plane at an elevation of 418 feet above mean sea level (ft above MSL); this plane is located approximately 23 feet below ground surface (ft-bgs). The Property Index Number (PIN) for this parcel is 19-2-08-27-14-301-003. The PIN for the parcel directly beneath the 9.56-acre donated parcel is 19-2-08-27-301-004, which is still owned by the Permittee and included in the permitted facility boundary.

      2) A 7.5-acre donated parcel which extends from the ground surface vertically downward to a subsurface horizontal plane at an elevation of 428 ft above MSL; this plane is located approximately 15 ft-bgs. The PIN for this parcel is 19-2-08-27-10-101-002. The PIN for the parcel directly beneath the

parcel is 19-2-08-27-10-101-003, which is still owned by the Permittee and included in the permitted facility boundary.

3) An approximate 118.25-acre parcel purchased by Kinder Morgan Phoenix Holdings LLC (KMPH) which only extends from ground surface vertically downward to a subsurface horizontal plane at an elevation of 408 ft above MSL, which is located approximately 25 ft-bgs. The Property Index Numbers (PINs) for the 118.25-acre KMPH parcel are:

19-1-08-27-18-301-001.001
19-1-08-34-00-000-001.004
19-1-08-34-00-000-001.005
19-1-08-34-00-000-001.006
19-1-08-34-00-000-001.007

Note that the parcel of land which lies directly beneath each of the KMPH parcels is owned by the Permittee and is a part of the permitted facility.

b. The facility which is the subject of this permit, located between the ground surface and an elevation of 428 ft above MSL, is approximately 434.69 acres in size. This is a reduction of approximately 135.31 acres from the original BP Main Plant to remove the parcels described in Conditions I.B.2.a (1) through (3).

c. The facility which is the subject of this permit, located between 418 ft above MSL and 428 ft above MSL, is approximately 442.19 acres in size. This is a reduction of approximately 7.5 acres from the original BP Main Plant to remove the parcels described in Conditions I.B.2.a (2).

d. The facility which is the subject of this permit, located between 408 ft above MSL and 418 ft above MSL, is approximately 451.75 acres in size. This is a reduction of approximately 17.06 acres from the original BP Main Plant to remove the parcels described in Conditions I.B.2.a (1) and (2).

e. The facility which is the subject of this permit, located between 408 ft above MSL and below, is approximately 570 acres in size. This is identical to the original BP Main Plant boundary.

3. Facility Maps:

The general location of the facility is shown on Figure B-1, Attachment B of this permit. The location of the solid waste management units (SWMUs), product release sites (PRSs) and Land Reuse Areas are shown on Figure B-2, Attachment B of this permit. The facility layout map is shown on Figure B-3, Attachment B of this permit.

C. DESCRIPTION OF HAZARDOUS WASTE MANAGEMENT ACTIVITIES

1. There are no regulated hazardous waste management units (HWMUs) operating or requiring closure/post-closure care under this permit at this facility. Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit. This includes the requirements for personnel training (35 IAC 724, Subpart B), preparedness and prevention (35 IAC 724, Subpart C) and contingency plan and emergency procedures (35 IAC 724, Subpart D). However, please note that through the application of other laws, regulations, and permit conditions, some of the concepts covered by these regulations may still apply to corrective action activities conducted at the site.

2. The Permittee currently proposes no corrective action activities that would subject the facility to a RCRA Remedial Action Plan Permit (RAPP). If plans change in the future such that one or more corrective action activities would subject the facility to a RCRA RAPP, the Permittee must submit a modification request to incorporate requirements for a RAPP into this permit in addition to the plans submitted as a part of a normal corrective action document, as well as certification in accordance with Section 39(i) of the Illinois Environmental Protection Act.

3. Requirements for HWMUs: NC-SP1 and SFP

   a. At the North Cell of Spray Pond 1 (NC-SP1) the closure-by-removal requirements of 35 IAC 703.159 have been met. This determination was made in the Illinois EPA's January 7, 2008 letter (Log No. B-147-CA-70) and was based upon the review of the October 17, 2007 "Supplemental Soil Investigation Report for the North Cell of Spray Pond 1" and the Illinois EPA's May 29, 2007 (Log No. B-147-M-7) letter to BP. This letter also required a Class 3 modification of the permit requesting that the NC-SP1 be removed as a regulated unit subject to the requirements of the permit. With the approval of this permit, this requirement has been considered to be met and accordingly, no further action is necessary for the NC-SP1.

   b. At the South Flare Pit (SFP), Condition 2 of the Illinois EPA's January 7, 2008 letter (Log No. B-147-CA-70) stated that the review of soil data contained in the October 17, 2007 "Supplemental Soil Investigation Report" determined that the closure-by-removal demonstration had been met for soil and no further action was needed for soil:

      (1) With the implementation of a Health and Safety Plan for Construction Workers in the area of the SFP shown within the hyphenated line by Attachment 1 of the January 7, 2008 letter;

      (2) With the eventual implementation of an Environmental Land use Control (ELUC) as required by Attachment C of the Illinois EPA's May 29, 2007 letter and the conditions set forth in the January 7, 2008 letter;

(3) Provided that groundwater issues for the SFP are addressed as outlined by Items 1 through 4 in Attachment C of the Illinois EPA's May 29, 2007 letter (Log No. B- 147-M-7 and B-147-M-1).

Condition II.F of this permit addresses the requirements of Conditions I.C.3.b (1) and (2) above, the remaining corrective action activities that need to be completed at the SFP. An ELUC must be established in accordance with the Conditions II.F of this permit renewal before a No Further Action (NFA) can be issued for the SFP. Condition II.C.5 below (Groundwater Requirements for the SFP) addresses the requirements associated with Item 3 above.

4. Groundwater Requirements for the SFP

a. The Illinois EPA approved the March 18, 2010 submittal for the SFP demonstration to exclude the groundwater ingestion exposure route for perched groundwater (locally encountered groundwater in surficial fill and fine-grained native materials (Cahokia Clay facies) at the former SFP area.

(1) As a result of the perched groundwater route being excluded, the Groundwater Detection Monitoring Program was removed with the issuance of the renewed RCRA Permit (Log No. B-147R).

(2) The facility must satisfy the requirement of Condition II.F.2 of this permit.

(3) The facility must continue to address groundwater of the uppermost aquifer in accordance with Section III of this permit.

SECTION II: CORRECTIVE ACTION

A. INTRODUCTION

1. In accordance with Section 3004(u) of RCRA and 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 waste constituents, listed in 35 IAC 721, Appendix H, from any Solid Waste Management Unit (SWMU) at the BP Main Plant in Wood River, Illinois. This section contains the conditions which must be followed to ensure these requirements are met.

2. The original permit issued by the Illinois EPA for this facility on September 30, 1993 required that the facility conduct corrective action at twenty-one (21) SWMUs and nine (9) product release sites (PRSs) (locations where product was known to have been released or where product could have potentially been released). On June 21, 2002, the Illinois EPA approved a plan to expand the scope of this corrective action program to include all recognized environmental conditions (RECs) at the facility. To accomplish this, the facility was broken up into nineteen (19) investigation areas (Land Reuse Areas) so that corrective action at the facility could be addressed on an Area-by-Area basis.

3. One of the Land Reuse Areas (Area 18) contains two units that were identified and regulated as hazardous waste management units (HWMUs) in the permit issued to this facility on September 30, 1993. The facility has since accomplished closure by removal for these two units (referred to as the North Cell Spray Pond 1 (NC-SP1) and the South Flare Pit (SFP)). This section summarizes the status of these units relative to RCRA closure, RCRA post-closure and RCRA corrective action (it must be noted that HWMUs are a subset of SWMUs).

4. The facility has completed a substantial amount of corrective action efforts to date at this facility. This permit summarizes these efforts and describes the corrective action efforts which must still be completed at this facility to ensure the requirements of Section 3004(u) and (v) of RCRA and 35 IAC 724.201 are met.

5. The Permittee must provide corrective action, as appropriate, for any future releases from SWMUs present at the facility or any SWMUs found during the course of facility operations in the future.

6. As 35 IAC Part 742 was amended to include indoor inhalation exposure route, all SWMUs which obtained no further action for corrective action as listed in Condition II.B.1 must be re-evaluated for the indoor inhalation pathway and meet all updated remediation standards to meet the requirements of 35 IAC Part 742.

7. The Permittee must develop and implement a Corrective Measures Program (CMP), as necessary, to protect human health and the environment from any SWMUs and Areas of Concern (AOCs) at the facility.

8. 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.

9. The Permittee must provide corrective action, as appropriate, for: (1) any newly discovered SWMUs and AOCs; and/or (2) future releases for existing SWMUs at the facility.

10. 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) the Illinois EPA and the USEPA guidance documents regarding such efforts; and (3) the Illinois EPA letters regarding such activities.

11. Unless there is a desire to modify specific requirements set forth in this Section, information submitted to Illinois EPA regarding the corrective action requirements set forth in this Section is not a request to modify this permit nor subject to the requirements of 35 IAC 703 Subpart G.

12. All Illinois EPA final decisions regarding RCRA corrective action at this facility are subject to the appeal provisions of Sections 39(a) and 40(a) of the Illinois Environmental Protection Act (Act).

13. All documents submitted to the Illinois EPA regarding corrective action efforts must be accompanied by a completed RCRA Corrective Action Certification Form (LPC 632). This form can be found on the Illinois EPA website.

14. 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.

15. Based on the results of the investigative efforts as required in corrective action, the Illinois EPA reserves the right to withdraw any "No Further Action" (NFA) determinations.

16. The Permittee shall incorporate, as necessary, climate change adaptation considerations into the corrective action required at this facility in accordance with the applicable USEPA guidance(s) regarding integrating climate change adaptation considerations into the RCRA corrective action process.

B. CORRECTIVE ACTION REQUIREMENTS

A plan to conduct a Phase I RCRA Facility Investigation (RFI) of the twenty-one (21) SWMUs and nine (9) product release sites (PRSs) of concern as identified in the 1993 permit and listed below was approved by Illinois EPA on September 7, 1994; a report documenting the results of this investigation was approved by Illinois EPA on June 5, 2001. In 2016, as the approximate 118.25-acre KMPH parcel at and above 408 feet above mean sea level (ft above MSL), which contained of one of the PRSs (PRS 7), was removed from the facility subject to this permit, the number of PRSs requiring corrective action under this permit is now eight (8), while groundwater throughout the original permitted boundaries of the facility is still subject to corrective action. The requirements to addresses corrective action at these areas are included in Section II of this permit.

SWMU #	SMMU Description
8	Three Leaded Tank Bottom Disposal Area
9	Northeast Sand Pits
12	Southeast Disposal Area
13	API Separator Sludge Landform
14	North Cell/Spray Pond 1
15	Spray Ponds Other Than North Cell/Spray Pond 1
16	Old API Separator
17	Additive Waste Pit
18	DAP Spent Filter Cake Storage Area
21	Former APAC Waste Transfer Area
22	New APAC Waste Transfer Area
23	MAP Spent Filter Cake Storage Area
24	APAC Slop Oil Tank 70
25	APAC Slop Oil Tank 176
26	APAC Slop Oil Tanks 189, 190, 845, and 846
27	APAC Slop Oil Tank 277 Area
30	Korea Tank Form Disposal Area
31	Waste Phenol Accumulation Area
33	South Flare Pit
34	Amoco's Sewer System
36	Liquid Waste Collection Bin

PRS #	PRS Description
1	Former Tank 228 Dike Area
2	Former Tank 256 Dike Area
3	Waste Oil Leak Area
4	Hydrocarbons on Water Table
5	North Tank Farm
6	East Tank Farm
8	Korea Tank Farm
9	Gasoline Piping Manifold

1. A Phase II RFI workplan for the SWMUs and PRSs mentioned above was approved by Illinois EPA on February 5, 2002 that was subsequently modified on June 21, 2002. The February 5, 2002 approval letter expanded the scope of corrective action at this facility to all recognized environmental conditions (not just the SWMUs and PRSs identified in the original 1993 permit) and divided the facility into nineteen (19) Land Reuse Areas for remediation and potential redevelopment. A map of the BP Main Plant Land Reuse Areas is presented in Attachment A-1 to this section; these areas are also identified as follows:

Land Reuse Area No.	Name
Area 1	Northwest Corner
Area 2	Northeast Corner
Area 3	North Central Area
Area 4	Former Rail Yard
Area 5	South Central Area
Area 6	Former APAC Area
Area 7	Former Alkyl Plant
Area 8	North Tank Farm
Area 9	Korea Tank Farm
Area 10	East Tank Farm
Area 11	Spray Pond Area (Ponds 1 & 2 and Intake Channel Areas)
Area 12	South Tank Farm
Area 13	Wildlife Enhancement Area
Area 14	Southeast Corner
Area 15	Administration Building
Area 16	Marketing Operations Area
Area 17	Liquid Propane Gas (LPG) Caverns
Area 18	North Cell Spray Pond 1 and South Flare Pit
Area 19	Spray Pond 3

2. Condition II.C.1 below includes the facility's corrective action efforts that have been completed, updated to June 2024. Condition II.D below includes the required corrective action that still must be completed at the facility.

3. All investigation efforts conducted at each Land Reuse Area must be sufficient as to thoroughly characterize contamination associated with all the identified recognized environmental conditions present in the area. The Land Reuse Area investigations will focus on soil and perched groundwater.

4. Conduct additional investigation and remediation, as necessary, to address any on-site and/or off-site contamination, which has migrated beyond the property boundaries from the former operation of the facility.

5. All plans and reports associated with all aspects of corrective action at this facility should be submitted to the Illinois EPA for review and approval before implemented. A summary of the plans/reports submitted to date regarding corrective action at this facility, organized by the Illinois EPA log number (and thus the chronologic order in

which the plans/reports were submitted) is provided in Attachment C; this attachment also identifies the Illinois EPA's final action on each submittal.

6. The requirements of 35 IAC Parts 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.

7. Components of the corrective action program must include:

   a. Continued groundwater monitoring and corrective action program in accordance with the conditions in Section III of this permit.

   b. Continued operation of the bioremediation systems and remediation of hydrocarbon in accordance with Condition II.E and as approved in Illinois EPA letters.

   c. Continued submittal of Corrective Action Progress Reports in accordance with Condition II.L.1 of this permit.

   d. Continued implementation of ELUC – Condition II.C of this permit.

8. The Permittee plans to complete corrective action for the soil and perched groundwater at the facility through the land reuse investigation remediation process. The goal in following this process is to obtain a NFA determination for a given Land Reuse Area by addressing recognized environmental conditions in that area. If the Permittee determines that redevelopment is not likely to occur in a given area, the Permittee will follow the corrective action process only for the SWMUs and PRSs in that area. If the potential for redevelopment of the Land Reuse Area becomes viable in the future, the Permittee would pursue an NFA determination for the entire area (including RECs) at that time. The general process for investigation and remediation of each Land Reuse Area is as follows:

   a. Current conditions will be established for the parcel/area.

   b. An Investigation Workplan incorporating the current conditions will be developed and submitted to the Illinois EPA for review and approval to investigate data gaps required to properly characterize the area (this submittal is referred to as the Current Conditions Report/Investigation Workplan).

   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 III of this permit.

   d. The results of the investigation will be analyzed; as well as all other data remediation objectives will be developed in accordance with 35 IAC Part 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 Conditions II.B.9.c and d above will be submitted to the Illinois EPA for review and approval (this report is referred to as the Investigation Report). 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 review of the Investigation Report, the 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 the 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 the Illinois EPA, until the 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 final NFA letter can be issued. Plans for establishing the required engineered barrier, if necessary, and associated institutional control(s) required must be submitted to the 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.

h. Development of the area may proceed so as long as such activities are conducted, meeting all the requirements and conditions of the NFA letter and any applicable conditions of this permit.

C. SUMMARY OF CORRECTIVE ACTION EFFORTS COMPLETED

1. The status of investigations and corrective action for each Land Reuse Area as of September 2024, is presented on the table below.

Notes: CCR/IW = Current Conditions Report/Investigation Work Plan
Inv Report = Investigation Report
ELUC = Environmental Land Use Control
APAC = Amoco Petroleum Additives Company
NFA = No further Action
IEPA = Illinois EPA

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
Area 1-Northwest Corner	PRS 5 – North Tank Farm	NFA for soils approved December 5, 2001. Recorded ELUC approved March 25, 2005.	Comply with conditions of NFA and ELUC.
Area 2-Northeast Corner	PRS 1 – Former Tank 228 Dike Area PRS 5 – North Tank Farm PRS 6 – East Tank Farm SWMU 9 – Northeast Sand Pit	NFA for soils approved August 13, 2002. Recorded ELUC approved March 29, 2005. Revised recorded ELUC approved February 27, 2012. A revised recorded ELUC approved August 9, 2017.	Comply with conditions of NFA and ELUC. The Permittee retains ownership and responsibility for RCRA corrective action activities associated groundwater in the vicinity of two parcels removed from the facility as described in Conditions II.C.5 (a) and (b) below.
Area 3-North Central Area	SWMU 24 – APAC Slop Oil Tank 70 SWMU 26 – APAC Slop Oil Tanks 189, 190, 845, 846	CCR/IW approved September 27, 2002. Inv. Report submitted December 22, 2006; revised Inv. Report submitted May 8, 2012. IEPA requested that the Permittee withdraw the 2012 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
Area 4-Former Rail Yard	SWMU 13 – Separator Sludge Landfarm SWMU 21 – Former APAC Waste Transfer Area	NFA for soils approved August 22, 2003. Recorded ELUC approved September 29, 2005.	Comply with conditions of NFA and ELUC. * See Notes below.
Area 5-South Central Area	SWMU 27 – APAC Slop Oil Tank 177 Area PRS 3 – Waste Oil Leak Area	CCR/IW approved September 27, 2002. Inv. Report submitted December 22, 2006; revised report received by IEPA February 12, 2012. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA. * See Notes below.
Area 6-Former APAC Area	SWMU 17 - Additives Waste Pit SWMU 18 - Detergent Additives Plant (DAP) Spent Filter Cake Storage Area SWMU 22 – New APAC Waste Transfer Area SWMU 23 – Multipurpose Additives Plant (MAP) Spent Filter Cake Storage Area SWMU 31 – Waste Phenol Accumulation Area SWMU 36 – Liquid Waste Collection Bin	CCR/IW approved September 5, 2002. Inv. Report submitted December 22, 2006; revised report received by IEPA March 16, 2012. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
Area 7-Former Alkyl Plant	PRS 5 – North Tank Farm	CCR/IW approved August 7, 2003. Inv. Report submitted June 2, 2008 to IEPA. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.
Area 8-North Tank Farm	PRS 2 – Former Tank 246 Dike Area PRS 5 – North Tank Farm SWMU 8 – Bottom Disposal Areas SWMU 25 – APAC Slop Oil Tank 189	CCR/IW approved August 7, 2003. Inv. Report submitted June 2, 2008. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.
Area 9-Korea Tank Farm	SWMU 30 – Korea Tank Farm Disposal Area PRS 8 – Korea Tank Farm	CCR/IW approved September 9, 2002. Inv. Report submitted May 9, 2008; revised report received by IEPA on December 15, 2011. IEPA requested that the Permittee withdraw the 2011 Inv. Report in a letter dated May 30, 2019.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.
Area 10-East Tank Farm	PRS 6 – East Tank Farm	CCR approved June 4, 2003. Inv. Report submitted March 21, 2008; revised Inv. Report received by IEPA on May 5, 2011. IEPA requested that the Permittee withdraw the 2011 Inv. Report in a letter dated May 30, 2019. Revised Inv. Report submitted December 20, 2019, superseding 2011 Inv. Report.	Revised Inv. Report pending IEPA review. * See Notes below.
Area 11-Spray Pond Area (Ponds 1 and 2	SWMU 15 – Spray Ponds Other than	RFI Phase I report for SWMUs in this area approved June 5, 2001.	The Permittee implementing approved CCR/IW.

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
and Intake Channel Areas)	NC-SP1 / Spray Pond 1	CCR/IW approved by IEPA January 24, 2012.	* See Notes below.
Area 12-South Tank Farm	PRS 7 – South Tank Farm SWMU 12 – Southeast Disposal Area	RFI Phase I report for SWMUs in this area approved June 5, 2001. IEPA notified of the Ownership Transfer of the Permittee to Kinder Morgan Phoenix Holdings LLC (KMPH) on November 2, 2015.	KMPH is responsible for RCRA corrective action activities at and above elevation 408 ft above MSL in Area 12. The Permittee retains ownership and responsibility for RCRA corrective action activities below elevation 408 ft above MSL.
Area 13-Wildlife Enhancement Area	SWMU 12 – Southeast Disposal Area	RFI Phase I report for SWMUs in area approved June 5, 2001. CCR/IW approved by IEPA on October 26,2011. Further revised Investigation Report submitted March 12, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA. * See Notes below.
Area 14-Southeast Corner	None	RFI Phase I report for SWMUs in area approved June 5, 2001. CCR/IW approved July 12, 2012. Environmental data collected in 2017-2019 submitted March 8, 2024.	March 2024 submittal under IEPA review.
Area 15-Administration Building	None	NFA for soils approved November 19, 2003. Recorded ELUC approved September 29, 2005.	Comply with conditions of NFA and ELUC.
Area 16-Marketing Operations Area	SWMU 16 – Old American Petroleum Institute (API) Separator SWMU 34 – Amoco's Sewer System	CCR/IW approved May 5, 2009. Inv. Report submitted December 23, 2014 and received by IEPA on December 24, 2014. IEPA requested a revised Inv. Report in a letter dated June 14, 2016. Additional environmental data collected in 2018-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
Area 17-LPG Caverns	None	CCR/IW approved May 5, 2009. Inv. Report submitted October 22, 2012. IEPA requested that the Permittee withdraw the 2012 Inv. Report in a letter dated May 30, 2019. Additional environmental data collected in 2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA. * See Notes below.
Area 18-North Cell Spray Pond 1 (NC-SP1) and South Flare Pit (SFP)	SWMU 14 – NC-SP1 SWMU 33 – SFP	On January 7, 2008, Illinois EPA approved closure by removal demonstration for the NC-SP1. IEPA has determined that the facility has satisfied the groundwater requirements of IEPA's May 29, 2007 and September 9, 2008 letters. Based upon 35 IAC 742.925, the groundwater ingestion route for perched groundwater can be excluded at the SFP area. A closure by removal demonstration for the soils at the SFP was approved by IEPA on January 7, 2008 subject to the establishment of an ELUC meeting the requirements of 35 IAC Part 742 which places certain restriction on future activities at the unit. Recorded ELUC approved July 18, 2016.	NFA at NC-SP1. Regarding the SFP. The Permittee must continue to address groundwater of the uppermost aquifer in accordance with the RCRA Permit. The Permittee must also comply with conditions of the ELUC.
Area 19 Spray Pond 3	SWMU 15 – Spray Ponds Other than NC-SP1 / Spray Pond 1	IEPA approved Inv. Report on December 6, 2007; IEPA revised this letter on April 13, 2009. This letter determined that no further action required in area provided certain requirements are met and certain restrictions are placed on future activities in the area.	The Permittee must carry out requirements set forth in IEPA's April 13, 2009 letter. * See Notes below.

*Notes: In accordance with the KMPH RCRA Permit issued March 4, 2024, small portions of the following Land Reuse Areas were included in the transfer of ownership to KMPH: 4, 5, 10, 11, 13, 17

and 19. The Permittee retains ownership and responsibility for RCRA corrective action activities at and below elevation 408 ft above MSL.

2. As provided by 35 IAC 742.1000(a), an institutional control satisfactory to the Illinois EPA must be established for property or media that have been remediated to any acceptable standard identified in 35 IAC Part 742 other than those for a residential use. As of September 2024, the Permittee has completed the required environmental investigation and remedial activities associated with the corrective action for soil and perched groundwater at Land Reuse Areas 1, 2, 4, and 15 identified in Condition II.C.3. As discussed in Condition II.C.3, No Further Action (NFA) determinations for soil and perched groundwater at Land Reuse Areas 1, 2, 4, and 15 have been made by Illinois EPA..

3. As of September 2024, the Permittee has obtained NFA for the specific media at the following parcels and SWMUs:

Land Reuse Area/ SWMUs Present in Area	**NFA and Media**
Area 1	NFA letter for soil and groundwater ingestion route for perched-groundwater only was issued on December 5, 2001 (Log No. B-147-CA-11). ELUC was established for Area 1 (see Conditions II.C.4 and 6 below).
Area 2	NFA letter for soil only was issued on August 13, 2002 (Log No. B-147-CA-14). ELUC was established for Area 2 (see Conditions II.C.4 and 6 below). No perched groundwater was encountered during the investigation.
Area 4	NFA letter for soil only was issued on August 22, 2003 (Log No. B-147-CA-30). Exclusion of groundwater ingestion exposure route for perched-groundwater in this parcel was approved on August 22, 2003 (B-147-CA-30). ELUC was established for Area 4 (Conditions II.C.4 and 6 below).
Area 15	NFA letter for soil only was issued on November 19, 2003 (Log No. B-147-CA-31,36 & 37). ELUC was established for Area 15 (see Conditions II.C.4 and 6 below).

4. As of September 2024, 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 Main Plant

Area Name	Size (Acres)	Parcel ID for Site	Date of NFA Letter	County Recorder's No. /Date Recorded	PIN/TAX ID
Area 1	6.3	Northwest Parcel	December 5, 2001	2003R05241/ January 23, 2003	19-1-08-28-12-201-001.001
Area 2	43	Police Station Donation Parcel & BP retained Parcel	August 13, 2002	2003R08605/ February 5, 2003	19-2-08-27-14-301-003;19-2-08-27-301-004; 19-2-08-27-10-101-002; 19-2-08-27-10-101-003.
Area 4	29.44	Former Rail Yard	August 22, 2003	2005R38583/ July 13, 2005	19-1-08-28-00-000-010; 19-1-08-33-00-000-013;19-1-08-34-00-000-001; 19-1-08-34-00-000-001.001
Area 15	11.73	Administration Building Parcel	November 19, 2003	2004R59615/ October 1, 2004	19-1-08-28-00-000-010.001

5. Three parcels have been removed from the original definition of the facility that are subject to corrective action under this permit as described below:

   a. BP donated a 9.56-acre parcel in Area 2 to the City of Wood River. This parcel received a NFA for soils only and extends from the ground surface to a horizontal plane approximately 23 ft-bgs at an elevation of 418 ft above MSL. The Parcel Index No. assigned to this parcel of land is 19-2-08-27-14-301-003. BP retained ownership of that portion of the 9.56- acre parcel which extends below a horizontal plane at an elevation of 418 ft above MSL. The Parcel Index No. assigned to this latter parcel of land is 19-2-08-27-301-004.

      (1) As a result of this action, BP established two new ELUCs to supersede the one filed for Area 2 on February 5, 2003, one for the parcel being donated to the City of Wood River and one for that portion of Area 2 being retained by BP.

      (2) The Illinois EPA approved a draft ELUC for the 9.56-acre donation parcel on November 3, 2011 (Log No. B-147R-CA-12) and this document was filed with the Madison County Recorder's office on December 7, 2011 as Document No. R2011R45888. This ELUC contained the same restrictions on this parcel as was in the original ELUC for Area 2 (Document No. 2003R0865 filed with the Madison County Recorder on February 5, 2003.

      (3) The Illinois EPA approved a draft ELUC for the remainder of Area 2

being retained by BP on November 3, 2011 (Log No. B-147R-CA-12) and this document was filed with the Madison County Recorder's office on December 7, 2011 as Document No. 2011R45887. This ELUC contained the same restrictions on this parcel as was in the original ELUC for Area 2 (Document No. 2003R08605 filed with the Madison County Recorder on February 5, 2003) and superseded the original ELUC for Area 2.

(4) The Illinois EPA issued a modified permit for this facility on December 21, 2012 which allowed the 9.56-acre donation parcel (Parcel Index No. 19-2-08-27-14-301-003) to be removed from the defined facility covered by this permit. The basis for this modification was that: (1) a NFA was issued for soils in Area 2 by Illinois EPA on August 3, 2002 (which would include the 9.56-acre donation parcel), subject to certain restrictions being in place on future activities in Area 2; and (2) an ELUC specific to this parcel was in place which restricted future activities in the donation parcel as required by the NFA Letter for Area 2.

b. BP donated a 7.5-acre parcel within Area 2 to the City of Wood River for the construction of a new police station. This parcel received a NFA for soils only and extends from the ground surface to a horizontal plane approximately 15 ft-bgs at an elevation of 428 ft above MSL. The Parcel Index No. assigned to this parcel of land is 19-2-08-27-10-101-002. BP is retaining ownership of that portion of the 7.5-acre parcel which extends below a horizontal plane at an elevation of 428 ft above MSL. The Parcel Index No. assigned to this latter parcel of land is 19-2-08-27-10-101-003.

(1) As a result of this action, BP established two new ELUCs to supersede the one filed for Area 2 on December 7, 2011, one for the parcel being donated to the City and one for that portion of Area 2 being retained by BP.

(2) Due to the amendments made in 35 IAC Part 742 associated with indoor air inhalation exposure route these requirements must be addressed. Thus, BP must conduct an investigation to demonstrate that the soils present in this second donation parcel met remediation objectives for the indoor air inhalation exposure route before it was removed from the defined facility covered by this RCRA permit in accordance with plans approved by Illinois EPA.

(3) The Illinois EPA issued a NFA letter on August 22, 2016 regarding the indoor air inhalation exposure route for the second donation parcel. This NFA determination was based in part on the establishment of an ELUC which would place certain restrictions on future activities within this parcel.

(4) The Illinois approved a draft ELUC for the 7.5-acre donation parcel on May 4, 2017 (Log No. B-147R-CA-78) and this document was filed with the Madison County Recorder's office on June 5, 2017 as Document No. 201718528. This ELUC contained the same restrictions on this parcel as was in the revised ELUC for Area 2 as identified in Condition II.C.5.a (3) above in addition to restrictions required by Illinois EPA's August 22, 2016 letter discussed in Condition II.C.5.b (3) above.

(5) The Illinois EPA approved a draft ELUC for the remainder of Area 2 being retained by BP on May 4, 2017 (Log No. B-147R-CA-77) and this document was filed with the Madison County Recorder's office on June 5, 2017 as Document No. R201718529. This ELUC contained the same restrictions on this parcel as was in the revised ELUC for Area 2 as identified in Condition II.C.5.a (3) above and also superseded this latter ELUC.

(6) This modified permit (Log No. B-147R-M-16 and any future modifications) allows the subject 7.5-acre donation parcel (Parcel Index No. 19-2-08-27-104-101-002) to be removed from the defined facility covered by this RCRA permit. The basis for this modification is that: (1) NFA Letters were issued for soils in this parcel by Illinois EPA on August 13, 2002 and August 22, 2016, subject to certain restrictions being in place on future activities in the parcel; and (2) an ELUC specific to this parcel is in place which restricted future activities in the donation parcel as required by these NFA letters.

c. An approximate 118.25-acre three-dimensional parcel at elevation of 408 ft above MSL is not part of the facility. This parcel has already been issued a RCRA Corrective Action Permit (Log No. B-214) to KM Phoenix Holdings LLC (KMPH). The area below elevation of 408 ft above MSL remains part of the facility and is subject to BP Main Plant's RCRA permit.

(1) KMPH is responsible for RCRA Corrective action activities at and above elevation of 408 ft above MSL at the former BP Wood River Terminal (South Tank Farm), Land Reuse Area 12, and those portions of the following areas that were included in the purchase: 4, 5, 10, 11, 13, 17 and 19.

(2) The Permittee retains ownership and responsibility for RCRA Corrective Action activities below elevation of 408 ft-MSL.

(3) The Permittee and KMPH recognize that the post-closure conditions, operations or other activities at the property acquired by KMPH or its successor could impact property owned and/or operated by BP or its successors. The parties also acknowledge that post-closure conditions, operations, and activates at the property retained by the BP, or its

successors could impact property owned and/or operated by KMPH or its successors.

(4) In the event that post-closure activities at the property acquired by KMPH impact (if determined to be the result of KMPH's activities) the underlying and/or adjacent property owned by the Permittee, KMPH will be responsible for the environmental impacts and corrective action activities that result.

(5) In the event that post-closure activities at the property retained by the Permittee impact the overlying and/or adjacent property owned by KMPH, the Permittee will be responsible (if determined to be the result of the Permittee's activities) for the environmental impacts and corrective action activities that result.

6. In general, the ELUCs identified place the following restriction on Land Reuse Areas 1, 2, 4 and 15:

a. No groundwater beneath the areas, including perched groundwater, may be used as a potable supply of water.

b. Contaminated groundwater and/or soil that is removed, excavated, or disturbed from the areas must be handled in accordance with all applicable laws and regulations.

c. The areas may not be used for residential purposes and may only be used solely and exclusively as "industrial/commercial property" as that term is defined in 35 IAC Part 742.

d. Excavation and subsurface construction work in the Land Reuse Areas must be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soil and impacted perched groundwater in the area. All construction workers shall be equipped with appropriate personal protective equipment as required and specified in the site health and safety plan.

e. The soil within each area is to remain in place, except where necessary to remove it for construction purposes.

f. A detailed process must be followed in the management on any soil excavated during construction/demolition/excavation efforts in the areas. This process allows the excavated soil to be placed elsewhere at the BP facility provided certain requirements are met.

g. Requires maintenance of engineered barriers over certain portions of each area as follows:

Land Reuse Areas	Number of Subareas Requiring an Engineered Barrier
Area 1	2
Area 2	2
Area 4	3
Area 15	4

h. Prior to commencement of any future excavation and/or construction in or near the sub-areas covered by an engineered barrier, a safety plan for that sub-area is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations, and other USEPA guidance as available. At a minimum, the plan should address possible worker exposure to contaminated soil which may be present in the sub-area. Any contaminated soil removed, or excavated from, or disturbed in the sub-areas where any engineered barrier is present must be handled in accordance with all applicable laws and regulations.

i. Failure to comply with the limitations or requirements of an ELUC may result in voidance of an Illinois EPA's NFA determination in accordance with the program under which the determination was made. The failure to comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Act.

j. The limitations or requirements of an ELUC apply in perpetuity or until:

(1) The Illinois EPA issues a new NFA determination approving modification or removal of the limitation/requirement; and

(2) A release or modification of the land use limitation is filed on the chain of title for the property that is the subject of the ELUC.

k. At no time shall this site be used in a manner inconsistent with the land use limitations established in an approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved; and (2) a new NFA determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 IAC Part 742.

(1) Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a: (1) request to amend the certification of closure; or (2) a permit modification request. Sufficient information must be provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC Part 742.

(2) Any final approval by Illinois EPA of a request to release or modify an ELUC must be filed with the chain of title for the subject facility.

D. SUMMARY OF CORRECTIVE ACTION EFFORTS STILL TO BE COMPLETED

1. The Permittee must meet the applicable indoor inhalation remediation objectives both on-site and the impacted off-site properties in accordance with 35 IAC Part 742.

    a. The Permittee must continue to address the primary objectives set forth in these documents entitled, "Revised Indoor Inhalation Exposure Route Evaluation and Work Plan" dated August 28, 2019 (Log No. B-147R-CA-96) and received by Illinois EPA on August 29, 2019; "Action Plan For Potential Man-Made Pathway Evaluation" dated November 25, 2019 (Log No. B-147R-CA-98) and received by Illinois EPA on November 26, 2019; "Soil Gas Pathway Evaluation Report" dated June 7, 2021 (Log No. B-147R-CA-111) and received by Illinois EPA on June 8, 2021; "Additional Info to the Revised Indoor Inhalation Exposure Route Eval And Work Plan Dated August 29, 2019 To Provide An Update on Changed Site Conditions" dated April 12,2024 (Log No. B-147R-CA-126) and received by Illinois EPA on April 16, 2024. Note, these documents are currently under review by the Illinois EPA.

    b. Additional evaluation for the indoor inhalation exposure route requirements must be met for all SWMUs and PRSs listed in Condition IV.B.1.

2. The Permittee is required to continue addressing the key objectives in these documents entitled, "Main Plant Area 10 Comprehensive Land Reuse Investigation Report" dated December 20, 2019 (Log No. B-147R-CA-99) and received by Illinois EPA on December 30, 2019; "Main Plant Land Reuse Investigation Data Submittal of General Background, Sampling Methods, Analytical Procedures, and Analytical Results for Areas" dated March 8, 2024 (Log No. B-147R-CA-125) and received by March 12, 2024. Note, these documents are currently under review by the Illinois EPA.

3. Additional corrective action activities must be carried out and additional information must be submitted to Illinois EPA, as necessary, to ensure all SWMUs and PRSs are properly remediated.

4. The requirements in Condition II.E and Section III of this permit must be met to address remediation of groundwater and hydrocarbon and refinery products.

E. REMEDIATION OF HYDROCARBON AND REFINERY PRODUCTS

Implementation of the bioremediation systems for impacted groundwater, treatment and reduction of free phase and residual product, and interim removal actions for recoverable product must be completed as set forth in Condition II.E of the permit.

1. Prior to the issuance of the permit issued May 29, 2018 (Log No. B-147R-M-17 and M-18), the Permittee had operated a Hydrocarbon Recovery System (HRS) to remove refinery product from above the water table. The HRS at the Former Wood River Main Plant was commissioned as an interim remedial measure (IRM) in 1993 to hydraulically recover subsurface mobile light non-aqueous phase liquids (LNAPL) from above the

water table. The original system included twenty-one (21) HRS extraction wells. Following seventeen (17) years of operation, sixteen (16) HRS wells were deactivated in 2010 based on declining LNAPL recovery. After seven (7) additional years of operation, the remaining five (5) HRS extraction wells were deactivated in 2017 due to the system reaching its limit of performance effectiveness.

2. During 2016 and 2017, in an effort to provide an interim measure and to conduct an evaluation of bioremediation technologies, the Permittee proposed to replace the above-mentioned original HRS with alternative remedial system(s). The Permittee installed and started to operate the following three different hydrocarbon bioremediation systems in the northern and central part of the BP Main Plant on a pilot scale:

   a. Biovent System (in the mid-section of Area 3); the Biovent System is designed to inject air into the vadose zone to provide oxygen and enhance in-situ aerobic bioremediation of hydrocarbons and refinery product at and above the water table as detailed in Attachment E;

   b. Biosparge System (mainly in the eastern portion of Land Reuse Area 5 extending to portions of Land Reuse Areas 6 and 10); the Biosparge System is designed to inject air below the water table to provide oxygen for enhancing aerobic bioremediation of hydrocarbons and refinery product in groundwater and the smear zone, as well as allow for biodegradation of volatilized hydrocarbons and residual product as it contributes to dissolved phase impacts in the vadose zone as detailed in Attachment E;

   c. Air Sparge/Soil Vapor Extraction (AS/SVE) (in the northeastern corner of Area 8); Air Sparging is designed to inject air below the water table to volatilize hydrocarbons from groundwater and the smear zone and provide oxygen for enhancing aerobic bioremediation of hydrocarbons and refinery product in the saturated zone. Soil Vapor Extraction is designed to recover volatilized hydrocarbons as necessary for ex-situ treatment, and to promote the flow of atmospheric air into the vadose zone to enhance aerobic bioremediation above the water table. This system is detailed in Attachment E;

   The locations of the three pilot remediation systems within the facility are shown in Figure E-1 of Attachment E.

3. The facility shut down the above-mentioned HRS in Condition II.E.1 above under the Temporary Authorization issued by Illinois EPA (effective date of December 5, 2017) provided the facility collected data as required, and submitted: (1) a Pilot-Scale Bioremediation System Performance Report for the pilot-scale tests identified in Condition II.E.1 above; and (2) a workplan for developing a site-wide hydrocarbon recovery/remediation system to address the hydrocarbon contamination in the groundwater and the smear zone above the facility's remedial objectives as defined in the workplan and applicable regulations, as approved by Illinois EPA. The workplan was required to provide a conceptual plan to implement the hydrocarbon recovery/remediation systems for the entire facility in the groundwater and smear zone

as well as an outline of the next steps in full-scale implementation of the hydrocarbon remedial systems. A report entitled, "Remedial Action Selection Report and Main Plant Remedy Roadmap" was received January 31, 2022, to meet this requirement. The document is currently under review by the Illinois EPA.

4. The Permittee shall operate, expand and use the pilot-scale Bioremediation Systems and technologies in order to remediate hydrocarbons and refinery product from the smear zone and vadose zone as it contributes to dissolved phase impacts. The number and location of Bioremediation Systems and Bioremediation wells, as detailed in Attachment E, can be modified to maintain or enhance remediation of hydrocarbons and refinery product. As the Permittee has continued to successfully operate these systems, activities associated with these systems shall be summarized in the Corrective Action Progress Reports required by Condition II.L.1.

5. As an interim remedial measure to address recoverable refinery product prior to the implementation of the Main Plant Remediation Plan, the Permittee shall perform interim removal action(s);

   a. Interim Removal Actions Shall occur when the 30-Day Average Mississippi River Stage as Calculated based on the Alton Dam Tailwater River stage is below 410 ft above MSL.

   b. Recoverable refinery product requiring interim removal shall be considered the product from those wells where most recent recoverability testing results indicate a product transmissivity of 2.0 ft^2/day or greater:

      (1) The refinery product recoverability shall be determined through product baildown testing or product skimming testing in accordance with applicable ASTM standards, and the data utilized to calculate product transmissivity using the Bouwer and Rice method (ASTM E2856-13 or most current method);

      (2) Re-evaluation of wells exhibiting most recent transmissivity testing results above 2.0 ft^2/day and thicknesses equal to or greater than 0.5 feet will be conducted a minimum of once per year during seasonal low water table conditions;

      (3) Refinery product exhibiting transmissivity values below 2.0 ft^2/day will be addressed as part of the final remedy;

   c. Interim removal actions must include one of the following (for wells above 2.0 ft^2/day):

      (1) Mobile LNAPL recovery system;

(2) Manual bailing and pumping; or

(3) Expansion of a pilot-scale bioremediation technology (i.e., AS/SVE, bioventing, or biosparging) into the area.

d. Interim remedial performance data will be used to re-evaluate LNAPL transmissivity over time.

F. RCRA CLOSURE, RCRA POST-CLOSURE AND RCRA CORRECTIVE ACTION STATUS OF THE NORTH CELL SPRAY POND 1 AND THE SOUTH FLARE PIT

1. The North Cell Spray Pond 1 (NC-SP1) and South Flare Pit (SFP) were regulated HWMUs in the permit issued to this facility on September 30, 1993. Since that time, BP has been providing post-closure care of these two HWMUs in accordance with the requirements of that permit. BP began pursuing a closure-by-removal demonstration for the NC-SP1 in 2002 and the SFP in 2005.

   a. With regard to the NC-SP1, on January 7, 2008, Illinois EPA approved a closure-by-removal demonstration. Based upon this approval, no further action is necessary at NC-SP1 in regards to RCRA closure, RCRA post-closure or RCRA corrective action.

   b. With regard to the SFP:

      (1) The Illinois EPA has determined that the facility has satisfied the groundwater requirements of Illinois EPA's May 29, 2007 (Log Nos. B-147-M-7 and M-13) and September 9, 2008 (Log No. PS08-030) letters. Based upon 35 IAC 742.925, the groundwater ingestion route for perched groundwater can be excluded at the SFP area. The facility must continue to address groundwater of the uppermost aquifer in accordance with Section III of this permit.

      (2) A closure-by-removal demonstration for the soils at the SFP, was approved by the Illinois EPA on January 7, 2008 subject to the establishment of an ELUC meeting the requirements of 35 IAC Part 742 which places certain restriction on future activities at the HWMU. The requirements regarding the restrictions that must be contained in the ELUC are set forth in Condition II.F.2.

2. The ELUC to be established for the SFP must place the following restrictions, at a minimum, on the future activities of the subject property:

   a. All groundwater, including the perched groundwater, under the property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the property shall be handled in accordance with all applicable laws and regulations;

b. The property shall not be used for residential use. The property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IAC Part 742;

c. Any excavation and subsurface construction work on the property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils and impacted perched groundwater on the property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

d. The soil within the property shall remain in place, except where necessary to remove it for construction activities;

e. Soil excavated during construction/demolition/excavation activities within the Property shall be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to field screening tests for volatile organic compounds (VOCs). The soil evaluation and management procedures shall be as follows:

(1) Field Screening. Soil shall be considered "potentially contaminated" if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings >100 units) of VOCs in soil;

(2) Laboratory Analysis. Soils exhibiting potential contamination based on visual discoloring or a field screening test for VOCs will must be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

(3) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if: (1) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site-specific industrial/commercial remediation objectives (ROs) developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in II.F.2.e.1 above.

(4) Management of Non-Contaminated Soils. Soils that are considered not contaminated, as determined by field screening or laboratory results, may be reused as clean fill in other areas of the former BP Main Plant Facility. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(5) Management of Contaminated Soils. If soils are found to be contaminated, they shall be sent off-site for disposal in accordance with 35 IAC Subtitle G: Waste Disposal.

(6) Documentation. All of these activities must be documented in the facility's operating records.

G. LAND REUSE PROCESS FOR AREAS 1 THROUGH 19

The purpose of the Land Reuse process is to allow for a potential redevelopment for each Land Reuse Area when proposed by the Permittee and approved by the Illinois EPA at the facility.

1. A NFA determination may be made for a Land Reuse Area and approved by the Illinois EPA in order to remove the Land Reuse Area from the definition of the facility subject to this permit for redevelopment by following the process described below:

   a. Assess and document the current conditions of the Land Reuse Area in the Current Conditions Report (CCR);

   b. Develop a Land Reuse Work Plan to investigate and address any data gaps necessary for a proper characterization of the Land Reuse Area;

   c. Conduct an investigation to collect soil and perched groundwater data for the Land Reuse Area;

   d. Analyze the collected data and perform a comprehensive risk assessment, as necessary;

   e. Identify the necessary remedial actions and institutional controls and incorporate them into the Land Reuse Investigation Report;

   f. Obtain a conditional NFA determination from the Illinois EPA for soil, perched groundwater and groundwater upon the Illinois EPA review and approval of the Land Reuse Investigation Report;

   g. Submit a draft ELUC for the Illinois EPA's review and approval;

   h. Upon the Illinois EPA's approval of a draft ELUC, record the ELUC on the property deed for the Land Reuse Area and submit a certified copy of the recorded ELUC to the Illinois EPA's review and approval;

   i. Upon the Illinois EPA's approval of a certified ELUC, proceed with the development of the Land Reuse Area, which fully complies with the conditions of the Illinois EPA's approval letters regarding such activities; and

   j. As necessary and applicable, submit final reports and required documentation of construction and any other required information to the Illinois EPA that satisfies conditions of the Illinois EPA approval letters, which may include an addendum to the ELUC and/or NFA letter.

2. The eventual removal of a Land Reuse Area from the terms and conditions of the facility's permit (so that its ownership can be transferred to another entity) will require that:

   a. The Permittee must eventually receive a NFA determination for all Land Reuse Areas from the Illinois EPA for the soils, groundwater, and, as appropriate, perched groundwater and/or surface water within the Area by following the Land Reuse process and at the completion of the corrective action process;

   b. The Permittee either receives a NFA determination for the groundwater in the vicinity of the Land Reuse Area from the Illinois EPA or demonstrates through the Land Reuse process that the contamination remaining at the site will not pose threat to human health and the environment under the appropriate intended use for the area during the Land Reuse Process for the purpose of redevelopment as described in Condition II.G.1 above.

   c. The boundaries of any parcels established in accordance with the process approved by this permit must be defined by a professional land surveyor licensed to practice in the State of Illinois and meet the requirements of all statutes and regulations applicable to such efforts. The boundaries of any new parcel must first be approved by the Illinois EPA before a new PIN is obtained for the parcel. It must be noted that Illinois EPA has already approved the boundaries of nineteen (19) horizontal parcels within the facility.

   d. Each parcel established in accordance with the Land Reuse process approved by this permit must obtain an individual and unique Real Estate Tax Index/PIN from Madison County.

   e. At a minimum, as part of obtaining a NFA determination, an ELUC must be established which allows full access of the property for the Permittee in the future for any refinery product and/or groundwater monitoring or remediation efforts to complete any remaining corrective actions required under this permit within the timeline approved by the Illinois EPA.

3. To modify the definition of the facility covered by the permit, the Permittee will be required to submit a request to modify the permit in accordance with 35 IAC 703, Subpart G. Such a request must be a Class 3 modification request, unless demonstrated otherwise, in accordance with the procedures set forth in 35 IAC 703.283.

4. The Illinois EPA must be able to enforce any efforts necessary to complete corrective action and achieve approved remediation objectives at the subject facility. This may be achieved through institutional controls, ordinances and the facility's permit.

5. As property (or parcels) with new PINs are established, it may be necessary to re-file ELUCs which have already been filed with the Madison County Recorder.

a. This effort is necessary if the new parcel was created from a parcel for which an ELUC was already established.

b. In addition to re-filing the required ELUC on the new parcel, it will be necessary to file documentation on the original parcel indicating that the original ELUC no longer applies to that parcel (it may also be necessary to file a revised ELUC on the original parcel) identifying any restrictions that still apply to that parcel of land.

H. 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 D. 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 Part 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); and

   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 CMP described in Attachment D consists of five (5) 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 the Illinois EPA 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. 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.

I. REQUIREMENTS FOR ADDRESSING NEWLY IDENTIFIED SWMU(s)

1. The Permittee shall notify the Illinois EPA in writing of any newly identified SWMU and/or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than thirty (30) days after discovery. The notification shall provide the following information, as available:

   a. The location of the newly identified SWMU and/or AOC in relation to other SWMUs on a scaled map or drawing;

   b. The type 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 identified SWMU/AOC to the environment.

3. Within ninety (90) 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) days of receiving such written notification or 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. Additional investigation plans and reports must be submitted to and approved by the Illinois EPA, as necessary, to ensure the nature and extent of contamination at the SWMU/AOC is adequately characterized. Once the contamination is characterized, the Permittee shall develop remedial objectives for the SMWU/AOC in accordance with 35 IAC Part 742; such objectives are subject to the Illinois EPA review and approval.

7. The Permittee must implement a CMP, as necessary, to properly address any contamination encountered during the assessment. Guidance regarding the implementation of this program will be provided at the time the Illinois EPA notifies the Permittee of the need for such a program.

8. All efforts carried out at newly identified SWMU/AOCs must meet the requirements of 35 IAC 724.201.

J. FUTURE RELEASES FROM SWMUs

There exists a potential that a release may occur in the future from SWMUs identified in the RCRA Facility Assessment (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 II.I.1. Additional investigation and, as necessary, corrective measures efforts at this SWMU must be carried out in accordance with the procedure set forth in condition II.H. The results of all corrective action efforts required by this condition must meet the requirements of 35 IAC 724.201.

K. INTERIM MEASURES/STABILIZATION

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

2. Prior to implementing any interim measures, the Permittee must submit detailed information regarding the proposed interim measure to the Illinois EPA 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 the Illinois EPA review and approval of the RFI reports and the CMP, 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.

L. REPORTING REQUIREMENTS

1. A Corrective Action Progress Report must be submitted summarizing the corrective action efforts completed 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:

Reporting Period	**Report to be Submitted by the following**
January-March	May 1
April-June	August 1
July-September	November 1
October-December	March 1*

   *Included in Annual Report required in Condition II.L.2 below.

   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;

      (3) A summary of the activities anticipated to be carried out during the next quarter.

2. A 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). 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.

3. 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 an independent licensed 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.

M. COST ESTIMATES/FINANCIAL ASSURANCE FOR CORRECTIVE ACTION

1. The current cost-estimate for completing corrective action and groundwater remediation at the BP Main Plant by the facility is $87,922,423 in 2020 dollars. 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 IV.C.2. The cost-estimate for completing corrective action required in this permit must include 10% contingency.

2. The Permittee shall prepare a cost estimate for the completion of any corrective action required under this permit, in order to provide financial assurance for completion of corrective action, in order to provide financial assurance for the approved amount of that cost estimate within ninety (90) days of the date of the effective date of this permit, as required under 35 IAC 724.201(b). Such a cost estimate must be based upon the cost of contamination investigations and assessments for the SWMU(s), and design, construction, operation, inspection, monitoring, and maintenance of the corrective measure(s) to meet the requirements of 35 IAC 724.201 and this permit. These estimates must be based upon third party costs. The revised cost estimate for corrective action must be submitted to the Illinois EPA annually by January 1.

3. 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 II.M.1 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 documentation shall be submitted to the Illinois EPA within sixty (60) days after the submittal of the initial or revised cost estimates required under Condition II.M.1. 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 at its discretion.

4. It must be noted that cost estimates and financial assurance must be provided for the operation of the groundwater remediation system required by Section III of this permit as such a system is necessary to meet the requirements of 35 IAC 724.201.

5. All cost estimates prepared under the requirements of Conditions II.M.1 through II.M.4 must be submitted as a Class 1* permit modification request in accordance with 35 IAC 703.281.

6. Financial assurance for corrective action must be updated, as necessary, to reflect the current status of the RCRA corrective action program at this facility. In addition, this financial assurance must be adjusted annually for inflation.

SECTION III: GROUNDWATER CORRECTIVE ACTION PROGRAM

A. SUMMARY

Hazardous constituents associated with historical activities at the BP Main Plant have been detected in the groundwater across the site which exceed the groundwater quality standards established in 35 IAC Part 620. Therefore, a corrective action program for groundwater meeting the requirements of 35 IAC 724.201 must be implemented at the facility. In addition to the corrective action necessary to treat or remove hazardous constituents released to groundwater, this permit also requires the Permittee to implement a corrective action program for the groundwater present in the uppermost aquifer beneath the facility, and off-site as necessary.

The groundwater corrective action program required by this permit includes:

1. Control of the horizontal and vertical flow of the vertical column of groundwater in the uppermost aquifer such that groundwater flow is towards the interior of the BP Main Plant. This control of groundwater flow will be accomplished by withdrawing sufficient quantities of groundwater from the uppermost aquifer. Such flow control is necessary as a corrective measure to prevent further contaminant migration of on-site releases of product or waste, beyond the boundaries of the BP Main Plant and is the basis for the establishment of a Groundwater Management Zone (GMZ), except as provided in Condition III.A.5 below.

2. Verification that the flow of groundwater is adequately controlled as required by Condition III.A.1 above.

3. Monitoring the quality and movement of the groundwater in the uppermost aquifer beneath the BP Main Plant to determine the effectiveness of the groundwater corrective action program, as well as, verify compliance with the GMZ.

4. Remediating and/or removing refinery product from above the water table, and within the smear zone of the uppermost aquifer. The smear zone will be considered the minimum and maximum range of water table fluctuations observed at the BP Main Plant.

5. In the event that the Permittee is unable to demonstrate an inward gradient in the southeast corner of the facility, or in the vicinity of Land Reuse Area 9, compliance will be satisfied by demonstration that the groundwater quality at designated Sentry Observation Monitoring Wells in this portion of the facility meet applicable groundwater quality standards. The Permittee shall comply with the requirements of III.E.12 in the event that groundwater quality in this portion of the facility does not meet groundwater quality standards. Contingent actions could include increased monitoring to demonstrate that contaminants do not migrate beyond the GMZ boundary and/or sentry well installation and monitoring, increased groundwater extraction, or other alternate measures.

6. Implementation of the bioremediation systems for impacted groundwater, treatment and reduction of free phase and residual product, and interim removal actions for recoverable product must be completed as set forth in Condition II.E of the permit.

B. IMPLEMENTATION

1. The Permittee shall implement the Groundwater 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 Main Plant. The "uppermost aquifer" refers to the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically connected with this aquifer in the vicinity of the facility. The uppermost aquifer at this facility is a sand and gravel aquifer located approximately 30 feet below the ground surface (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 III.D.1 or to established background values or other applicable standards as appropriate.

4. The Permittee must continue corrective action measures to the extent necessary to ensure that the groundwater protection standard is not exceeded to meet the requirements of 35 IAC 724.201.

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. Northing and Easting coordinates for wells are provided in Attachment F.

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)	Well Designation[1]
GMZ Boundary Wells					
G005[8]	B-5D	44.00	386.10	406.10-386.10	UMA H
G006	B-6	44.00	384.01	404.01-384.01	UMA H
G008*	B-8D	50.00	378.21	408.21-378.21	UMA H
G021	C-11	49.70	382.27	417.27-382.27	UMA C
G023	C-13	49.50	381.74	416.74-381.74	UMA C
G04R	B-4R	59.50	382.54	402.54-382.54	UMA H
G045	G-5	40.87	402.67	412.67-402.67	UMA H
G055	G-15	52.19	393.02	413.02-393.02	UMA H
G059	G-19	45.00	384.33	404.33-384.33	UMA C
G062	G-22	45.00	388.01	408.01-388.01	UMA H
R063	G-23R	46.24	385.58	405.82-385.82	UMA H
G067#	G-27	49.00	386.28	406280-386.28	UMA H
G068@	G-28	50.00	392.24	414.24-392.24	UMA H
G073	G-33	44.00	387.15	407.15-387.15	UMA H
G079	G-39	40.00	383.12	404.12-384.12	UMA C
G084	G32R	45.00	389.13	409.13-389.33	UMA H
G085	G-26R	54.15	388.59	408.24-388.94	UMA H
G111	SWMU12-MW02	38.17	393.89	404.06-394.06	UMA H
G112	SWMU12-GH1	43.22	388.87	408.87-388.87	UMA C
G32R	H32R	44.50	384.64	405.34-385.34	UMA C
G35A	G35A	32.20	397.95	408.15-398.15	UMA H
G35B	G35B	40.20	390.26	400.46-390.46	UMA H
G37	H-37	46.00	386.47	401.47-386.47	UMA C
G5B	G-5B	75.85	367.73	377.73-367.73	UMA H
G500[7]	G500	29.39	401.06	411.06-401.06	UMA C
G69R	G-29R	59.96	385.87	405.87-385.87	UMA H
G74L	G-34	60.00	386.69	406.69-386.69	UMA H
G75L	G-35	60.00	386.51	406.51-386.51	UMA H
G76L	G-36	60.00	385.81	405.81-385.81	UMA H
G91	M-1D	39.70	388.13	398.13-388.13	UMA H
G92	M-2D	40.40	386.08	401.08-386.08	UMA H
G93L	M-3D	40.80	386.18	401.18-386.18	UMA H
H31B	H-31B	75.02	357.32	367.32-357.32	UMA H
RG36	H36R	60.43	384.94	404.27-389.57	UMA H
R302&	R302	33.20	399.84	410.04-400.04	Cahokia Clay
G303	RP-3D	39.85	393.24	398.74-393.74	UMA C
G503[8]	G08A	32.00	396.20	406.20-396.20	UMA H
G504[8]	R067	32.12	404.38	409.68-404.68	UMA H
G505[8]	R068	37.70	403.90	414.20-404.20	UMA H

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)	Well Designation[1]
Observation Monitoring Wells					
G002	G-01R	37.32	391.34	411.16-391.56	UMA C
G009	B-9	49.00	382.66	407.66-382.66	UMA H
G020	C-10	49.50	382.50	417.50-382.50	UMA C
R042[3A]	R042	37.20	393.48	403.48-394.02	UMA H
G048	G-8	48.00	381.68	401.68-381.68	UMA H
G057[4]	G-17	35.02	391.90	411.90-391.90	UMA C
G058[4]	G18	36.00	391.27	411.27-391.27	UMA C
R083[3A]	R083	38.79	393.44	403.98-394.52	UMA H
G10L	H-20	58.43	371.82	396.82-376.82	UMA H
G14L	H-24	57.00	372.85	397.85-377.85	UMA H
G16L	H-26A	55.00	378.24	408.24-378.24	UMA H
G22R	C-12R	54.70	378.10	398.10-378.10	UMA C
G30R	H-30R	43.04	387.98	408.63-388.63	UMA H
G31D	C-21C	70.00	357.98	362.98-357.98	UMA H
G39[+]	H-39	42.10	385.74	400.74-385.74	UMA H
G84L	H-4	59.00	374.19	399.19-379.19	UMA H
G87L	H-7	51.50	376.68	402.68-382.68	UMA C
G92L	H-12	69.00	373.82	410.82-378.82	UMA H
G98L	H-18	52.50	378.22	403.22-383.22	UMA C
G301	RP-1	49.00	377.38	388.38-378.38	UMA H
G305	RP-5	49.00	381.06	391.06-381.06	UMA C
G307	RP-7D	49.00	383.13	393.13-383.13	UMA H
G501[3A]	G501	40.89	392.55	403.09-393.63	UMA H
G502[3A][8]	G502	35.55	393.75	404.29-394.83	UMA H
Sampling Only Network[5]					
G031	C-21A	35.00	393.18	403.18-393.18	Cahokia Clay
G065	G-25	55.00	389.58	409.58-389.58	UMA H
G082	G-42	40.00	388.81	409.81-388.81	UMA C
R11L	H-21R	57.47	371.85	391.85-371.85	UMA C
G19	H-29	47.24	386.42	401.42-386.42	UMA H
R31L[8]	R31L	55.00	373.10	378.10-373.10	UMA H
G33	H-33	44.00	387.37	407.37-387.37	UMA C
G71L	G-31	58.70	387.25	407.25-387.25	UMA H
G97L	H-17	58.00	377.09	402.09-382.09	UMA H
G306	RP-6	49.00	381.34	391.34-381.34	UMA H
Gauging Only Network					
G016	C-6	49.50	381.00	416.00-381.00	UMA C
G046	G-6	50.00	391.37	411.37-391.37	UMA H
G050	G-10	44.00	386.65	406.65-386.65	UMA C

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)	Well Designation[1]
G31R[8]	H-31R	42.22	389.88	410.08-390.08	UMA H
G83L	H-3	52.50	375.09	400.09-380.09	UMA H
G86L	H-6	64.30	376.92	401.92-381.92	UMA H
G89L	H-9	53.50	375.96	400.96-380.96	UMA H
G99L[8]	H-19	53.50	376.60	402.10-382.10	UMA H
G128[2]	G128	33.65	395.86	406.04-396.26	UMA H
G506	A8MW04	50.00	383.34	418.34-383.34	UMA H
G507	A8MW05	48.00	383.74	413.74-383.74	UMA H
G508	A8MW06	48.00	381.97	416.97-381.97	UMA H
LNAPL Monitoring network [6]					
G011	C-1	49.50	380.30	415.30-380.30	UMA C
G027	C-17	40.00	390.32	400.32-390.32	UMA C
G049	G-9	47.00	382.75	402.75-382.75	UMA H
G13L	H-23	51.50	380.14	408.64-388.64	UMA H
G34	H-34	38.47	393.11	403.11-393.11	UMA C
G96L	H-16	58.50	373.28	393.28-378.28	UMA H
G417	B-17	51.00	380.48	400.48-380.48	UMA H
G603	RC-3	54.00	377.3	397.30-377.30	UMA H
G604	RC-4	51.46	379.92	399.92-379.92	UMA H
G605	RC-5	51.19	378.91	398.91-378.91	UMA H
G613	RC-13	63.12	368.38	403.38-373.38	UMA H
G614	RC-14	61.81	369.99	404.99-374.99	UMA H
G615	RC-15	59.66	370.48	405.48-375.48	UMA H
G617	RC-17	58.00	370.91	403.91-386.91	UMA H
G618	RC-18	57.50	371.78	411.78-376.78	UMA H
G619	RC-19	58.00	369.3	407.30-372.30	UMA H
G620	RC-20	85.36	344.51	406.28-349.64	UMA H
G509[9]	B-14	54.83	376.37	396.37-376.37	UMA H
G510+[8]	C-9	+	+	+	unknown
G511	G-11	43.08	388.38	408.21-388.21	UMA H
G512[9]	G-12	45.37	386.12	406.25-386.25	UMA H
G513	G-40	40.00	388.26	409.26-389.26	UMA C
G514[9]	G-47	38.67	389.33	407.66-389.66	UMA C
G515+[9]	G-14	+	+	+	unknown
G516	A3MW01	45.00	384.8	414.80-384.80	UMA H
G517	A3MW02	50.00	380.5	415.50-380.50	UMA H
G518	A6MW01	50.00	380.01	415.01-380.01	UMA H
G519	A6MW02	50.00	382.17	417.17-382.17	UMA C
G520	A6MW03	55.00	376.26	416.26-376.26	UMA H
G521	A8MW02	50.00	379.67	414.67-379.67	UMA H
G522	A9BH05	37.00	391.29	405.29-391.29	UMA C
G523	LS-1	33.87	394.71	414.71-394.71	UMA C

G524[9]	SVE-2	36.62	395.97	416.50-396.50	UMA C
Demonstration Wells					
R032[3B]	R032	39.27	388.99	399.47-389.71	UMA C
R034[3B]	C-24R	35.24	393.64	403.88-386.34	UMA C
R035[3B]	C-25AR	35.57	392.04	402.50-392.72	UMA C
G304[3B]	RP-4D	45.75	385.51	396.34-386.34	UMA C

Notes: * = Groundwater sampling only required at G008 when G503 is dry.
+ = Well construction information is incomplete.
# = Groundwater sampling only required at G067 when G504 is dry.
@ = Groundwater sampling only required at G068 when G505 is dry.
& = R302 was installed as a water table well and G302 was abandoned (G302 had screened interval 393.63-383.63). It appears a benzene pipeline release from the neighboring site (ID No. 1191150025) may be the source of contamination previously measured at G302. IEPA will require the neighboring site to delineate onto BP property. The contamination detected at the screened interval for former G302/RP-2D must continue to be monitored due to contaminant levels previously detected. As the Illinois EPA is working with Shell Oil Products US to delineate benzene contamination associated with a benzene pipeline release at BOL site ID No. 1191150025, BP will not be required to install a well at the screened interval of approximately 393.63-383.63 at this time.
1 = Top of casing and ground surface elevation measurements are from the 2020 Monitoring Well Survey unless otherwise noted.
2 = Groundwater gauging only at G128 due to known benzene release from Shell Oil pipeline in 1986 and the requirement for the permittee associated with site 1191150002 sampling G128.
3A = Sentry Well used to demonstrate contaminant control in the southeast portion of the GMZ.
3B = Sentry Well used to demonstrate contaminant control in the vicinity of Land Reuse Area 9.
4 = Also a designated Sentinel Well under the Riverfront RCRA Permit.
5 = Groundwater sampling only, well will still be gauged when sampled in accordance with Condition III.F.1; however, water level data will not be utilized for developing potentiometric surface maps or evaluation of hydraulic gradients as required under Condition III.E.6.
6 = LNAPL monitoring only, groundwater sampling not required (32 wells).
7 = G500 installed on November 20, 2017 as the well listed in the May 29, 2018 RCRA Permit as IEPA Well No. Gl13 "to be installed." The designation G500 was used because there is a different well designated as G113 under the Riverfront RCRA Permit.
8 = Top of casing and ground surface elevation measurements measured on the following dates: June 17, 2021 (G31R, GOSA, C-9); March 7, 2022 (G005, G99L, G502); and September 19, 2023 (R31L, R067, R068).
9 = Top of casing and ground surface elevation measurements are from 2015 Monitoring Well Survey.
10 = Well designations are identified based on zones within the uppermost aquifer being monitored: wells behaving as perched wells (Cahokia Perched); within the silty sandy layer of the Cahokia Sand facies (UMA C); within the coarse sand and gravel of the Henry formation (UMA H).

11 = Per Condition IV.C.1.a, G078, G030, G97L, and G87L require a new or replacement well or well pairs be installed within ninety (90) days to monitor the previously screened interval. Of those wells, only G078 no longer exists because the well was damaged.

Additional Notes:

"Ft-bgs" = refers to the number of feet below the ground surface.
"Ft-MSL" = refers to the number of feet referenced to mean sea level.
"Stick-up" = refers to the height of the reference survey datum. This point is determined with + 0.01 foot in relation to mean sea level, which in turn is established by reference to an established National Geodetic Vertical Datum.

2. The Permittee shall maintain the Gradient Control Wells (Cone of Depression (COD) 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 III.A.1 above.

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Elevation (ft. MSL)	Well Screen Length (ft.)
Gradient Control Wells				
HW1B	HW01-B	75.00	356.12	300
HW2A	HW02-A	75.00	355.71	300
HW2B	HW02-B	75.00	356.37	300

Note: The Gradient Control Wells are horizontal wells.

3. Construction of each monitoring well/piezometer must be in accordance with the "Monitoring Well Diagram" and "Well Completion Report" forms located on the Illinois EPA website, 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 contained in the "Field Boring Log" form on the Illinois EPA website, 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 Condition III.C.1 and III.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 the 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 monitoring well construction standards at the time that the well is replaced. A well which is more than ten (10) feet from the existing well or 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 Agency
   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 Part 920 regulations. Monitoring wells and piezometers that are improperly constructed must be abandoned in accordance with Condition III.C.4.

D. GROUNDWATER PROTECTION STANDARD

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

Field Parameters	Storet	Units
pH	00400	Standard Units
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	Feet
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 III.I.9.a.

Hazardous Constituents	**Storet No.**	**Concentration Limits (mg/L)**
Metals		
Antimony	01097	0.006
Arsenic	01002	0.010
Barium	01007	2.0
Beryllium	01012	0.004
Cadmium	01027	0.005
Chromium	01034	0.1
Cobalt	01037	1.0
Lead	01051	0.0075
Mercury	71900	0.002
Nickel	01067	0.1
Selenium	01147	0.05
Vanadium	01087	0.049
VOCs		
1,2-Dichloroethane	34531	0.005
1,3-Dichlorobenzene	34561	0.0002
1,4-Dichlorobenzene	34571	0.075
2-Butanone (MEK)	81595	4.2
Benzene	34030	0.005
Carbon Disulfide	77041	0.7
Chlorobenzene	34301	0.1
Chloroform	32106	0.0002
Ethylbenzene	78113	0.7
Toluene	34010	1.0
Total Xylenes	34020	10.0
Methyl Tertiary-Butyl Ether	46491	0.07
Styrene	77128	0.1
SVOCs		
2,4-Dimethylphenol	34606	0.14
2,4-Dinitrophenol	34616	0.014
2-Methylphenol (o-cresol)	77152	0.35
4-Methylphenol (p-cresol)	77146	0.035
4-Nitrophenol	34646	--
Anthracene	34220	2.1
Benzo(a)anthracene	34526	0.00013
Benzo(a)pyrene	34247	0.0002
Benzo(b)fluoranthene	34230	0.00018
Benzo(k)fluoranthene	34242	0.00017
Bis(2-ethylhexyl)phthalate	39100	0.006

Hazardous Constituents	Storet No.	Concentration Limits (mg/L)
Butyl benzyl phthalate	34292	1.4
Chrysene	34320	0.0015
Dibenzo(a,h)anthracene	34556	0.0003
Diethyl phthalate	34336	5.6
Dimethyl phthalate	34341	--
Di-n-butyl phthalate	39110	0.7
Di-n-octyl phthalate	34596	0.14
Fluoranthene	34376	0.28
Naphthalene	34696	0.14
Phenanthrene	34461	0.21
Phenol	34466	0.1
Pyrene	34469	0.21
Pyridine	77045	0.007

-- Not available

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.

   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 (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.

E. GROUNDWATER CORRECTIVE ACTION PROGRAM

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

1. The Permittee shall determine the groundwater quality for the Observation wells and the GMZ Boundary Wells designated in Condition III.D.1 for the hazardous constituents listed in Condition III.E.1 above.

2. In accordance with 35 IAC 620.250, a GMZ is a three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contaminants from the facility. The GMZ must be monitored and maintained as follows:

   a. The GMZ horizontal and vertical extent is monitored with program monitoring wells measuring concentrations of hazardous constituents in Condition III.D.1 in groundwater.

i. The following groundwater monitoring wells shall define the outermost horizontal extent of the approved GMZ: G005, G006, G008, G021, G023, G04R, G045, G055, G059, G062, R063, G067, G068, G073, G079, G084, G111, G112, G32R, G37, G5B, G35A, G35B, G500, G69R, G74L, G75L, G76L, G91, G92, G93L, H31B, RG36, R302, G303, G503, G504, G505.

ii. The vertical boundaries of the GMZ shall range from the approximate top of the uppermost aquifer (30 feet bgs) to the top of the bedrock surface at the BP Main Plant facility. As required by Condition IV.C.1.b, wells must be proposed to better define the vertical extent.

b. The results of monitoring the GMZ shall be submitted to the Illinois EPA semi-annually in accordance with the schedule found in Condition III.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 III.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. A Mann-Kendall trend analysis based on eight (8) quarters of data shall be submitted for Illinois EPA review and approval unless otherwise approved.

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 III.H must also be included.

3. The Groundwater 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 hazardous constituents released to groundwater as follows:

a. The pumping from the Gradient Control Wells (also referred to as Cone of Depression (COD) wells) shall maintain the cone of depression to ensure groundwater flow is adequately controlled in the uppermost aquifer, except as provided in Condition III.A.

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 III.I.2.

   a. A record of the amount of groundwater withdrawn each day by the Gradient Control Wells (COD wells).

   b. Quarterly monitoring of the piezometric head at wells identified in Condition III.C.1 and III.C.2 above to demonstrate that groundwater flow is properly controlled throughout the contaminated area requiring corrective action.

   c. The measured thickness of hydrocarbon product encountered at each well identified in Condition III.C.1 and III.C.2.

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 III.C.1.

7. The groundwater quality in the uppermost aquifer shall be monitored on a quarterly or semi-annual basis at each of the wells identified in Condition III.C.1, and submitted to the Illinois EPA semi-annually, as identified in Condition III.I.2.

8. If the groundwater gradient is not maintained, as required by Condition III.E.3, or contamination is migrating beyond the GMZ Boundary Wells, the Permittee shall submit an application for a permit modification, as required by Condition III.J.

9. Prior to making any changes on-site which might affect the overall program associated with controlling the groundwater flow as required by Condition III.E.3 of the permit (i.e., maintain and verify an inward gradient), the Permittee must obtain written permission from the Illinois EPA. Detailed information regarding the changes shall be submitted to the Illinois EPA at least 120 days prior to the date that the change is to be made. Disapproval or approval with modifications of any written requests for changes shall be subject to the appeal provisions of Section 40 of the Act.

10. The Permittee shall maintain all equipment associated with withdrawal and treatment of water withdrawn from the uppermost aquifer to adequately control groundwater flow. This includes maintenance of any pollution control equipment (i.e., air pollution and water pollution control equipment) necessary for these activities.

11. The Permittee must continue to pursue access to the off-site property where former wells G060 and G061 are located for the purposes of properly abandoning these wells. Once access to the property is obtained, the facility must submit certification that plugging and abandonment of the well(s) was carried out in accordance with the approved procedures to Illinois EPA and the appropriate State Agencies in accordance

with Condition III.C.6. Until the wells are abandoned, the status and details of any efforts must be reported in the reports required by Condition III.I.2.

12. In the event that the Permittee is unable to demonstrate an inward groundwater gradient based upon groundwater elevation data in the Southeast portion of the GMZ, and/or in the vicinity of Land Reuse Area 9 for the GMZ (western portion of the GMZ), during a monitoring event, the Permittee will take the following actions:

    a. The Permittee will review the groundwater quality data for the most recent sampling event for the Sentry Observation Monitoring Wells (G042R, G083R, G501, and G502) for the southeast corner of the GMZ, and/or Demonstration Wells (R032, R034, R035, and G304) for the vicinity of Land Reuse Area 9.

    b. If the groundwater quality data from the most recent sampling event for the Sentry Observation Monitoring Wells meets the permit-defined requirements for VOCs, the Permittee shall include a summary of the results in the semi-annual report required by Condition III.I.2.

    c. If the groundwater quality data from the most recent sampling event for the Sentry Observation Monitoring Wells or Demonstration Wells, does not meet permit-defined requirements for VOCs, the Permittee shall:

        i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.

        ii. Perform a "Resampling Event" for the Sentry Observation Monitoring Wells within thirty (30) days of the date the determination is made.

    d. If the groundwater quality data from the Resampling Event for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.c meets permit-defined requirements for VOCs, the Permittee shall include a summary of the results in the semi-annual report required by Condition III.I.2.

    e. If the groundwater quality data from the Resampling Event for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.c does not meet the permit-defined requirements for VOCs, the Permittee shall:

        i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.

        ii. Initiate "Contingency Monitoring" consisting of monthly groundwater gauging and monitoring for a period of three (3) months for the Southeast portion of the GMZ, and/or in the vicinity of Land Reuse Area 9, as follows:

1. For the Southeast portion of the GMZ, the groundwater gauging performed for Contingency Monitoring shall use at a minimum the following nine (9) monitoring wells in order to develop a groundwater flow gradient. For the southeast portion of the GMZ: wells G301, G305, R042, R083, G501, G502, G005, G92, and G112. For the vicinity of Land Reuse Area 9: wells R032, R034, R035, and G304.

2. For the vicinity of Land Reuse Area 9, the groundwater gauging and monitoring performed for Contingency Monitoring shall use at a minimum the following four (4) monitoring wells in order to develop a groundwater flow gradient for the vicinity of Land Reuse Area 9 of the GMZ: R032, R034, R035, and G304.

3. The Contingency Monitoring shall include monthly groundwater sampling for a period of three (3) months for the Sentry Observation Monitoring Wells R042, R083, G501, and G502 for the southeast area, and/or the Demonstration Wells R032, R034, R035and G304 for Land Reuse Area 9.

f. If the three (3) monthly groundwater gauging potentiometric maps from Contingency Monitoring demonstrate an inward gradient, and the groundwater quality data from the three (3) monthly sampling events for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.e.ii meets the permit-defined requirements for VOCs, the Permittee shall include a summary of the results in the semi-annual report required by Condition III.I.2.

g. If the monthly groundwater gauging potentiometric maps for Contingency Monitoring do not demonstrate an inward gradient, and the groundwater quality data from the sampling event for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.e.ii does not meet the permit-defined requirements for VOCs, the Permittee shall submit a written report to the Illinois EPA:

i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.

ii. Submit a written report to the Illinois EPA within thirty (30) days of the date the determination is made describing the actions to be taken.

iii. Install additional well(s) at locations approved by the Illinois EPA.

iv. Implement an Illinois EPA-approved groundwater monitoring program for the new wells on a monthly basis for three (3) months.

v. Evaluate Contingent Corrective Measures to address the potential for off-site contaminant migration from the southeast corner, including but not limited to, modification of pumping rates at the Gradient Control Wells, rehabilitation of one or more Gradient Control Wells to address loss of hydraulic capacity, supplemental groundwater investigation, and/or in-situ technologies.

h. Design and implement Contingent Corrective Measures approved by the Illinois EPA.

13. The Permittee shall operate, expand and use the Bioremediation Systems and/or other technologies approved by the Illinois EPA in order to remediate hydrocarbons and refinery product in accordance with Condition II.D of the Corrective Action Section of the Permit and 35 IAC Parts 620, 724, and 742. Historical information related to the development of these remediation systems is summarized in Attachment E. Current information related to the remediation activities of hydrocarbons and refinery product must be submitted within reports required by Condition II.M.1. A discussion must also be provided in reports required by Condition III.I.6.

14. Semi-annual evaluations for the indoor inhalation exposure route must be provided for exceedances of 35 IAC Part 620 and screening levels identified in Table H of Appendix B in 35 IAC Part 742 at the groundwater monitoring wells located at the property boundary and at any off-site locations. Screening levels for the current type of property use shall be used.

a. Identify any homes or buildings potentially impacted by the exceedance and evaluate, in accordance with 35 IAC Part 742, if the indoor inhalation pathway is complete by conducting site-specific evaluations based on the most recent water level, building-specific construction information if known, known occupancy and any other site-specific factors, as appropriate and applicable, at each building.

b. If the evaluation demonstrates that the indoor inhalation pathway is incomplete, the Permittee shall include the demonstration in the semi-annual report required by Condition III.I.2.

c. If the evaluation demonstrates that the indoor inhalation pathway is complete, the Permittee must submit the evaluation and propose additional corrective action within thirty (30) days of the discovery of the exceedance for the Illinois EPA review and approval.

d. A new evaluation is required for each sampling to determine whether screening levels are exceeded.

F. GROUNDWATER ELEVATIONS

1. The Permittee shall determine the groundwater surface elevation referenced to mean sea level (MSL) at each well at least quarterly and each time groundwater is sampled in accordance with Condition III.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 III.I.9.

3. Elevation, as referenced to MSL, of the bottom of each monitoring well (STORET 72020), is to be reported at least annually in accordance with Condition III.I.10. The mandatory measurement shall be taken during the second quarter sampling event each year.

G. SAMPLING AND ANALYSIS PROCEDURES

The Permittee shall follow the techniques and procedures described in Exhibit C-1 of the approved permit application, except as modified below, when obtaining and analyzing samples from the groundwater monitoring wells described in Condition III.C.1:

1. Samples shall be collected by the techniques described for low-flow sample collection in Section 2.2 of Exhibit C-1.

2. Samples shall be preserved, shipped and handled in accordance with the procedures specified in Section 2.2 of Exhibit C-1.

3. Samples shall be analyzed according to the procedures specified in Section 7 of Appendix B. Groundwater analysis must be in accordance with the most current version of the applicable methods found in USEPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," Third Edition (SW-846) and finalized updates.

4. Samples shall be tracked and controlled using the chain-of-custody procedures specified in Section 2.2 of Exhibit C-1.

H. STATISTICAL METHODS

The Permittee shall evaluate the quality of groundwater samples collected during semi-annual sampling events identified in Condition III.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 III.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 III.D.1, in accordance with Exhibit C-3 of the approved permit application.

b. The results of the statistical evaluations shall be discussed and included within the required 5-year GMZ Evaluation reports required by Condition III.I.11.

I. REPORTING AND RECORDKEEPING

1. The Permittee shall enter all monitoring, testing and analytical data obtained in accordance with Conditions III.D, III.E, and III.F into the operating record.

2. Samples collected to meet the requirements of the groundwater monitoring program described in Conditions III.D. and III.E shall be collected and reported as identified in the table below. The results of the analyses conducted on the groundwater quality samples shall be submitted in accordance with this schedule. All additional data collected for the groundwater monitoring program as specified in Conditions III.D, III.E and III.F shall also be submitted to the Illinois EPA in accordance with this schedule.

Sampling Event of Calendar Year	Samples to be Collected During the Months of	Results Submitted to the Illinois EPA by the Following
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 III.F.1, shall be collected at least quarterly and submitted to the Illinois EPA as identified in Condition III.I.2.

4. Groundwater withdrawal rates collected and calculated pursuant to Condition III.E.5.a shall be submitted semi-annually in accordance with the schedule identified in Condition III.I.2.

5. Gradient control measurements collected pursuant to Condition III.E.5.b shall be collected at least quarterly and submitted to the Illinois EPA semi-annually as identified in Condition III.I.2.

6. Free product thickness data measured pursuant to Condition III.E.5.c, and reduction of hydrocarbons and refinery product data collected in accordance with Condition II.D of the Corrective Action Section, shall be collected at least quarterly and submitted to the Illinois EPA as identified in Condition III.I.2. Reporting information must also be included in Corrective Action Progress Reports required by Condition II.M.1.

7. The groundwater flow rate and direction, determined pursuant to Condition III.E.6, shall be submitted annually as a part of the first and second semi-annual reports as identified in Condition III.I.2.

8. Groundwater quality samples collected to meet the requirements of Condition III.E.1 shall be collected semi-annually and submitted to the Illinois EPA as identified in Condition III.I.2. The extent of dissolved contamination must be depicted on figures as needed to define the extent of contamination.

9. The Permittee shall report the surveyed elevation, as required by Condition III.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 III.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 III.C.1, referenced to MSL, is to be reported annually. This measurement shall be taken during the second quarter sampling event (Storet 72020).

11. Statistical evaluations, as required by Condition III.H, shall be submitted to the Illinois EPA as a part of the required 5-year GMZ Evaluation reports required by Condition III.E.2.e.

12. Information required by Conditions III.I.2, III.I.3, III.I.9 and III.I.10 must be submitted in an electronic format. The information is to be submitted as fixed-width text files formatted as found in the form, "Formatting Requirements for the 01 (and 02) Record of the Electronically Submitted Groundwater and Leachate Data" (LPC 160) located on the Illinois EPA website and in accordance with the schedule found in Condition III.I.2. Additional guidance regarding the submittal of the information in an electronic format can be found at the Illinois EPA website.

13. 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 the 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 to the Illinois EPA. The form is not to be used for permit modification requests.

14. 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.

15. The Permittee shall submit a written report to the Illinois EPA, in accordance with the schedule found in Condition III.I.2, which discusses the effectiveness of the Groundwater Corrective Action Program. At a minimum, the report must:

    a. Address the information requirements in Conditions III.C, III.D, III.E and III.F.

    b. Evaluate the effectiveness of the hydraulic control and contaminant removal from the GMZ including the information required by Condition III.D.

    c. Provide a discussion of any change in the quality of groundwater beneath the facility which has resulted from the corrective action.

16. If the Permittee evaluation, when required by Condition III.E.12, determines verification of contaminant control is necessary due to a lack of inward gradient, the Permittee will complete the following reporting and notification requirements in III.E.12:

    a. Notify the Illinois EPA in writing within seven (7) days of the date the determination resampling is required.

    b. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made Contingency Monitoring is required.

    c. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made Contingency Monitoring does not meet the requirements for inward gradient and the permit-defined requirements for VOCs, the Permittee shall take steps to implement additional corrective measures as outlined in Condition III.E.12.g, and:

        i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.

        ii. Submit a written report to the Illinois EPA within thirty (30) days describing the actions to be taken.

        iii. Take necessary actions to meet applicable groundwater standards at GMZ Boundary wells.

17. If the indoor inhalation exposure route evaluation required by Condition II.E.14 demonstrates that the indoor inhalation pathway is complete, the Permittee must submit the evaluation and propose additional corrective action within thirty (30) days of the discovery of the exceedance for the Illinois EPA review and approval

18. If the Permittee determines that groundwater flow is not being adequately controlled, and/or the contaminant control evaluations indicate contaminants are migrating beyond the GMZ boundaries, 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 III.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 Groundwater Corrective Action Program required by this permit no longer satisfies the requirements of 35 IAC 724.201, the Permittee must, within ninety (90) days, submit an application for permit modification to the Illinois EPA, Bureau of Land, Permit Section, 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 IV: SPECIAL CONDITIONS

A. REQUIRED FORMS

1. 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.

2. The Permittee shall submit a current 39(i) certification and supporting documentation with all applications for a permit.

Note: If the Permittee desires to add additional staff as delegated signatories for future modifications, certifications, etc., the Permittee must meet the requirements of 35 IAC 702.126 and the delegated signatory individuals should also send in an individual 39(i) 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 renewed RCRA corrective action permit.

   b. All permit applications and permit modification requests.

   c. All Illinois EPA responses to modification requests made to the RCRA corrective action permit (Log No. B-147R2).

C. COMPLIANCE SCHEDULE

1. The following revisions must be met with regards to groundwater:

   a. Within ninety (90) days of the effective date of this permit, install a new or replacement well or well pairs for G078, G030, G97L, and G87L to monitor the previously screened interval. It is noted only G078 no longer exists because the well was damaged.

   b. Within ninety (90) days of the effective date of this permit, propose monitoring wells with screens positioned to adequately define the vertical boundary of the GMZ in Condition II.E.2.a.

   c. A Water Well Survey (WWS) must be provided within ninety (90) days of the effective date of this permit to include a WWS as described in 35 IAC 1600.210 and the guidance document entitled, "Well Survey Procedures at Bureau of Land Permitted Facilities" provided as Attachment G to the permit.

2. The Permittee must prepare and submit 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 ninety (90) days of the date of the effective date of this permit, as required in accordance with 35 IAC 724.201. This cost estimate must include a minimum of 10% contingency for all items necessary to complete corrective action.

SECTION V: 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 (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. (35 Illinois Administrative Code (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 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 Act and is grounds for enforcement action; permit revocation or modification; or for denial of a permit renewal application. (35 IAC Code 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 include 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 35 IAC 721, Appendix A. 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 three (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 IAC 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. 1. The Illinois EPA has inspected the modified or newly constructed facility and finds it is in compliance with the condition of the permit; or

2. If, within fifteen (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 ninety (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 human health or the environment. Any such information shall be reported orally within twenty-four (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 HWM 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 five (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 (5) day written notice requirement in favor of a written report within fifteen (15) days. (35 IAC .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 16, 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. 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 Agency
Bureau of Land
Permit Section - #33
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

24. 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 .151)

25. CONFIDENTIAL INFORMATION. Any claim of confidentiality must be asserted in accordance with 35 IAC 702.103 and 35 IAC Part 161.

26. 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. Post-closure plan as required by 35 IAC 724.218(a) and this permit.

b. Cost estimate for facility closure as required by 35 IAC 724.242(d) and this permit.

c. Operating record as required by 35 IAC 724.173 and this permit.

d. Inspection schedules as required by 35 IAC 724.115(b) and this permit.

GENERAL FACILITY STANDARDS

27. GENERATOR REQUIREMENTS. Any hazardous waste generated at this facility shall be managed in accordance with the generator requirements at 35 IAC Part 722.

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

29. 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).

30. 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

31. 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)

32. 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.

33. 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)

34. ACCESS TO COMMUNICATIONS OR ALARM SYSTEM. The Permittee shall maintain access to the communications or alarm system as required by 35 IAC 724.134.

35. REQUIRED AISLE SPACE. The Permittee shall maintain aisle space as required by 35 IAC 724.135 and National Fire Protection Association (NFPA) requirements.

36. 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.

RECORD KEEPING

37. OPERATING RECORD. The Permittee shall maintain a written operating record at the facility in accordance with 35 IAC 724.173.

POST-CLOSURE

38. 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.

39. 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).

40. 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 sixty (60) days prior to each anniversary of the date on which the first closure cost estimate was prepared or if using the financial test or corporate guarantee, within thirty (30) days after close of the firm's fiscal year.

    b. Revised whenever there is a change in the facility's post-closure plan increasing the cost of closure.

    c. Kept on record at the facility and updated. (35 IAC 724.244).

    d. Maintained at the value approved by the Illinois EPA with annual adjustment for inflation and cannot be decreased unless approved by the Illinois EPA in a permit modification.

41. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE. The Permittee shall demonstrate compliance with 35 IAC 724.245 by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by Standard Condition 35. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 IAC 724.245.
    Financial assurance documents submitted to the Illinois EPA should be directed to the following address:

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

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

SECTION VI: REPORTING AND NOTIFICATION REQUIREMENTS

The reporting and notification requirements of each section of the 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.

Condition	Action	Due Date
Section II: Corrective Action		
H.4	Submit Phase I CMP Workplan.	Within 90 days of notification from Illinois EPA
I.1	Notification of Newly Identified SWMU/AOCs.	Within 30 days of discovery
I.3	Submittal of Assessment Plan for Newly Identified SWMU.	Within 90 days of request for plan from Illinois EPA
I.5	Submittal of SWMU Assessment Report for Newly Identified SWMU.	In accordance with schedule in assessment plan
J	Notification of Release from Existing SWMU.	Within 30 days of discovery
II.M.2	Annual Cost Estimate for Corrective Action	January 1 each year
II.L.1	Quarterly Corrective Action Progress Report: January – March April – June July-September October – December	 May 1 August 1 November 1 March 1
II.L.2	Annual Report of Corrective Action Program Activities with Quarterly Report for October-December	March 1 of each year
II.L.3	Final Report for each parcel/area	As corrective action is completed
Section III: Groundwater Corrective Action Program		
C.3	Notification that well has been damaged or its structural integrity compromised.	Within 30 days of identification
C.5	Boring logs, construction diagrams and datasheets from installation and development of new/replaced well.	Within 30 days after well installed

C.2 General schedule for collection and reporting of groundwater data:

Sampling Event of Calendar year	Collected During the Months of	Results Submitted to the Illinois EPA by the Following
First Quarter	January-February	August 1
Second Quarter	April-May	August 1

	Third Quarter July-August February 1 Fourth Quarter October-November February 1	
I.3	Groundwater surface elevation data.	Quarterly as set forth in Condition III.I.2
I.4	Groundwater withdrawal rates.	Quarterly as set forth in Condition III.I.2
I.5	Gradient control measurements.	Semi-annually as set forth in Condition III.I.2
I.6	Free product thickness.	Semi-annually as set forth in Condition III.I.2 and quarterly per Condition II.M.1.
I.7	Groundwater flow rate and direction.	Annually as set forth in Condition III.I.2
I.8	Groundwater quality results.	Semi-annually as set forth in Condition III.I.2
I.9	The surveyed elevation of the top of well casing.	Every 5 years
I.10	Elevation of the bottom of each monitoring well.	Second quarter as set forth in Condition III.I.2
I.11	Report every 5 years the summary of annual statistical calculations	Every 5 years within GMZ evaluations
I.12	Electronic reporting of groundwater data	Semi-annually as set forth in Condition III.I.2
I.15	Report to Illinois EPA on effectiveness of corrective action program.	By August 1 of each year
I.16.a	Contaminants in Sentry Observation Wells or Demonstration Wells require resampling	Within 7 days of the determination
I.16.b	Contingency Monitoring is required	Within 7 days of the determination
I.16.c.i	Gradient is not maintained and VOCs are not met	Within 7 days of the date the determination is made
I.16.c.ii	Notify the Illinois EPA in writing describing the actions to be taken	Within 30 days
I.17	Submit an evaluation of the indoor inhalation pathway and propose additional corrective action.	Within 30 days of the discovery
I.18.a	Notify the Illinois EPA in writing that groundwater flow is not being adequately controlled	Within 7 days of the date the determination is made
I.18.b	Submit a report to Illinois EPA describing the actions taken to regain control of groundwater flow.	Within 30 days
I.18.c	Submit a request for permit modification to Illinois EPA describing	Within 60 days

	any changes to the corrective action program to regain control of groundwater flow.	
J.1	Modification of groundwater corrective action program.	Within 90 days of determination existing program does not meet the requirements of 35 IAC 724.201
Section IV: Special Conditions		
A.1	Submit LPC-PA23 form.	With all additional information, permit modifications, and permit applications
A.2	Submit 39i certification form.	With all permit applications
Section V: Standard Conditions		
6	Submit complete application for new permit	At least 180 days prior to permit expiration
11	Information requested by Illinois EPA and copies of records required to be kept by this permit.	Reasonable time
14	Notify Illinois EPA of planned physical alterations or additions.	As soon as possible
16	Notify Illinois EPA of changes which may result in permit noncompliance.	Advanced written notice to the Illinois EPA
17	Application for permit modification indicating permit is to be transferred.	90 days prior to change in ownership
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
21	Report all other instances of noncompliance.	At the time monitoring reports are submitted
34	Application for permit modification amending post-closure plan.	60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred
35.a	Adjust post-closure cost estimates for inflation.	Within 60 days before anniversary date, or within 30 days after close of the firm's fiscal year.

35.b	Revision post-closure cost estimates.	As needed, within 90 days of discovery of revision
36	Change in financial assurance mechanism for post-closure.	As needed
37	Notify Illinois EPA of commencement of voluntary or involuntary bankruptcy proceedings.	Within 10 days after commencement of proceeding

ATTACHMENTS

ATTACHMENT A

IDENTIFICATION OF APPROVED PERMIT APPLICATION

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT A

IDENTIFICATION OF APPROVED PERMIT APPLICATION

1. RCRA Post-Closure Renewal Application (Log No. B-147R2) dated October 8, 2020.
2. Additional Information for B-147R2- Replacement Pages submitted 1) Condition C.8.1.5 – Page 13 and 2) Exhibit C-1, Table 1- Page 4, dated April 28, 2022.
3. Time extension request for submittal of a response to the IEPA RCRA Permit Renewal Application NOD letter, dated July 5, 2024.
4. "Response to Illinois EPA Comments dated July 18, 2024" dated August 1, 2024.
5. Additional Information for B-147R2. Replacement pages, for Section C, dated August 29, 2024.

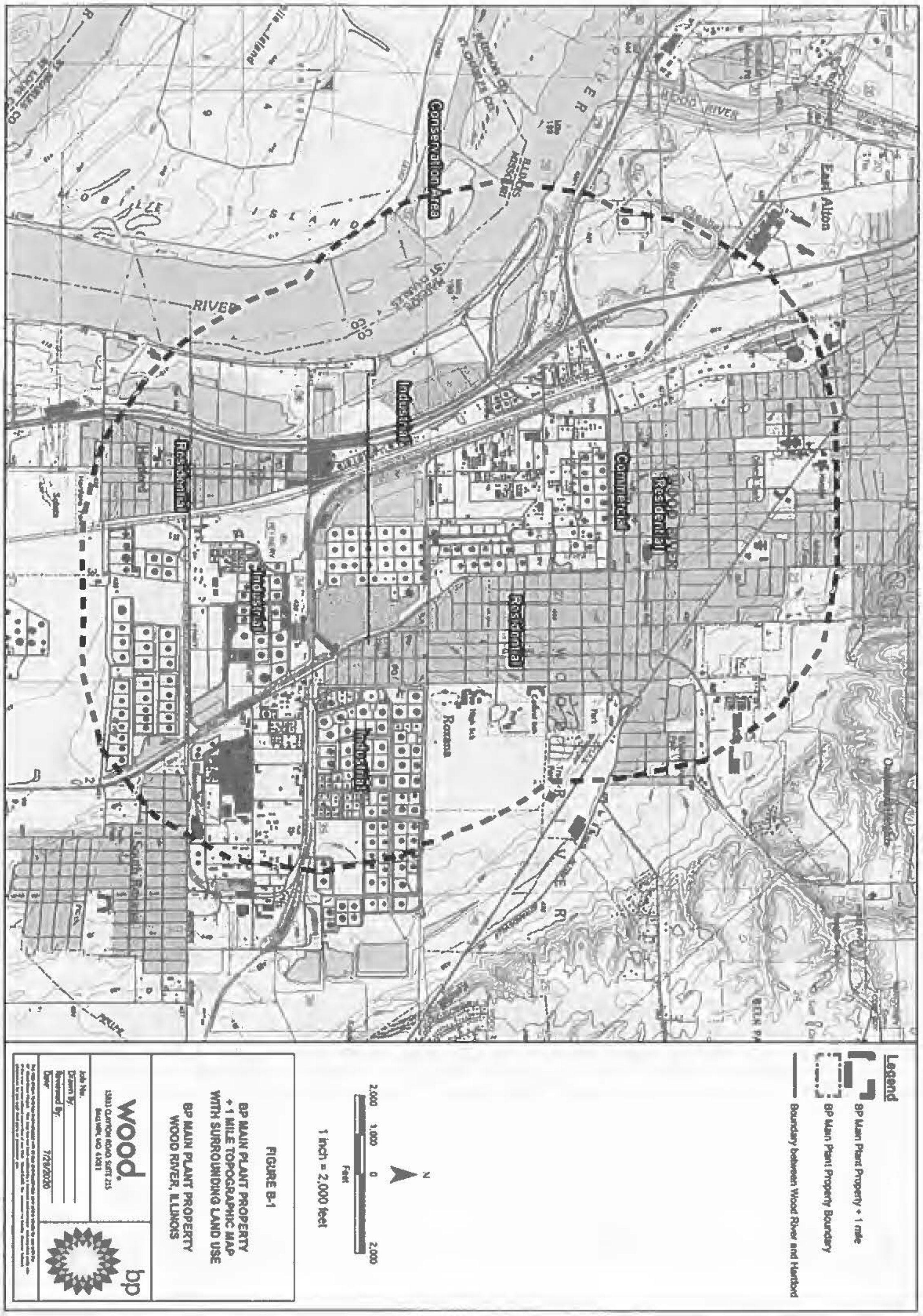
ATTACHMENT B

LOCATION MAP & DRAWING OF PERMITTED UNITS

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2


Conservation Area
Industrial
Residential
Commercial
Residential
Residential
Industrial
Industrial
South Roxana
Roxana
East Alton
Legend
BP Main Plant Property + 1 mile
BP Main Plant Property Boundary
Boundary between Wood River and Hartford
1 inch = 2,000 feet
FIGURE B-1
BP MAIN PLANT PROPERTY + 1 MILE TOPOGRAPHIC MAP WITH SURROUNDING LAND USE
BP MAIN PLANT PROPERTY WOOD RIVER, ILLINOIS
wood.
bp
7/29/2020

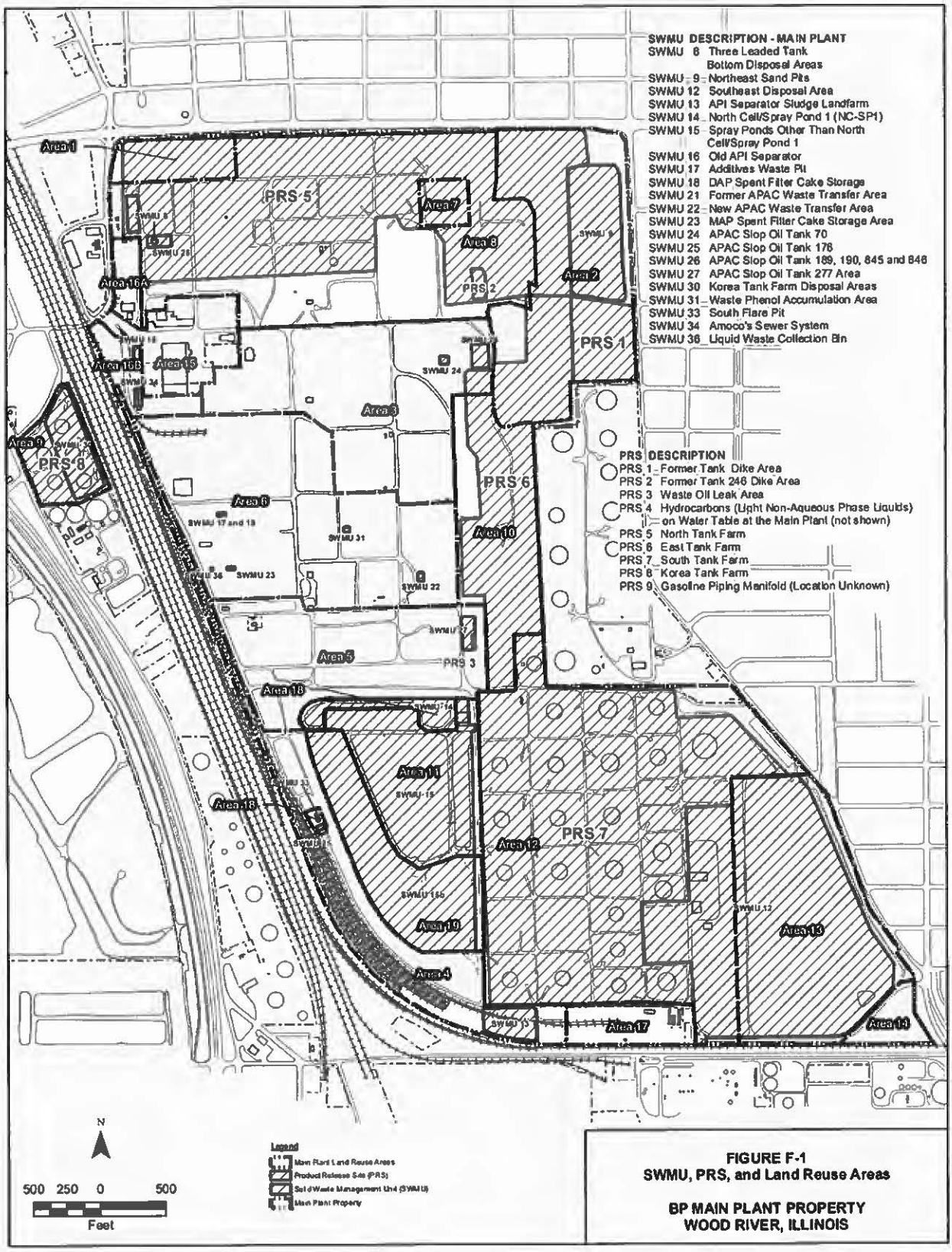
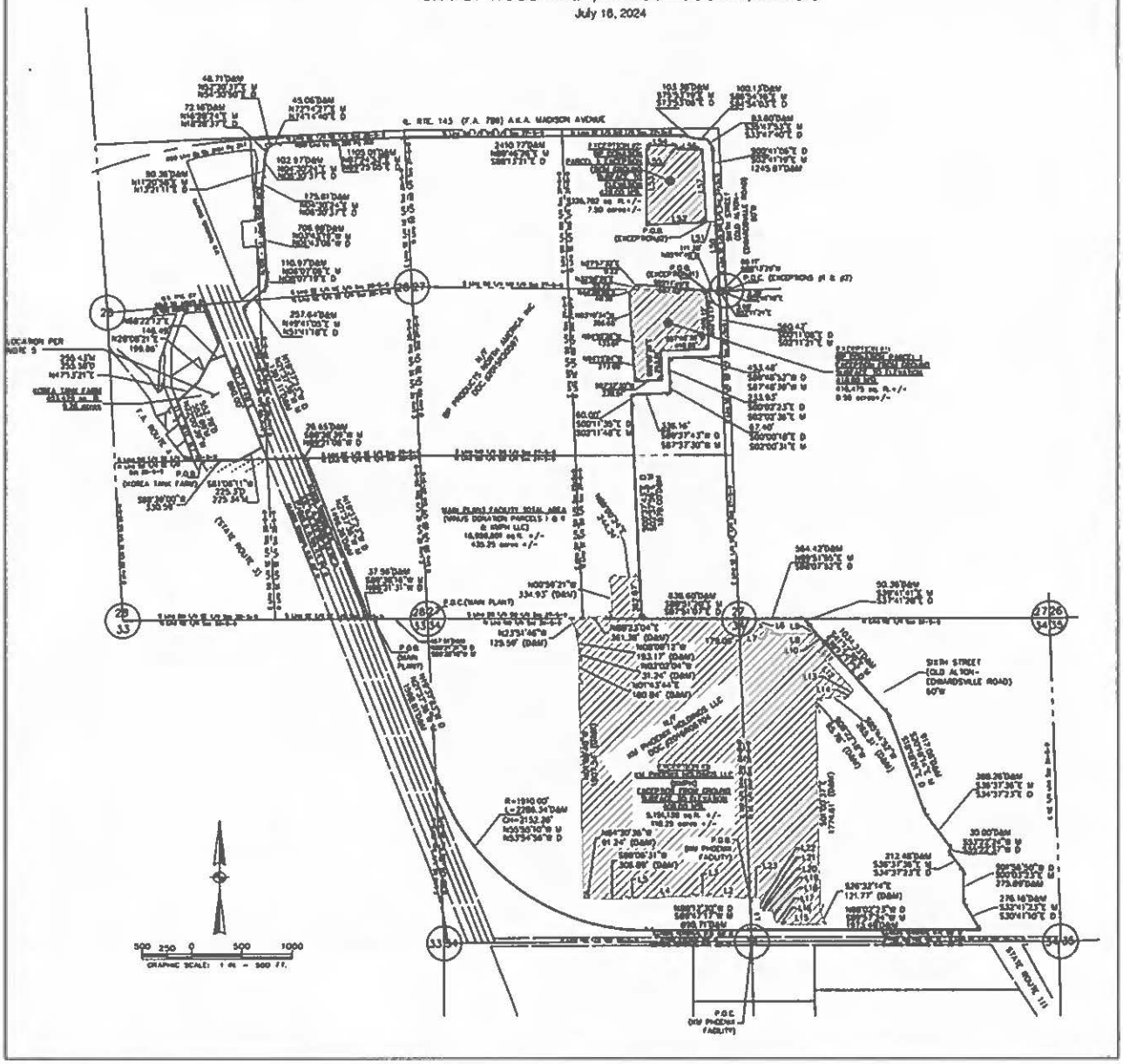


FIGURE F-1
SWMU, PRS, and Land Reuse Areas

BP MAIN PLANT PROPERTY
WOOD RIVER, ILLINOIS

EXHIBIT: B.P. AMOCO MAIN PLANT AND TANK FARM WITH
DONATION PARCEL EXCEPTIONS PARCEL I & PARCEL II AND KINDER MORGAN PHOENIX HOLDINGS, LLC EXCEPTION
BEING PART OF SECTIONS 27, 28, 33 AND 34, ALL IN TOWNSHIP 5 NORTH, RANGE 9 WEST OF THE THIRD PRINCIPAL MERIDIAN
CITY OF WOOD RIVER, MADISON COUNTY, ILLINOIS
July 16, 2024



ATTACHMENT C

SUMMARY OF CORRECTIVE ACTION SUBMITTALS

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT C

SUMMARY OF CORRECTIVE ACTION SUBMITTALS

The table below summarizes the plans/reports/documents submitted to Illinois EPA regarding the corrective action efforts at the BP/Main Plant facility in Wood River, Illinois.

Note:

CCR = Current Conditions Report
GMZ = Groundwater Management Zone
NC-SP1 = North Cell of Spray Pond 1
RFI = RCRA Facility Investigation
SFP = South Flare Pit
SSI = Statistically Significant Increase

Log No.	Submittal	Status
B-147	RCRA Permit issued to facility, Section IV contains corrective action requirements.	Approved September 30, 1993
B-147	Proposed GMZ	Approved April 6, 1994
B-147-CA-1	RFI Phase I workplan	Approved September 7, 1994
B-147-CA-2	RFI Phase I report	Approved June 5, 2001
B-147-CA-3	Supplemental RFI Phase I report	Approved June 5, 2001
B-147-CA-4	Conceptual RFI Phase II/III workplan	Superseded by CA-7
B-147-CA-5	Investigation Workplan for Areas 1 and 2	Approved August 15, 2000
B-147-CA-6	Engineered Barrier Specification Report	Superseded by CA-9
B-147-CA-7	RFI Phase II/III workplan	Approved February 5, 2002
B-147-CA-8	Human Exposures Controlled (CA725) Demonstration	Superseded by CA-12
B-147-CA-9	Engineered Barrier Specification Report	Approved August 3, 2001
B-147-CA-10	"Comfort Letter" request for soils in Area 1	Approved July 9, 2001
B-147-CA-11	No Further Action Determination for Area 1	Approved December 5, 2001
B-147-CA-12	Human Exposures Controlled (CA725) Demonstration	Approved October 9, 2001

Log No.	Submittal	Status
B-147-CA-13	Request to incorporate two releases in Area 12 into corrective action program	Superseded by CA-16
B-147-CA-14	NFA for Area 2	Approved August 13, 2002
B-147-CA-15	Groundwater action Releases Under Control (CA750) Demonstration	Approved March 18, 2002
B-147-CA-16	Request to Incorporate two releases in Area 12 into corrective action program	Approved September 13, 2002
B-147-CA-17	CCR/Characterization Workplan for Area 4	Approved January 10, 2002
B-147-CA-18	GMZ Re-Evaluation	Approved March 13, 2002
B-147-CA-19	CCR/Characterization Workplan for Area 19	Approved March 20, 2002 (soils); April 9, 2002 (groundwater)
B-147-CA-20	CCR/Characterization Workplan for Area 15	Approved March 20, 2002 (soils); April 9, 2002 (groundwater)
B-147-CA-21	City of Wood River Ordinance and MOU to restrict groundwater use	Approved March 28, 2002
B-147-CA-22	CCR/Characterization workplan for Area 9	Approved September 5, 2002
B-147-CA-23	Modifications to Approved Phase II/III RFI workplan (CA-7)	Approved June 21, 2002
B-147-CA-24	CCR/Characterization Workplan for Area 6	Approved September 5, 2002
B-147-CA-25	CCR/Characterization workplan for Area 5	Approved September 27, 2002
B-147-CA-26	Revised CCR/Characterization workplan for Area 15	Approved September 27, 2002
B-147-CA-27	CCR/Characterization Workplan for Area 3	Approved September 27, 2002
B-147-CA-28	Comments on IEPA's January 10, 2002 letter regarding Area 4 (CA-17)	Approved September 5, 2002
B-147-CA-29	Draft ELUC for Area 1	Approved January 10, 2003

Log No.	Submittal	Status
B-147-CA-30	Investigation Report for Area 4	Approved August 22, 2003
B-147-CA-31	Investigation Report for Area 15	Approved November 19, 2003
B-147-CA-32	Revised Corrective Action Schedule	Approved February 7, 2003
B-147-CA-33	CCR/Characterization Workplan for Area 7/8	Approved August 7, 2003
B-147-CA-34	Revised Corrective Action Schedule	Superseded by B-147-CA-45
B-147-CA-35	Report on soil removal activities in Area 2	Approved August 11, 2003
B-147-CA-36	Area 15 Report-Addendum 1	Approved November 19, 2003
B-147-CA-37	Area 15 Report-Addendum 2	Approved November 19, 2003
B-147-CA-38	Extension request for submitting Area 12 CCR/Workplan	Approved December 30, 2004
B-147-CA-40	Draft ELUC for Area 2	Approved January 29, 2003
B-147-CA-41	CCR/Characterization Workplan for Area 10	Approved June 4, 2003
B-147-CA-42	Soil Removal Activities Report at Area 15	Approved June 16, 2004
B-147-CA-43	Draft ELUC for Area 15	Approved August 23, 2004
B-147-CA-44	Soil Removal Activities Report at Area 4	Approved September 15, 2004
B-147-CA-45	Revised Corrective Action Schedule	Approved December 30, 2004
B-147-CA-46	Recorded ELUC for Area 15	Approved September 29, 2005
B-147-CA-47	Draft ELUC for Area 4	Approved June 1, 2005
B-147-CA-48	Recorded ELUC for Area 1	Approved March 25, 2005
B-147-CA-49	Recorded ELUC for Area 2	Approved March 29, 2005
B-147-CA-50	Updated RFI Phase II/III Project Plan Schedule	Approved September 21, 2005
B-147-CA-51	2004-05 CCR Phytoremediation/Landfarming Remedial Measures at Tank 293	Approved December 29, 2005

Log No.	Submittal	Status
B-147-CA-52	Recorded ELUC for Area 4	Approved September 29, 2005
B-147-CA-53	Submittal regarding facility's GMZ	Approved January 24, 2006
B-147-CA-54	Summary of Phytoremediation/Landfarming Remedial Measures at Tank 293	Approved August 11, 2008
B-147-CA-55	Reevaluation of GMZ	Approved January 21, 2009
B-147-CA-56	Updated RFI Phase II/III Project Plan Schedule	Superseded by B-147R
B-147-CA-57	Investigation Report for Area 3	Soil comments e-mailed by IEPA February 25, 2008
B-147-CA-58	Investigation Report for Area 5	Disapproved June 22, 2007
B-147-CA-59	Investigation Report for Area 6	Superseded by B-147R-CA-29
B-147-CA-60	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are from alternate source	Approved January 6, 2009
B-147-CA-61	Underground Piping Investigation Work Plan	Approved April 4, 2007 (eventually superseded by CA-90)
B-147-CA-62	Re-evaluation of GMZ	Approved January 21, 2009
B-147-CA-63	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are from alternate source.	Approved January 6, 2009
B-147-CA-64	Underground Piping Work Plan for 7 and 8 Areas	Superseded by CA- 90
B-147-CA-65	Investigation Report for Area 19	Approved December 6, 2007
B-147-CA-66	Draft White Paper – Property Transfer Process	Approved March 31, 2009
B-147-CA-67	Demonstration that detection monitoring SS1s at NC-SP1 and SFP are from alternate source.	Approved January 6, 2009
B-147-CA-68	Information regarding two releases in Area 8	Approved August 13, 2007

Log No.	Submittal	Status
B-147-CA-69	Addendum to Area 5 Report	On January 30, 2009, IEPA required additional investigation be conducted in Area 5.
B-147-CA-70	Supplemental Report for Soil Sampling of NC-SP1 and SFP	Approved January 7, 2008 (NFA determination made for NC-SP1; additional work required for SFP).
B-147-CA-71	Area 5 Land Reuse Investigation Report	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA-72	Corrective Action Excavation in Area 5	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA-73	Area 5 Analytical Reports for Perched Groundwater	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA-74	2007 Annual Current Conditions Report – Phytoremediation at Tank 293	Approved August 11, 2008
B-147-CA-75	Area 5 Land Reuse Inventory Report and closure Plan, Revision 1	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA- 76	Area 10 Land Reuse Investigation and Closure Plan	Superseded by B-147R-CA-4
B-147-CA-77	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are from alternate source	Approved January 6, 2009
B-147-CA-78	Comments on IEPA's December 6, 2007 letter regarding the Area 19 Land Reuse Investigation Report and Closure Plan (CA-65)	Approved April 13, 2009
B-147-CA-79	Area 9 Land Reuse Report	Superseded by B-147R-CA-15
B-147-CA-80	Site-Wide Class II GW Determination	Disapproved December 17, 2012
B-147-CA-81	Area 7/8 Land Reuse Investigation Report and Closure Plan	Superseded by B-147R-CA-27
B-147-CA-82	2007 Annual Current Conditions Report, Phytoremediation/Landfarming at Tank 293	Approved August 11, 2008

Log No.	Submittal	Status
B-147-CA-83	Additional information regarding two releases in Area 8 (see CA-68)	Received June 4, 2008
B-147-CA-84	Area 16 CCR/Characterization Workplan	Approved May 5, 2009
B-147-CA-85	Demonstration that detection monitoring SS1s at NC-SP1 and SFP are from alternate source.	Approved January 6, 2009
B-147-CA-86	Area 17 CCR/Characterization Workplan	Approved May 5, 2009
B-147-CA-87	Underground Pipeline Work Plan	Superseded by B-147-CA-90
B-147-CA-88	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved January 6, 2009
B-147-CA-89	Additional information regarding Area 5 Investigation Report	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA-90	Underground Product Pipeline Investigation Workplan – Revision 1	Approved April 13, 2009
B-147-CA-91	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of renewal permit.
B-147-CA-92	Response to Comments, Area 6 Land Reuse Investigation Report	Superseded by B-147R-CA-21
B-147-CA-93	CCR for Phytoremediation/Landfarming	Approved November 20, 2009
B-147-CA-94	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-95	Requested changes to IEPA's April 13, 2009 approval of the Underground Product Pipeline Investigation Workplan	Approved July 6, 2009
B-147-CA-96	Letter Regarding Vertical Parceling	Approved March 3, 2010
B-147-CA-97	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).

Log No.	Submittal	Status
B-147-CA-98	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-99	Proposal to evaluate: (1) the hydrocarbon recovery system at facility; and (2) arsenic impacts in Well RG36	Approved February 24, 2010
B-147-CA-100	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-101	Shallow investigation of South Flare Pit.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-102	Current Condition Report for phytoremediation landforming at Tank 293.	Approved July 12, 2011
B-147-CA-103	Demonstration that detection monitoring statistical increases are not due to significant changes in groundwater quality.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-104	Response to request for improvement to hydrocarbon recovery system.	Approved August 31, 2011
B-147-CA-105	Demonstration that detection monitoring statistical increases are not due to significant changes in groundwater quality.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-106	Response to February 24, 2010 letter requiring improvements to hydrocarbon recovery system.	Approved August 31, 2011.
B-147-CA-107	Site-wide Geology Report and cone penetrometer logs.	Approved December 17, 2012
B-147-CA-108	Demonstration Regarding SSIs for NCSP1/SFP (2Q10)	Approved August 31, 2011
B-147-CA-109	SSI Demonstration for SFP (3Q10)	Approved August 31, 2011
B-147R	Renewed RCRA Permit	Approved March 4, 2011
B-147R-CA-1	2010 Report for Phytoremediation/Landfarming at Tank 293	Approved July 12, 2011

Log No.	Submittal	Status
B-147R-CA-2	Submittal Regarding GMZ Boundary Wells	Approved August 31, 2011
B-147R-CA-3	Area 11 CCR/Characterization Workplan	Approved January 24, 2012
B-147R-CA-4	Area 10 Comprehensive Report	Received May 5, 2011
B-147R-CA-5	Information Regarding the Arsenic Levels at Monitoring Wells RG36	Approved October 29, 2013
B-147R-CA-6	Draft ELUC for Donation Parcel in Area 2	Approved November 3, 2011 (see also B-147R-CA-12)
B-147R-CA-7	Draft ELUC for Area 2, excluding Donation Parcel	Superseded by B-147R-CA-11
R B-147-CA-8	Additional Information Regarding the Arsenic Levels at Monitoring Well RG36	Disapproved October 29, 2013
B-147R-CA-9	Draft ELUC for South Flare Pit	Superseded by B-147R-CA-18
B-147R-CA-10	Area 13 CCR/Characterization Work Plan	Approved October 26, 2012
B-147R-CA-11	Draft ELUC for Area 2, Excluding Donation Parcel	Approved November 3, 2011
B-147R-CA-12	Draft ELUC for Donation Parcel in Area 2	Approved November 3, 2011
B-147R-CA-13	Area 14 CCR/Characterization Workplan	Approved July 12, 2012
B-147R-CA-14	Response to August 31, 2011 IEPA letter (see R-CA-2)—improvements to HRS and GMZ	Approved October 29, 2013
B-147R-CA-15	Area 9 Comprehensive Report	Received December 15, 2011
B-147R-CA-16	Recorded ELUC for Donation Parcel in Area 2	Approved March 13, 2012
B-147R-CA-17	Recorded ELUC for Area 2, excluding Donation Parcel	Approved February 27, 2012
B-147R-CA-18	Revised Draft ELUC for South Flare Pit	Approved August 11, 2014
B-147R-CA-19	Area 5 Comprehensive Report	Received February 2, 2012

Log No.	Submittal	Status
B-147R-CA-20	2011 Report for Phytoremediation-Landfarming Project at Tank 293	Approved December 21, 2012
B-147R-CA-21	Area 6 Report	Received March 16, 2012
B-147R-CA-22	GMZ Re-Evaluation	Approved October 29, 2013
B-147R-CA-23	Site-Wide Class 2 Groundwater Demonstration	Approved December 17, 2012
B-147R-CA-24	Area 3 Current Conditions Report/Characterization Plan	Received May 10, 2012
B-147R-CA-25	Area 17 comprehensive land reuse investigation report and remediation plan	Received October 25, 2012
B-147R-CA-26	Extension request for submittal of response to 12/17/12 letter re: sitewide Class 2 Groundwater demonstration and cone penetration test.	Approved December 3, 2014
B-147R-CA-27	Area 7/8 comprehensive land reuse investigation report and remediation plan	Received December 17, 2012
B-147R-CA-28	Response to comments for the sitewide class 2 groundwater demonstration	Approved December 3, 2014
B-147R-CA-29	2012 annual current condition report: phytoremediation/landfarming remedial measures at Tank 293.	Approved November 13, 2013
B-147R-CA-30	Extension Request for Information Required by IEPA's Response to B-147R-CA-22	Approved February 9, 2016
B-147R-CA-31	Area 2 donation parcel ii current conditions rpt/vapor intrusion wp	Superseded by B-147R-CA-35
B-147R-CA-33	Response to 10/29/13 letter (condition 2.3(iv))	Approved February 9, 2016
B-147R-CA-34	Tank 293 annual current conditions report	Approved December 3, 2014
B-147R-CA-35	Area 2 donation parcel ii current conditions rpt and vapor intrusion wp.	Approved October 24, 2014
B-147R-CA-36	Response/schedule to 10/29/13 letter and 12/19/13 meeting	Approved June 10, 2014
B-147R-CA-37	Updated financial assurance cost estimates	Approved August 2, 2017

Log No.	Submittal	Status
B-147R-CA-38	Extension request to respond to IEPA's 12/29/13 letter	Approved June 10, 2014
B-147R-CA-39	Response to IEPA 2/14/13 email comments on the Area 9 Investigation Report (B-147R-CA-15)	Received May 5, 2014
B-147R-CA-40	Information Re: Existing HRS	Approved April 4, 2016
B-147R-CA-41	Updated Regarding HRS Evaluation	Approved April 4, 2016
B-147R-CA-42	Updated Regarding the Cone of Depression (COD) Evaluation	Approved January 19, 2016
B-147R-CA-43	Information Regarding filing ELUC	Approved October 27, 2015
B-147R-CA-44	Extension Request (GW)	Approved July 18, 2017
B-147R-CA-45	Area 16 Investigation Report and Remediation Plan	Approved June 14, 2016
B-147R-CA-46	Response to Comments Regarding Site-Wide Class II GW Demonstration	Received December 24, 2014
B-147R-CA-47	60 day extension Request (GW)	Approved July 18, 2017
B-147R-CA-48	Annual 2014 Current Conditions Report for Tanlk293	Approved January 16, 2015
B-147R-CA-49	GMZ Well Evaluation Report	Approved July 18, 2017
B-147R-CA-50	Potential TACO Based CA for Tank 293	Received June 17, 2015
B-147R-CA-51	Area 2 Donation Parcel II CCR & Vapor Intrusion Work Plan	Superseded by B-147R-CA-57 and R-CA-59
B-147R-CA-52	COD Well Performance Evaluation Report	Approved January 19, 2016
B-147R-CA-53	ELUC Submittal	Received July 15, 2015
B-147R-CA-54	GMZ Re-evaluation Report	Approved July 18, 2017
B-147R-CA-55	Evaluation of Significant Increase	Received April 23, 2015
B-147R-CA-56	COD Well Evaluation and Status Report	Approved January 19,. 2016
B-147R-CA-57	Area 2 Donation Parcel II – Boundary Approval request	Approved August 22, 2016
B-147R-CA-58	ELUC	Approved July 18, 2016

Log No.	Submittal	Status
B-147R-CA-59	Area 2 Donation Parcel II – Vapor Intrusion Report	Approved August 22, 2016
B-147R-CA-60	HRS Evaluation Update	Approved April 4, 2016
B-147R-CA-61	HRS Evaluation Update	Approved April 4, 2016
B-147R-CA-63	2015 Annual CCR for Tank 293	Received March 1, 2016
B-147R--CA-64	Draft ELUC for Donation Parcel Area 2 (7.5-ac)	Approved February 28, 2017
B-147R--CA-65	Draft ELUC for Donation Parcel Area 2	Approved February 28, 2017
B-147R--CA-77	Revised Draft ELUC for Police Station Parcel (Area 2 7.5 acres -Top layer)	Approved May 4, 2017
B-147R--CA-78	Revised Draft ELUC for Police Station Parcel (Area 2 7.5 acres – Beneath the top layer)	Approved April 21, 2017
B-147R--CA-79	4th Quarter 2016 Demonstration Report (SSIE)	Received April 24, 2017
B-147R--CA-80	Extension Request for Information Required by IEPA's Response to B-147R-CA-22	Received June 22, 2017
B-147R--CA-81	Proposed ELUC	Received July 10, 2017
B-147R-CA-82	Response to IEPA 7/18/27 letter regarding GMZ wells	Received October 16, 2017
B-147R-CA-83	Extension request for submittal of cost estimate	Received October 30, 2017
B-147R-CA-84	GMZ monitoring wells	Received October 16, 2017
B-147R-CA-85	Plan for GMZ optimization for compliance commitment agreement	Received January2, 2018
B-147R-CA-86	Interim progress report - bioremediation pilot systems operations	Received April 2, 2018
B-147R-CA-87	Fourth Quarter 2017 GW demonstration report	Received April 12, 2018
B-147R-CA-88	Response to IEPA's 7/18/17 GMZ wells letter	Received May 1, 2018
B-147R-CA-89	GW Monitoring Optimization Report	Approved January 19, 2023

Log No.	Submittal	Status
B-147R-CA-90	Time Extension Request	Approved June 24, 2019
B-147R-CA-91	Remedial Action Selection Report and Main Plant Remedy Roadmap	Approved February 11, 2020
B-147R-CA-92	Performance Report-Pilot-Scale Bioremediation Systems	Approved February 11, 2020
B-147R-CA-93	Indoor Inhalation Exposure Route Evaluation & Work Plan	Denied May 30, 2019
B-147R-CA-94	State-wide Arsenic/Inorganic Demonstration Report	Approved June 24, 2019
B-147R-CA-95	4th Quarter 2018 Demonstration Report (Statistically Significant Increase Evaluation)	Approved February 27, 2020
B-147R-CA-96	Revised Indoor Inhalation Exposure Route Evaluation and Work plan	Received August 29, 2019
B-147R-CA-97	Site-wide inorganics and metals evaluation work plan schedule update letter	Received November 5, 2019
B-147R-CA-98	Action Plan for potential manmade pathway evaluation	Received November 26, 2019
B-147R-CA-99	Main Plant Area 10 Comprehensive land reuse Investigation Report	Received December 20, 2019
B-147R-CA-100		
B-147R-CA-101	2019 Annual Tank 293 Current Conditions Report	Received February 28, 2020
B-147R-CA-102	Documentation of monitoring well installation and abandonment	Received March 27, 2020
B-147R-CA-103	Proposed modification to 2Q 2020 GW Gauging & Monitoring in response to COVID-19 pandemic	
B-147R-CA-104	4th Quarter 2019 Demonstration Report	Received May 21, 2020
B-147R-CA-104	4th Quarter 2019 Demonstration Report (Statistically Significant Increase Evaluation)	Received April 30, 2020
B-147R-CA-105	RCRA Land reuse investigation assessments	Received June 22, 2020
B-147R-CA-106	Notification of COD Pumping and Equipment Status	Received July 29, 2020
B-147R-CA-107	COD pumping and equipment status update	Received September 16, 2020

Log No.	Submittal	Status
B-147R-CA-108	Request to update Main Plant Observation Monitoring Well Abandonment of G047	Received September 23, 2020
B-147R-CA-109	Site-wide inorganics and metals evaluation work plan	Received November 302020
B-147R-CA-110	Groundwater Management Zone Re-evaluation	Received December 21, 2020
B-147R-CA-111	Soil Gas Pathway Evaluation Report	Received June 8, 2021
B-147R-CA-112	Results in accordance with Site-Wide Inorganics and Metals Evaluation Report submitted on 12/20/18	Received January 26, 2022
B-147R-CA-113	Remedial Action Selection Report & Main Plant Remedy Roadmap. This is a follow up on IEPA correspondence dated 2-11-20	Received January 31, 2022
B-147R-CA-114	Monitoring Well Condition	Approved January 19, 2023
B-147R-CA-115	Proposed upgrades to the Cone of Depression (COD) Well System	Approved January 19, 2023
B-147R-CA-116	4th Quarter 2021 Demonstration Report	Received May 3, 2022
B-147R-CA-117	Northern GMZ Monitoring Wells G067/G068	Approved January 19, 2023
B-147R-CA-118	Well replacement extension request	Approved April 21, 2023
B-147R-CA-119	4th Quarter 2022 Demonstration Report	
B-147R-CA-120	Documentation of monitoring well installation and abandonment	Received July 21, 2023
B-147R-CA-121	Main Plant GMZ Well G078 Well Condition Notification letter in accordance with Condition V.D.4 of the RCRA permit	Received July 13, 2023
B-147R-CA-122	Corrective Action Mod request for the Korea tank Farm (Area 9) at the Main Plant	Approved November 20, 2023
B-147R-CA-123	Gradient Control Well G668 and G669 Condition Notification	Received September 13, 2023
B-147R-CA-124	Main Plant Observation Well G97L Well Conditions Notification letter in accordance with ConditionV.D.4 of the RCRA	Received January 30, 2024
B-147R-CA-125	Main plant land reuse investigation data submittal of general background, sampling methods, analytical procedures, and analytical results for areas	Received March 12, 2024

Log No.	Submittal	Status
B-147R-CA-126	Additional info to the revised indoor inhalation exposure route eval and work plan dated 8/29/19 to provide an update on changed site conditions	Received April 16, 2024
B-147R-CA-127	Response to recommendation to vent well cap in the 8/3/23 Inspection Report	Received April 24, 2024
B-147R-CA-128	Main Plant Observation well G87L well condition Notification letter in accordance with Condition V.D.4 of RCRA permit	Received July 31, 2024

ATTACHMENT D

CORRECTIVE MEASURES PROGRAM REQUIREMENTS

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT D

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 (AOC) is compared to remediation objectives developed in accordance with 35 IAC Part 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 Part 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 AOC to follow these five (5) 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 (5) 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 CMP 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 AOC. All such documents must be reviewed and approved by the 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 AOCs and provides a conceptual design for these measures. The main criteria for the Illinois EPA review are 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 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 Time 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:

   e. 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.

   f. 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 if 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.

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 a physical corrective measure (e.g., a final cover system, certain 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-inch to 12-inch 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-inch to 12-inch 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.

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 E

SUMMARY OF HISTORICAL AND CURRENT HYDROCARBON RECOVERY AND REMEDIAL SYSTEMS AT THE MAIN PLANT FACILITY

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT E

SUMMARY OF HISTORICAL AND CURRENT HYDROCARBON RECOVERY AND REMEDIAL SYSTEMS AT THE MAIN PLANT FACILITY

Updated as of September 2024

A. SUMMARY

The following subsections detail the historical and current remediation systems operated at the BP Main Plant to mitigate hydrocarbons and refinery product in accordance with Condition II.E of the facility's permit.

Historical remedial operations included a Hydrocarbon Recovery System (HRS) as an interim remedial measure (IRM), as discussed in Section C, below.

Current remedial operations include three pilot-scale Bioremediation Systems as successors to the HRS, which reached its limit of effectiveness. The Bioremediation Systems are being operated to mitigate hydrocarbons and refinery product, and to provide information on long-term performance and other essential data to evaluate the full-scale implementation of hydrocarbon and other refinery related product remediation at the BP Main Plant facility. These Bioremediation Systems include:

- Central Bioventing System (Section E)
- Sothern Biosparging/Bioventing System (Section F)
- Northern Air Sparge/Soil Vapor Extraction System (AS/SVE) (Section G)

B. DEFINITIONS

"Bioremediation systems" means systems or technologies that enhance the biodegradation of hydrocarbons, and preferentially remove compounds that are typically more toxic which results in compositional change. The biodegradation processes affect refinery product from the smear zone and vadose zone as it contributes to soil vapor and dissolved phase impacts. Systems to accomplish this include bioventing, biosparging, and AS/SVE systems or some combination of systems designed to remediate hydrocarbons. It may also include other technologies that could enhance bioremediation such as infiltration galleries or ambient air introduction that can increase oxygen to the subsurface to enhance aerobic biodegradation.

"Hydrocarbon Remediation Well" means any type of well, including Bioremediation System wells, installed to remediate hydrocarbons, from the smear zone and vadose zone.

"Remediating refinery product" means the use of physical, chemical, or biological means to remove or treat refinery product located from the smear zone or vadose zone as it contributes to dissolved phase impacts in order to reduce the mass present at the Site.

"Smear Zone" means the vertical profile of hydrocarbon impacted soil located across the area of groundwater fluctuations, between the high and low groundwater elevations.

"Vadose Zone" means the vertical profile of unsaturated soils located above the water table.

C. HISTORICAL HYDROCARBON RECOVERY SYSTEM (HRS) OPERATION

The HRS at the BP Main Plant facility was commissioned as an IRM in 1993 to hydraulically recover subsurface mobile LNAPL from above the water table. The original system included twenty-one (21) HRS extraction wells as listed below. Following seventeen (17) years of operation, sixteen (16) HRS wells were deactivated in 2010 based on declining LNAPL recovery. After seven (7) additional years of operation, the remaining five (5) HRS wells were deactivated in 2017 due to the system reaching its limit of performance effectiveness. As described in the technical memorandum by BP entitled, Hydrocarbon Recovery System (HRS) Evaluation, dated May 24, 2017, the HRS removed 6.5 million gallons of LNAPL over twenty-two (22) years of operation. However, despite this volume of mobile LNAPL having been removed, the HRS did not have a significant impact on dissolved phase concentrations in groundwater. Accordingly, installation and operation of three (3) pilot-scale bioremediation systems (as discussed below) was implemented as a replacement for the HRS, to provide information needed to design full-scale remedies to target the remaining LNAPL with the goal to reduce dissolved phase concentrations of benzene.

Identification of Historical/Inactive HRS Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
G601	RC-1	56.0	373.40	393.40 – 373.40
G602	RC-2	55.0	374.96	394.96 – 374.96
G603	RC-3	51.0	379.39	399.39 – 379.39
G604	RC-4	49.5	382.18	402.18 – 382.18
G606	RC-6	55.0	373.27	408.27 – 378.27
G607	RC-7	58.5	368.97	403.97 – 373.97
G608	RC-8	61.0	364.90	399.90 – 369.90
G609	RC-9	64.0	367.40	402.40 – 372.40
G610	RC-10	69.0	366.61	401.61 – 371.61
G611	RC-11	70.0	369.96	404.96 – 374.96
G612	RC-12	73.0	368.21	395.21 – 373.21
G615	RC-15	58.4	371.77	407.15 – 377.15
G617	RC-17	58.0	370.41	392.41 – 375.41
G618	RC-18	57.5	371.76	411.76 - 376.76
G619	RC-19	58.0	368.92	408.92 – 373.92
G629	RC-H-29	57.6	379.88	401.48 – 379.88
G605	RC-5	49.8	380.56	401.27 – 381.27
G613	RC-13	60.0	371.25	406.25 – 376.25
G614	RC-14	59.5	371.60	406.60 – 376.60
G616	RC-16	65.0	367.61	402.61 – 372.61
G620	RC-20	85.4	344.72	406.49 – 349.72

ft. MSL= feet above mean sea level

D. CURRENT HYDROCARBON REMEDIATION SYSTEMS OPERATIONS

BP is currently operating three (3) pilot-scale bioremediation systems and has implemented pilot-scale passive bioventing in two (2) additional areas for remediation of groundwater and destruction of LNAPL impacts. These remedial approaches focus on in-situ remediation of hydrocarbons by delivering increased oxygen to the subsurface via different mechanisms as opposed to hydraulic recovery. Biodegradation also has the added benefit of not only removing LNAPL mass but changing the chemical composition of LNAPL in the subsurface, through sparging and venting, to mitigate impact to dissolved phase groundwater conditions. The locations of the bioremediation systems are depicted on Figure E-1.

The primary objectives of these bioremediation systems include:

I. Progressing LNAPL remediation beyond what the HRS could achieve including dissolved phase risk reduction;

II. Identification of technology combinations that will be flexible across water table conditions and optimize vapor treatment;

III. Evaluation of alternative remedial approaches for hydrocarbon and LNAPL mitigation; and

IV. Support for selection and design of appropriate final remedies.

Performance of the initial pilot-scale systems was presented in the October 2018 Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018) and found enhanced biodegradation via all three (3) technologies (i.e., bioventing, biosparging, and AS/SVE) to be viable for remediation of groundwater and more effective at destruction of remaining LNAPL impacts than physical hydrocarbon recovery. The passive bioventing technologies implemented promote the same remedial mechanisms as active bioventing but utilize natural pressure changes between the vadose zone and surface to deliver oxygen into the vadose zone in the form of ambient air. The technologies all specifically enhance the removal rate of hydrocarbon compared to historical systems and promote compositional change to decrease concentrations of aromatic BTEX compounds at the site.

BP completed modifications to the pilot-scale bioremediation systems and technologies between 2019 to 2021 to maintain and enhance hydrocarbon remediation through treatment of expanded site areas at the BP Main Plant Property. Installation of air injection wells, piezometers, and soil vapor monitoring points (VMPs) was initiated in 2019 and completed during First Quarter 2020. Surveying of the newly installed wells was also completed in First Quarter 2020. Installation of requisite equipment and start-up activities were completed in 2020 and 2021. Passive bioventing was implemented in two of the initial pilot areas in 2021 and 2022, as previous remedial efforts progressed remediation in those area to the point where passive bioventing is able to deliver sufficient oxygen to maintain an aerobic vadose zone for enhanced bioremediation.

The three (3) expansion pilot bioremediation systems continue to operate as of 2024. Any changes to the operations or configuration of the systems is documented through an annual update to Attachment C of the permit as required by Section IV.C.8 of the permit. Information presented in the following previously submitted Class 1* Permit modification requests has been incorporated into this exhibit: i) Attachment C Annual Update (1/31/2022); ii) Attachment C Annual Update (1/31/2023); and iii) Attachment C Annual Update (1/31/2024). The configuration and operation of the three pilot-scale bioremediation systems are detailed in Sections E (Central Biovent System), F (Southern Biosparge/Biovent System) and G (Northern AS/SVE System). Each section includes a timeline of operations, enhancements, and modifications for each system.

E. PILOT-SCALE CENTRAL BIOVENTING SYSTEM

A bioventing pilot test was performed to evaluate performance of this remedial approach and to quantify the mass remediation rate (and thus remediation timeframe) in comparison to more traditional LNAPL/contaminants of concern (COCs) removal systems, such as groundwater/LNAPL physical extraction, and, in comparison with natural biodegradation rates. Performance of the pilot-scale system was presented in the October 2018 Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018). The pilot test finding is that bioventing is more effective at treating hydrocarbons through mass removal (biodegradation) and compositional change than physical removal of hydrocarbon.

The biovent system underwent an expansion in 2019-2020, including installation of additional biovent wells to treat a larger area to the west of the original biovent implementation area (Figure 3). Performance data from the initial pilot test was utilized in design of the expansion pilot system to more efficiently deliver oxygen into the subsurface. The monitoring network was also modified with the installation of additional piezometers and VMPs in 2019-2020. Active bioventing in six (6) biovent wells in the initial Central Biovent pilot system area was shut down in July 2020 and transitioned to passive bioventing in 2021 as part of the modifications to the current operating system. Full-time operation of the expanded Central Biovent System was initiated in April 2021.

The six (6) biovent wells from the initial biovent system area were converted to passive biovent wells by fitting one-way valves that allow ambient air into the vadose zone when negative pressure is present in the subsurface. In April 2023, Main Plant Observation Well G050 was also fitted for passive bioventing as an IRM to address LNAPL.

A timeline of system operations is provided below.

Time Period	Description	Wells
April 2017-June 2020	Initial pilot wells operate with active bioventing.	A3BVS-S, A3BVS-D, A3BVNW-S, A3BVNW-D, A3BVNE-S, A3BVNE-D
July 2020-March 2021	System shut down for completion of system	

	expansions and electrical system upgrades.	
April 2021-2024 (ongoing)	Expansion system wells operate with active bioventing.	A3BV-1A, A3BV-1B, A3BV-2A, A3BV2B, A3BV-3A, A3BV-3B, A3BV-4A, A3BV-4B, A3BV-5A, A3BV-5B, A3BV-6A, A3BV-6
December 2021- 2024 (ongoing)	Initial pilot wells used for passive bioventing.	A3BVS-S, A3BVS-D, A3BVNW-S, A3BVNW-D, A3BVNE-S, A3BVNE-D
April 2023-2024 (ongoing)	Main Plant Observation Well used for passive bioventing.	G050

System Description

The pilot-scale biovent system equipment is designed to deliver sufficient air into the subsurface at low pressures to allow for aerobic respiration to dominate the treatment zone. Flow from a rotary vane compressor delivers air at total flow rates up to 60 standard cubic feet per minute (scfm) @ 10 pounds per square inch (psi), split into up to 12 of the 18 total biovent wells. Air from the compressor has a throttling valve, temperature indicator, check valve, and pressure indicator. The biovent process and instrumentation diagram is presented as Figure 2, and the biovent system schematic is presented as Figure 2A.

Flow from the equipment is routed through a 6-leg manifold. Each manifold leg has a flow control valve, rotameter-style flowmeter, and pressure gauge. Each manifold leg feeds up to two (2) biovent wells via aboveground piping. Each of the biovent well lateral legs has its own flow control valve and pressure indicator. Operation of each of the six (6) manifold legs is controlled with a normally closed solenoid controlled via a human machine interface (HMI) screen on an interior control panel. The system components are plumbed in a modular/mobile enclosure with environmental controls (e.g. lighting, heating, and ventilation).

Biovent configurations and flow rates are controlled by system valves, the Programmable Logic Controller (PLC) and HMI. The system is designed to operate up to 12 of the 18 total individual biovent points at a time in any combination. Individual point flow rates are between 1 to 20 scfm, with a combined rate of up to 60 scfm. Flow rates, pressures, and operational timing are monitored and maintained by system technicians and engineers.

Biovent System Layout and Well Network

The pilot-scale biovent system layout and well network are depicted on Figure 3. The Central Biovent System remediation wells include 18 biovent wells, and performance monitoring utilizes a series of piezometers and VMPs as summarized below.

Biovent Wells: Eighteen (18) total biovent wells are present; six (6) were components of the initial system installation, and twelve (12) were installed during the system expansion. Biovent

well construction was designed to target the vadose zone directly above the water table under typical conditions.

Piezometers: Six (6) total piezometers were installed to monitor the shallow water table and identify LNAPL presence in the remediation areas. Piezometers supplement existing monitoring wells in the north (G99L) and south (G13L) of the expansion treatment area. One (1) additional deep monitoring well is present in the initial treatment area – A3AS-C.

Vapor Monitoring Points: A total of twenty (20) nested VMP locations are used to monitor the vadose zone to measure degradation. VMP depths are staggered to ensure granularity in measuring impacts and changing gradients. The twenty (20) nested VMPs are located at differing distances from the pilot test wells and throughout the treatment zones to allow for monitoring the influence of the system. Each location contains 3-4 nested VMPs for a total of 67 individual VMPs.

The wells comprising the Bioventing system are listed below:

Bioventing Hydrocarbon Remediation Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A3AS-C	A3AS-C	70	361.19	366.19 - 361.19
A3BVS-S	A3BVS-S	25	406.27	416.27 - 406.27
A3BVS-D	A3BVS-D	35	396.20	406.20 – 396.20
A3BVNW-S	A3BVNW-S	25	406.05	416.05 – 406.05
A3BVNW-D	A3BVNW-D	35	396.11	406.11 – 396.11
A3BVNE-S	A3BVNE-S	25	406.27	416.27 – 406.27
A3BVNE-D	A3BVNE-D	35	396.28	406.28 – 396.28
A3BV-1A	A3BV-1A	32	397.77	407.77-397.77
A3BV-1B	A3BV-1B	32	397.24	407.24-397.24
A3BV-2A	A3BV-2A	32	397.72	407.72-397.72
A3BV-2B	A3BV-2B	32	397.02	407.02-397.02
A3BV-3A	A3BV-3A	32	398.35	408.35-398.35
A3BV-3B	A3BV-3B	32	399.09	409.09-399.09
A3BV-4A	A3BV-4A	32	396.96	406.96-396.96
A3BV-4B	A3BV-4B	32	397.71	407.71-397.71
A3BV-5A	A3BV-5A	32	398.58	408.58-398.58
A3BV-5B	A3BV-5B	32	398.77	408.77-398.77
A3BV-6A	A3BV-6A	32	399.35	409.35-399.35
A3BV-6B	A3BV-6B	32	399.16	409.16-399.16

Bioventing System Area Piezometers

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A3PZ-N	A3PZ-N	35	396.11	396.11 - 411.11

A3PZ-C	A3PZ-C	35	396.22	396.22 - 411.22
A3PZ-S	A3PZ-S	35	396.14	396.14 - 411.14
A3PZ-N2	A3PZ-N2	34	394.64	404.64-394.64
A3PZ-C2	A3PZ-C2	35	394.61	404.61-394.61
A3PZ-S2	A3PZ-S2	36	394.66	404.66-394.66

Bioventing System Area Vapor Monitoring Points

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Interval (ft. BGS)	Well Diameter (inches)
A3VMPNA-10	A3VMPNA-10	10	9.5-10	0.75
A3VMPNA-20	A3VMPNA-20	20	19.5-20	0.75
A3VMPNA-24	A3VMPNA-24	24	23.5-24	0.75
A3VMPNA-28	A3VMPNA-28	28	27.5-28	0.75
A3VMPNB-15	A3VMPNB-15	15	14.5-15	0.75
A3VMPNB-22	A3VMPNB-22	22	21.5-22	0.75
A3VMPNB-26	A3VMPNB-26	26	25.5-26	0.75
A3VMPNB-30	A3VMPNB-30	30	29.5-30	0.75
A3VMPC-10	A3VMPC-10	10	9.5-10	0.75
A3VMPC-20	A3VMPC-20	20	19.5-20	0.75
A3VMPC-24	A3VMPC-24	24	23.5-24	0.75
A3VMPC-28	A3VMPC-28	28	27.5-28	0.75
A3VMPSW-10	A3VMPSW-10	10	9.5-10	0.75
A3VMPSW-20	A3VMPSW-20	20	19.5-20	0.75
A3VMPSW-24	A3VMPSW-24	24	23.5-24	0.75
A3VMPSW-28	A3VMPSW-28	28	27.5-28	0.75
A3VMPSW-15	A3VMPSW-15	15	14.5-15	0.75
A3VMPSW-22	A3VMPSW-22	22	21.5-22	0.75
A3VMPSW-26	A3VMPSW-26	26	25.5-26	0.75
A3VMPSW-30	A3VMPSW-30	30	29.5-30	0.75
A3VMPSE-10	A3VMPSE-10	10	9.5-10	0.75
A3VMPSE-20	A3VMPSE-20	20	19.5-20	0.75
A3VMPSE-24	A3VMPSE-24	24	23.5-24	0.75
A3VMPSE-28	A3VMPSE-28	28	27.5-28	0.75
A3VMPSE-15	A3VMPSE-15	15	14.5-15	0.75
A3VMPSE-22	A3VMPSE-22	22	21.5-22	0.75
A3VMPSE-26	A3VMPSE-26	26	25.5-26	0.75
A3VMPSE-30	A3VMPSE-30	30	29.5-30	0.75
A3VMP1-S	A3VMP1-S	17	16-17	0.75
A3VMP1-M	A3VMP1-M	22	21-22	0.75
A3VMP1-D	A3VMP1-D	27	26-27	0.75
A3VMP2-S	A3VMP2-S	17	16-17	0.75
A3VMP2-M	A3VMP2-M	22	21-22	0.75
A3VMP2-D	A3VMP2-D	27	26-27	0.75
A3VMP3-S	A3VMP3-S	17	16-17	0.75
A3VMP3-M	A3VMP3-M	22	21-22	0.75

A3VMP3-D	A3VMP3-D	27	26-27	0.75
A3VMP4-S	A3VMP4-S	17	16-17	0.75
A3VMP4-M	A3VMP4-M	22	21-22	0.75
A3VMP4-D	A3VMP4-D	27	26-27	0.75
A3VMP5-S	A3VMP5-S	17	16-17	0.75
A3VMP5-M	A3VMP5-M	22	21-22	0.75
A3VMP5-D	A3VMP5-D	27	26-27	0.75
A3VMP6-S	A3VMP6-S	17	16-17	0.75
A3VMP6-M	A3VMP6-M	22	21-22	0.75
A3VMP6-D	A3VMP6-D	27	26-27	0.75
A3VMP7-S	A3VMP7-S	17	16-17	0.75
A3VMP7-M	A3VMP7-M	22	21-22	0.75
A3VMP7-D	A3VMP7-D	27	26-27	0.75
A3VMP8-S	A3VMP8-S	17	16-17	0.75
A3VMP8-M	A3VMP8-M	22	21-22	0.75
A3VMP8-D	A3VMP8-D	27	26-27	0.75
A3VMP9-S	A3VMP9-S	17	16-17	0.75
A3VMP9-M	A3VMP9-M	22	21-22	0.75
A3VMP9-D	A3VMP9-D	27	26-27	0.75
A3VMP10-S	A3VMP10-S	17	16-17	0.75
A3VMP10-M	A3VMP10-M	22	21-22	0.75
A3VMP10-D	A3VMP10-D	27	26-27	0.75
A3VMP11-S	A3VMP11-S	17	16-17	0.75
A3VMP11-M	A3VMP11-M	22	21-22	0.75
A3VMP11-D	A3VMP11-D	27	26-27	0.75
A3VMP12-S	A3VMP12-S	17	16-17	0.75
A3VMP12-M	A3VMP12-M	22	21-22	0.75
A3VMP12-D	A3VMP12-D	27	26-27	0.75
A3VMP13-S	A3VMP13-S	17	16-17	0.75
A3VMP13-M	A3VMP13-M	22	21-22	0.75
A3VMP13-D	A3VMP13-D	27	26-27	0.75

Bioventing System Area Deep Monitoring Well

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A3AS-C	A3AS-C	70	361.19	361.19 - 366.19

F. PILOT-SCALE SOUTHERN BIOSPARGE/BIOVENT SYSTEM

A biosparging/bioventing pilot test was performed to evaluate the performance of this remedial approach and quantify the mass remediation rate (and thus remediation timeframe) in comparison to more traditional LNAPL/COC removal systems, such as groundwater/LNAPL physical extraction, and, in comparison with natural biodegradation rates. The test was also intended to determine the efficiency of using a horizontal well for sparging, and whether this approach could potentially be used to serve as a barrier for contaminant migration in the dissolved phase. Performance of the pilot-scale system was presented in the October 2018

Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018); the pilot test finding is that biosparging/bioventing is treating hydrocarbons more effectively than previous hydrocarbon recovery efforts.

The biosparge system was modified to treat a larger area to the north and west of the original implementation area and to include use of bioventing. When operating under the expanded bioventing scenario, flow from the existing compressor is routed through a flow amplifying air eductor and manifold to deliver air to 36 vertical biovent wells (as opposed to the original single horizontal biosparge well). The monitoring network was also expanded with the addition of piezometers and VMPs. The wells associated with the bioparge/biovent system expansion were installed in 2019-2020. Active biosparging in the horizontal well was shut down in September 2020 as part of the modifications to the current operating system. Full-time operation of the modified and expanded Southern Biosparge/Biovent System was initiated in July 2021.

In April 2023, BP Main Plant Observation Well G16L was converted to a passive biovent well by fitting a one-way valve to allow ambient air into the vadose zone when negative pressure is present in the subsurface. In December 2023, G16L was then converted to an active biovent well as part of the Pilot-Scale Southern Biosparge/Biovent System.

A timeline of system operations is provided below.

Time Period	Description	Wells
April 2017-September 2020	Initial horizontal well operates with active biosparging.	A5HBS
October 2020-June 2021	System shut down for completion of system expansions and electrical system upgrades.	
July 2021-2024 (ongoing)	Expansion system wells operate with active bioventing.	A5BV-1, A5BV-2, A5BV-3, A5BV-4, A5BV-5, A5BV-6, A5BV-7, A5BV-8, A5BV-9, A5BV-10, A5BV-11, A5BV-12, A5BV-13, A5BV-14, A5BV-15, A5BV-16, A5BV-17, A5BV-18, A5BV-19, A5BV-20, A5BV-21, A5BV-22, A5BV-23, A5BV-24, A5BV-25, A5BV-26, A5BV-27, A5BV-28, A5BV-29, A5BV-30, A5BV-31, A5BV-32, A5BV-33, A5BV-34, A5BV-35

April 2023- November 2023	Main Plant Observation Well used for passive bioventing.	G16L
December 2023- 2024 (ongoing)	Main Plant Observation Well used for active bioventing.	G16L

System Description

The biosparge/biovent pilot test system is designed to deliver air into the subsurface at moderate flow rates and pressure. The biosparge scenario volatizes VOCs in the saturated zone and enhances biodegradation of those impacts via inducing aerobic conditions. The biovent scenario delivers air to the vadose zone to ensure aerobic conditions are present which enhances hydrocarbon biodegradation. Flow from a compressor delivers air at flow rates up to 150 scfm at 40 psi. Air from the compressor has a receiver tank, particulate filter, throttling valve, flow meter, and pressure gauge. The biosparge/biovent process and instrumentation diagram is presented as Figure 4, and the biosparge/biovent process flow schematic is presented as Figure 4A.

Under the biosparge scenario, flow from the equipment is routed directly to the biosparge horizontal well with a flow control valve, flowmeter, pressure regulator, and pressure gauge. Operation of the well is controlled with a normally-closed solenoid controlled via an HMI screen on an interior control panel. The system components are plumbed in a modular/mobile enclosure with environmental controls (e.g. lighting interior and exterior, heating, and ventilation).

Biosparge configurations and flow rates are controlled by system valves, the pressure regulator, PLC and HMI. The system is designed to operate the biosparge well at flow rates between 30 and 150 scfm but typically operates in the range of 50 to 85 scfm total flow. Flow rates, pressures, and operational timing are monitored and maintained by system technicians and engineers.

Under the biovent configuration, rather than running compressed air directly to the biosparge horizontal well, compressed air is run through an air eductor to boost flow rates up to 240 scfm at 10 psi in a manifold building with 36 manifold points. Each well on the manifold is equipped with a flow control valve, flowmeter, pressure regulator, and pressure gauge. Operation of each well is controlled with a normally-closed solenoid controlled via an HMI screen on an interior control panel. The manifold components are plumbed in a modular/mobile enclosure with environmental controls (e.g. lighting interior and exterior, heating, and ventilation).

Biosparge System Layout and Well Network

The biosparge/biovent system layout and well network are depicted on Figure 5. The Biosparge Remediation Well includes the horizontal biosparge well. There are 35 biovent remediation wells in the Southern Biosparge/Biovent System area, plus the monitoring well (G16L) to

which bioventing is being applied. Performance monitoring utilizes a series of piezometers and VMPs as summarized below.

Biosparge Horizontal Well:

One (1) horizontal biosparge well was installed for the pilot test. The biosparge well construction described below was designed to be placed at the bottom of groundwater impacts to create an oxygen curtain through which impacted water should pass. The screened portion of the well is 150 feet long and placed perpendicular to groundwater flow; the screen length allows for groundwater flow to be influenced within the targeted area even with minor temporal variations in groundwater flow.

Horizontal biosparge well construction specifications are summarized below:

I. Horizontal directional drilling methodology;
II. Installed at a depth of 45 ft-bgs;
III. Screen length of 150 feet;
IV. Riser length of 240 to 250 feet on each end of well (630 feet total length horizontally);
V. 3-inch diameter, HDPE construction;
VI. Custom slotting to uniformly sparge approximately 2 to 10 scfm per 10 horizontal feet of screen.

Biovent Wells:
Thirty-five (35) biovent wells were installed during the system expansion. Biovent well construction was designed to target the vadose zone directly above the groundwater table under typical conditions. In December 2023, G16L was converted to an active biovent well, for a current total of thirty-six (36) biovent wells.

Piezometers:
A total of twenty-two (22) piezometers were installed at three different depths – fifteen (15) shallow, six (6) mid, and one (1) deep to monitor the vertical extent of impacts in the water table. In the biosparge area, seven (7) wells were installed upgradient of the biosparge well and twelve (12) wells downgradient. In the biovent area, three (3) additional piezometers supplement existing monitoring wells in the treatment area (A6MW03, G048, and G049).

Vapor Monitoring Points:
Twenty-eight (28) nested VMPs were installed to monitor the vadose zone impacts. Each set of nested points contains two (2) to three (3) depths of monitoring points to assess the vadose zone vertically for a total of 81 points. VMP placement is meant to measure influence at different depths and measure the extent of influence perpendicular from the well screen orientation.

The wells comprising the Biosparging system are listed below:

Biosparging Hydrocarbon Remediation Well

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A5HBS*	A5HBS	45	varies*	(150 ft long)*

*Horizontal Well

Bioventing Hydrocarbon Remediation Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A5BV-1	A5BV-1	36	395.27	405.27-395.27
A5BV-2	A5BV-2	36	396.77	406.77-396.77
A5BV-3	A5BV-3	36	396.08	406.08-396.08
A5BV-4	A5BV-4	36	395.99	405.99-395.99
A5BV-5	A5BV-5	36	395.93	405.93-395.93
A5BV-6	A5BV-6	36	394.65	404.65-394.65
A5BV-7	A5BV-7	36	395.51	405.51-395.51
A5BV-8	A5BV-8	36	NS	NS
A5BV-9	A5BV-9	36	396.53	406.53-396.53
A5BV-10	A5BV-10	36	396.45	406.45-396.45
A5BV-11	A5BV-11	36	396.33	406.33-396.33
A5BV-12	A5BV-12	36	396.32	406.32-396.32
A5BV-13	A5BV-13	34	397.05	407.05-397.05
A5BV-14	A5BV-14	36	397.62	407.62-397.62
A5BV-15	A5BV-15	36	NS	NS
A5BV-16	A5BV-16	36	NS	NS
A5BV-17	A5BV-17	36	396.39	406.39-396.39
A5BV-18	A5BV-18	36	396.38	406.38-396.38
A5BV-20	A5BV-20	36	395.21	405.21-395.21
A5BV-21	A5BV-21	36	395.26	405.26-395.23
A5BV-22	A5BV-22	36	397.00	407.00-397.00
A5BV-23	A5BV-23	38	391.95	406.95-391.95
A5BV-24	A5BV-24	41	391.75	406.75-391.75
A5BV-25	A5BV-25	41	391.38	406.38-391.38
A5BV-26	A5BV-26	36	397.40	407.40-397.40
A5BV-27	A5BV-27	38	395.68	405.68-395.68
A5BV-28	A5BV-28	38	393.43	408.43-393.43
A5BV-29	A5BV-29	38	395.04	410.04-395.04
A5BV-31	A5BV-31	38	394.73	409.73-394.73
A5BV-32	A5BV-32	33	398.32	408.32-398.32
A5BV-33	A5BV-33	34	397.61	407.61-397.61
A5BV-34	A5BV-34	38	391.53	406.53-391.53
A5BV-35	A5BV-35	38	391.48	406.48-391.48
A5BV-36	A5BV-36	38	391.65	406.65-391.65

NS – Not surveyed, in a health and safety exclusion zone during surveying.

Biosparging/Bioventing System Area Piezometers

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A5PZN-S	A5PZN-S	40	389.29	389.29 - 399.29
A5PZNW-S	A5PZNW-S	38	391.56	391.56 - 401.56
A5PZNW-M	A5PZNW-M	45	384.51	384.51 - 389.51
A5PZW-S	A5PZW-S	39.5	390.44	390.44 - 400.44
A5PZW-M	A5PZW-M	45	385.07	385.07 - 390.07
A5PZW-D	A5PZW-D	65	365.04	365.04 - 370.04
A5PZW-S1	A5PZW-S1	40	389.51	389.51 - 399.51
A5PZW-S2	A5PZW-S2	40	389.85	389.85 - 399.85
A5PZSW-S	A5PZSW-S	40	389.82	389.82 - 399.82
A5PZSW-M	A5PZSW-M	45	384.86	384.86 - 389.86
A5PZNE-S	A5PZNE-S	40	389.51	389.51 - 399.51
A5PZNE-M	A5PZNE-M	45	384.51	384.51 - 389.51
A5PZE-S1	A5PZE-S1	40	389.93	389.93 - 399.93
A5PZE-S2	A5PZE-S2	40	390.72	390.72 - 400.72
A5PZE-M	A5PZE-M	45	384.62	384.62 - 389.62
A5PZSE-S	A5PZSE-S	40	389.79	389.79 - 399.79
A5PZSE-M	A5PZSE-M	45	384.71	384.71 - 389.71
A5PZS-S1	A5PZS-S1	40	389.51	389.51 - 399.51
A5PZS-S2	A5PZS-S2	40	389.90	389.90 - 399.90
A5PZ-1	A5PZ-1	40	392.47	402.47-392.47
A5PZ-2	A5PZ-2	40	391.59	401.59-391.59
A5PZ-3	A5PZ-3	40	NS	NS

Biosparging System Area Vapor Monitoring Points

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Interval (ft. BGS)	Well Diameter (inches)
A5VMPNW-S	A5VMPNW-S	10	9.5-10	0.75
A5VMPNW-M	A5VMPNW-M	20	19.5-20	0.75
A5VMPNW-D	A5VMPNW-D	25	24.5-25	0.75
A5VMPSW-S	A5VMPSW-S	10	9.5-10	0.75
A5VMPSW-M	A5VMPSW-M	20	19.5-20	0.75
A5VMPSW-D	A5VMPSW-D	25	24.5-25	0.75
A5VMPW-S	A5VMPW-S	10	9.5-10	0.75
A5VMPW-M	A5VMPW-M	20	19.5-20	0.75
A5VMPW-D	A5VMPW-D	25	24.5-25	0.75
A5VMPE-S	A5VMPE-S	10	9.5-10	0.75
A5VMPE-M	A5VMPE-M	20	19.5-20	0.75
A5VMPE-D	A5VMPE-D	25	24.5-25	0.75

A5VMP1-S	A5VMP1-S	23	22-23	0.75
A5VMP1-M	A5VMP1-M	28	27-28	0.75
A5VMP2-S	A5VMP2-S	23	22-23	0.75
A5VMP2-M	A5VMP2-M	28	27-28	0.75
A5VMP2-D	A5VMP2-D	33	32-33	0.75
A5VMP3-S	A5VMP3-S	22	21-22	0.75
A5VMP3-M	A5VMP3-M	27	26-27	0.75
A5VMP3-D	A5VMP3-D	32	31-32	0.75
A5VMP4-S	A5VMP4-S	22	21-22	0.75
A5VMP4-M	A5VMP4-M	29	28-29	0.75
A5VMP4-D	A5VMP4-D	33	32-33	0.75
A5VMP5-S	A5VMP5-S	23	22-23	0.75
A5VMP5-M	A5VMP5-M	28	27-28	0.75
A5VMP6-S	A5VMP6-S	21	20-21	0.75
A5VMP6-M	A5VMP6-M	26	25-26	0.75
A5VMP6-D	A5VMP6-D	31	30-31	0.75
A5VMP7-S	A5VMP7-S	21	20-21	0.75
A5VMP7-M	A5VMP7-M	26	25-26	0.75
A5VMP7-D	A5VMP7-D	31	30-31	0.75
A5VMP8-S	A5VMP8-S	22	21-22	0.75
A5VMP8-M	A5VMP8-M	27	26-27	0.75
A5VMP8-D	A5VMP8-D	32	31-32	0.75
A5VMP9-S	A5VMP9-S	20	19-20	0.75
A5VMP9-M	A5VMP9-M	25	24-25	0.75
A5VMP10-S	A5VMP10-S	20	19-20	0.75
A5VMP10-M	A5VMP10-M	25	24-25	0.75
A5VMP10-D	A5VMP10-D	30	29-30	0.75
A5VMP11-S	A5VMP11-S	22	21-22	0.75
A5VMP11-M	A5VMP11-M	27	26-27	0.75
A5VMP11-D	A5VMP11-D	32	31-32	0.75
A5VMP12-S	A5VMP12-S	22	21-22	0.75
A5VMP12-M	A5VMP12-M	27	26-27	0.75
A5VMP12-D	A5VMP12-D	32	31-32	0.75
A5VMP13-S	A5VMP13-S	22	21-22	0.75
A5VMP13-M	A5VMP13-M	27	26-27	0.75
A5VMP13-D	A5VMP13-D	32	31-32	0.75
A5VMP14-S	A5VMP14-S	22	21-22	0.75
A5VMP14-M	A5VMP14-M	27	26-27	0.75
A5VMP14-D	A5VMP14-D	32	31-32	0.75
A5VMP15-S	A5VMP15-S	22	21-22	0.75
A5VMP15-M	A5VMP15-M	27	26-27	0.75
A5VMP15-D	A5VMP15-D	32	31-32	0.75
A5VMP16-S	A5VMP16-S	22	21-22	0.75
A5VMP16-M	A5VMP16-M	27	26-27	0.75
A5VMP16-D	A5VMP16-D	32	31-32	0.75
A5VMP17-S	A5VMP17-S	22	21-22	0.75
A5VMP17-M	A5VMP17-M	27	26-27	0.75

A5VMP17-D	A5VMP17-D	32	31-32	0.75
A5VMP18-S	A5VMP18-S	22	21-22	0.75
A5VMP18-M	A5VMP18-M	27	26-27	0.75
A5VMP18-D	A5VMP18-D	32	31-32	0.75
A5VMP19-S	A5VMP19-S	22	21-22	0.75
A5VMP19-M	A5VMP19-M	27	26-27	0.75
A5VMP19-D	A5VMP19-D	32	31-32	0.75
A5VMP20-S	A5VMP20-S	24	23-24	0.75
A5VMP20-M	A5VMP20-M	28	27-28	0.75
A5VMP20-D	A5VMP20-D	32	31-32	0.75
A5VMP21-S	A5VMP21-S	22	21-22	0.75
A5VMP21-M	A5VMP21-M	27	26-27	0.75
A5VMP21-D	A5VMP21-D	32	31-32	0.75
A5VMP22-S	A5VMP22-S	22	21-22	0.75
A5VMP22-M	A5VMP22-M	27	26-27	0.75
A5VMP22-D	A5VMP22-D	35	34-35	0.75
A5VMP23-S	A5VMP23-S	22	21-22	0.75
A5VMP23-M	A5VMP23-M	27	26-27	0.75
A5VMP23-D	A5VMP23-D	32	31-32	0.75
A5VMP24-S	A5VMP24-S	23	22-23	0.75
A5VMP24-M	A5VMP24-M	28	27-28	0.75
A5VMP24-D	A5VMP24-D	32	31-32	0.75

G. PILOT-SCALE AIR SPARGE / SOIL VAPOR EXTRACTION (AS/SVE) SYSTEM

An AS/SVE pilot test was performed to evaluate performance of this remedial approach and quantify the mass remediation rate (and thus remediation timeframe) in comparison to more traditional LNAPL/COC removal systems, such as groundwater/LNAPL physical extraction, and, in comparison with natural biodegradation rates. The AS/SVE test is evaluating the combined effects air sparging below the water table for stripping of contaminants and enhancing aerobic biodegradation in the vadose zone and below the water table via introduction of ambient air. SVE is specifically utilized when biodegradation is insufficient to control the VOCs in soil gas during sparging or bioventing. Performance of the pilot-scale system was presented in the October 2018 Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018); the pilot test finding is that AS/SVE is treating hydrocarbons more effectively than previous hydrocarbon recovery efforts.

The AS/SVE extraction system was modified to treat a larger area to the south, east, and west of the original AS/SVE pilot test area. This included installation of additional air sparge and soil vapor extraction wells. To treat the additional loading, a catalytic oxidizer is being used for the treatment of off-gases, a change from the previous granular activated carbon off-gas treatment system. The monitoring network was also modified with the addition of piezometers and VMPs. All of the expansion wells were installed in 2019-2020. The initial AS/SVE pilot system was shut down in July 2020 as part of the modifications to the current operating system. Full-time operation of the expanded AS/SVE System was initiated in December 2020.

The four SVE wells and four shallow piezometers from the initial AS/SVE system area were converted to passive biovent wells in December 2021 by fitting one-way valves that allow ambient air into the vadose zone when negative pressure is present in the subsurface.

A timeline of system operations is provided below.

Time Period	Description	Wells
June 2017-July 2020	Initial pilot wells operate AS/SVE with granular activated carbon (GAC) off-gas treatment.	A8AS-N, A8AS-W, A8AS-E, A8AS-S, A8AS-C, A8SVE-NW, A8SVE-NE, A8SVESW, A8SVE-SE
August 2020- November 2020	System shut down for completion of system expansions and electrical system upgrades.	
December 2020- 2024 (ongoing)	Expansion system wells operate AS/SVE with catalytic oxidizer off-gas treatment.	A8AS-1A, A8AS-1B, A8AS-1C, A8AS-2A, A8AS-2B, A8AS-2C, A8AS-3A, A8AS-3B, A8AS-3C, A8AS-4A, A8AS-4B, A8AS-4C, A8AS-5A, A8AS-5B, A8AS-5C, A8SVE-1A, A8SVE-1B, A8SVE-2A, A8SVE-2B, A8SVE-3A, A8SVE-3B
October 2022-2024 (ongoing)	Initial pilot SVE wells and shallow piezometers used for passive bioventing.	A8SVE-NW, A8SVE-NE, A8SVE-SW, A8SVE-SE, A8PZS-S, A8PZN-S, A8PZNE-S, A8PZSW-S

System Description

The AS/SVE pilot test system is designed to deliver air into the subsurface and capture resultant vapors. Flow from the AS compressor delivers air at total flow rates up to 150 scfm at 50 psi, split into up to fifteen (15) of the twenty (20) AS wells. Air from the blower has a receiver tank, particulate filter, throttling valve, flow meter, and pressure gauge. Flow from the SVE blower collects vapors at total flow rates up to 500 scfm at 60 inches of water column (iw), split among up to six (6) of the ten (10) SVE wells. Vapors collected from the blower pass through throttling valves, a moisture knockout tank, dilution valve, vacuum gauges, and particulate filter prior to entering the blower. After exiting the blower discharged vapors pass through a flow meter, pressure gauge, and temperature gauge prior to passing through a heat exchanger and catalytic oxidizer prior to discharging through a stack. The off-gas treatment via a catalytic oxidizer was installed in the third quarter of 2020 and is a change from granular activated carbon treatment utilized during initial pilot test operation.

Condensate collected in the moisture separator is drained via an automated pumping system to a condensate holding tank within the enclosure. This condensate is periodically pumped out manually and discharged to the catch basin in the wash down pad for entry into the site groundwater treatment system. The AS/SVE process and instrumentation plan is presented as Figure 6, and the AS/SVE system schematic is presented as Figure 6A.

AS flow is routed through a five (5)-point manifold and split to reach up to fifteen (15) of the twenty (20) AS wells. Each manifold leg has a solenoid valve, flow control valve, rotameter-style flowmeter, and pressure gauge. SVE flow is collected through a four (4)-point manifold to up to six (6) of the ten (10) SVE wells. Each manifold leg has a flow control valve, pilot-tube flowmeter, and vacuum gauge.

The system components are plumbed in a modular/mobile enclosure with interior/exterior lighting and environmental controls (e.g. heating and ventilation). Operational controls for the system include programmed/automated controls in the form of a PLC with HMI, individual equipment components, and automated operation of the process control valves. The gas flow capacities of the AS/SVE system are controlled by the air compressor and the SVE blower. AS compressor flow rates to the individual air sparge wells are between 1 and 30 scfm, with a combined rate of up to 150 scfm at 50 psi. Flow from the SVE blower collects vapors at total flow rates up to 500 scfm at 60 iw, split among the SVE wells. Flow rates, pressures, and operational timing are monitored and maintained by system technicians and engineers.

AS/SVE System Layout and Well Network

The AS/SVE system layout and well network are depicted on Figure 7. The Remediation Wells include twenty (20) AS wells and ten (10) SVE wells. At any given time, up to fifteen (15) AS wells and six (6) SVE wells can be active; the active Remediation Wells can be configured based on the capacity of the equipment and manifold listed above. Performance monitoring utilizes a series of piezometers and VMPs as summarized below.

Air Sparge Wells: Twenty (20) AS wells were installed in the treatment areas. The AS wells were installed to the full depth of groundwater impacts.

SVE Wells: Ten (10) SVE wells were installed to capture vapors created by the AS wells. The wells were placed to cover the AS well layout to ensure capture of any generated vapors.

Piezometers: A total of sixteen (16) piezometers were installed at three different depths - shallow, mid, and deep to monitor the full extent of impacts in groundwater. In the expansion area, the piezometers supplement existing monitoring wells in the treatment area (G85L and G86L). In June 2023, R85L, R85D, and R85A were installed to replace G85L, which was plugged and abandoned in November 2023.

Vapor Monitoring Points: Seventeen (17) nested VMPs were installed to monitor the vadose zone impacts. Each nested point contains three depths of monitoring points to assess the full vadose zone vertically, for a total of fifty-one (51) total VMPs.

The wells comprising the AS/SVE system are listed below:

Active AS/SVE Hydrocarbon Remediation Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A8AS-N	A8AS-N	50	390.49	395.49 – 390.49
A8AS-W	A8AS-W	50	390.51	395.51 – 390.51
A8AS-C	A8AS-C	50	390.74	395.74 – 390.74
A8AS-E	A8AS-E	45	395.59	400.59 – 395.59
A8AS-S	A8AS-S	45	395.71	400.71 – 395.71
A8SVE-NW	A8SVE-NW	35	405.55	415.55 – 405.55
A8SVE-NE	A8SVE-NE	35	405.49	415.49 – 405.49
A8SVE-SW	A8SVE-SW	35	405.71	415.71 – 405.71
A8SVE-SE	A8SVE-SE	35	405.64	415.64 – 405.64
A8AS-1A	A8AS-1A	67	373.53	378.53-373.53
A8AS-1B	A8AS-1B	67	373.57	378.57-373.57
A8-AS-1C	A8-AS-1C	70	369.62	374.62-369.62
A8AS-2A	A8AS-2A	67	373.28	378.28-373.28
A8AS-2B	A8AS-2B	67	372.67	377.67-372.67
A8AS-2C	A8AS-2C	70	369.06	374.06-369.06
A8-AS-3A	A8-AS-3A	65	375.59	380.59-375.59
A8AS-3B	A8AS-3B	67	372.66	377.66-372.66
A8-AS-3C	A8-AS-3C	70	368.98	373.98-368.98
A8-AS-4A	A8-AS-4A	65	376.67	381.67-376.67
A8-AS-4B	A8-AS-4B	65	375.83	380.83-375.83
A8-AS-4C	A8-AS-4C	65	375.25	380.25-375.25
A8-AS-5A	A8-AS-5A	65	376.87	381.87-376.87
A8-AS-5B	A8-AS-5B	65	376.71	381.71-376.71
A8-AS-5C	A8-AS-5C	65	376.10	381.10-376.10
A8SVE-1A	A8SVE-1A	25	415.27	425.27-415.27
A8SVE-1B	A8SVE-1B	25	411.49	421.49-411.49
A8SVE-2A	A8SVE-2A	25	415.73	425.73-415.73
A8SVE-2B	A8SVE-2B	25	413.82	423.82-413.82
A8SVE-3A	A8SVE-3A	25	416.91	426.91-416.91
A8SVE-3B	A8SVE-3B	25	416.31	426.31-416.31

AS/SVE System Area Piezometers

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A8PZN-S	A8PZN-S	30	410.88	410.88 - 420.88
A8PZN-M	A8PZN-M	40	400.78	400.78 - 405.78
A8PZN-D	A8PZN-D	45	395.70	395.70 - 400.70
A8PZNW-S	A8PZNW-S	30	410.56	410.56 - 420.56
A8PZNW-M	A8PZNW-M	40	400.57	400.57 - 405.57
A8PZNW-D	A8PZNW-D	45	395.63	395.63 - 400.63

A8PZSE-S	A8PZSE-S	30	410.77	410.77 - 420.77
A8PZSE-M	A8PZSE-M	40	400.76	400.76 - 405.76
A8PZSE-D	A8PZSE-D	45	395.71	395.71 - 400.71
A8PZS-S	A8PZS-S	30	410.66	410.66 - 420.66
A8PZS-M	A8PZS-M	40	400.62	400.62 - 405.62
A8PZS-D	A8PZS-D	45	395.61	395.61 - 400.61
A8PZ-C	A8PZ-C	52	387.85	397.85-387.85
A8PZ-SE	A8PZ-SE	45	396.18	406.18-396.18
A8PZ-NE	A8PZ-NE	50	391.82	401.82-391.82
A8PZ-SW	A8PZ-SW	49	387.30	397.30-387.30

AS/SVE System Area Vapor Monitoring Points

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Interval (ft. BGS)	Well Diameter (inches)
A8VMPN-S	A8VMPN-S	10	9.5-10	0.75
A8VMPN-M	A8VMPN-M	20	19.5-20	0.75
A8VMPN-D	A8VMPN-D	25	24.5-25	0.75
A8VMPNE-S	A8VMPNE-S	10	9.5-10	0.75
A8VMPNE-M	A8VMPNE-M	20	19.5-20	0.75
A8VMPNE-D	A8VMPNE-D	25	24.5-25	0.75
A8VMPS-S	A8VMPS-S	10	9.5-10	0.75
A8VMPS-M	A8VMPS-M	20	19.5-20	0.75
A8VMPS-D	A8VMPS-D	25	24.5-25	0.75
A8VMPSW-S	A8VMPSW-S	10	9.5-10	0.75
A8VMPSW-M	A8VMPSW-M	20	19.5-20	0.75
A8VMPSW-D	A8VMPSW-D	25	24.5-25	0.75
A8VMP1-S	A8VMP1-S	5	4-5	0.75
A8VMP1-M	A8VMP1-M	15	14-15	0.75
A8VMP1-D	A8VMP1-D	25	24-25	0.75
A8VMP2-S	A8VMP2-S	5	4-5	0.75
A8VMP2-M	A8VMP2-M	15	14-15	0.75
A8VMP2-D	A8VMP2-D	25	24-25	0.75
A8VMP3-S	A8VMP3-S	5	4-5	0.75
A8VMP3-M	A8VMP3-M	15	14-15	0.75
A8VMP3-D	A8VMP3-D	25	24-25	0.75
A8VMP4-S	A8VMP4-S	5	4-5	0.75
A8VMP4-M	A8VMP4-M	15	14-15	0.75
A8VMP4-D	A8VMP4-D	25	24-25	0.75
A8VMP5-S	A8VMP5-S	5	4-5	0.75
A8VMP5-M	A8VMP5-M	15	14-15	0.75
A8VMP5-D	A8VMP5-D	25	24-25	0.75
A8VMP6-S	A8VMP6-S	5	4-5	0.75
A8VMP6-M	A8VMP6-M	15	14-15	0.75
A8VMP6-D	A8VMP6-D	25	24-25	0.75
A8VMP7-S	A8VMP7-S	5	4-5	0.75

A8VMP7-M	A8VMP7-M	15	14-15	0.75
A8VMP7-D	A8VMP7-D	25	24-25	0.75
A8VMP8-S	A8VMP8-S	5	4-5	0.75
A8VMP8-M	A8VMP8-M	15	14-15	0.75
A8VMP8-D	A8VMP8-D	25	24-25	0.75
A8VMP9-S	A8VMP9-S	5	4-5	0.75
A8VMP9-M	A8VMP9-M	15	14-15	0.75
A8VMP9-D	A8VMP9-D	25	24-25	0.75
A8VMP10-S	A8VMP10-S	5	4-5	0.75
A8VMP10-M	A8VMP10-M	15	14-15	0.75
A8VMP10-D	A8VMP10-D	25	24-25	0.75
A8VMP11-S	A8VMP11-S	5	4-5	0.75
A8VMP11-M	A8VMP11-M	15	14-15	0.75
A8VMP11-D	A8VMP11-D	25	24-25	0.75
A8VMP12-S	A8VMP12-S	5	4-5	0.75
A8VMP12-M	A8VMP12-M	15	14-15	0.75
A8VMP12-D	A8VMP12-D	25	24-25	0.75
A8VMP13-S	A8VMP13-S	5	4-5	0.75
A8VMP13-M	A8VMP13-M	15	14-15	0.75
A8VMP13-D	A8VMP13-D	25	24-25	0.75

Figures to Attachment E:

E-1 -- Site Plan
E-2 -- Process and Instrumentation Plan – Central Biovent System
E-2A- Process Flow Schematic Central Biovent Area
E-3 – Area 3 Biovent Expansion
E-4 -- Process and Instrumentation Plan – Southern Biosparge System
E-4A-Process Flow Schematic Southern Biosparge/Biovent Area
E-5 – Area 5 Biosparge/ Biovent System Area
E-6 – Process and Instrumentation Plan – Air Sparge/SVE System
E-6A-Process Flow Schematic Northern AS/SVE Area
E-7 – Northern Air Sparge/ Soil Vapor Extraction System Area

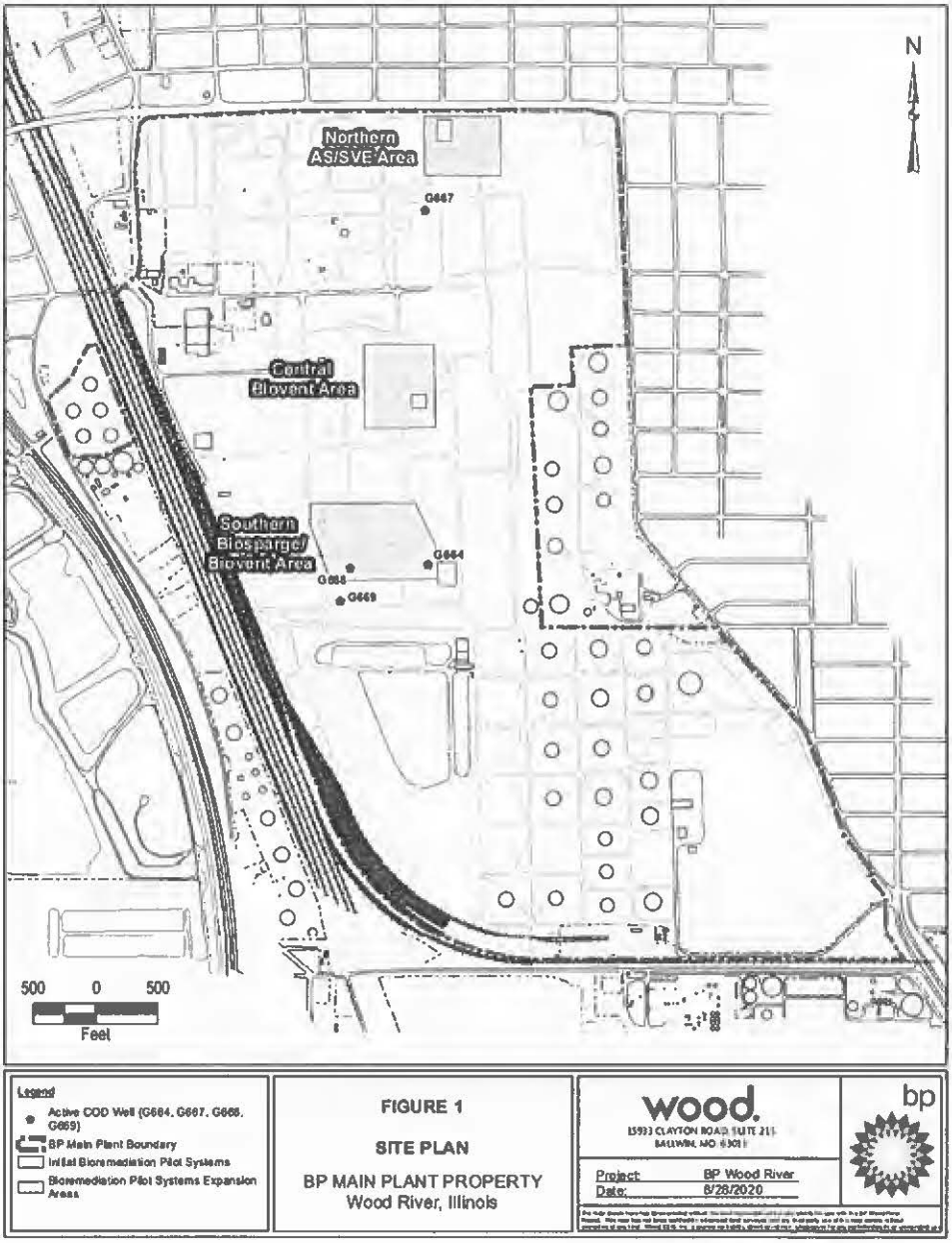


Figure E-1 -- Site Plan

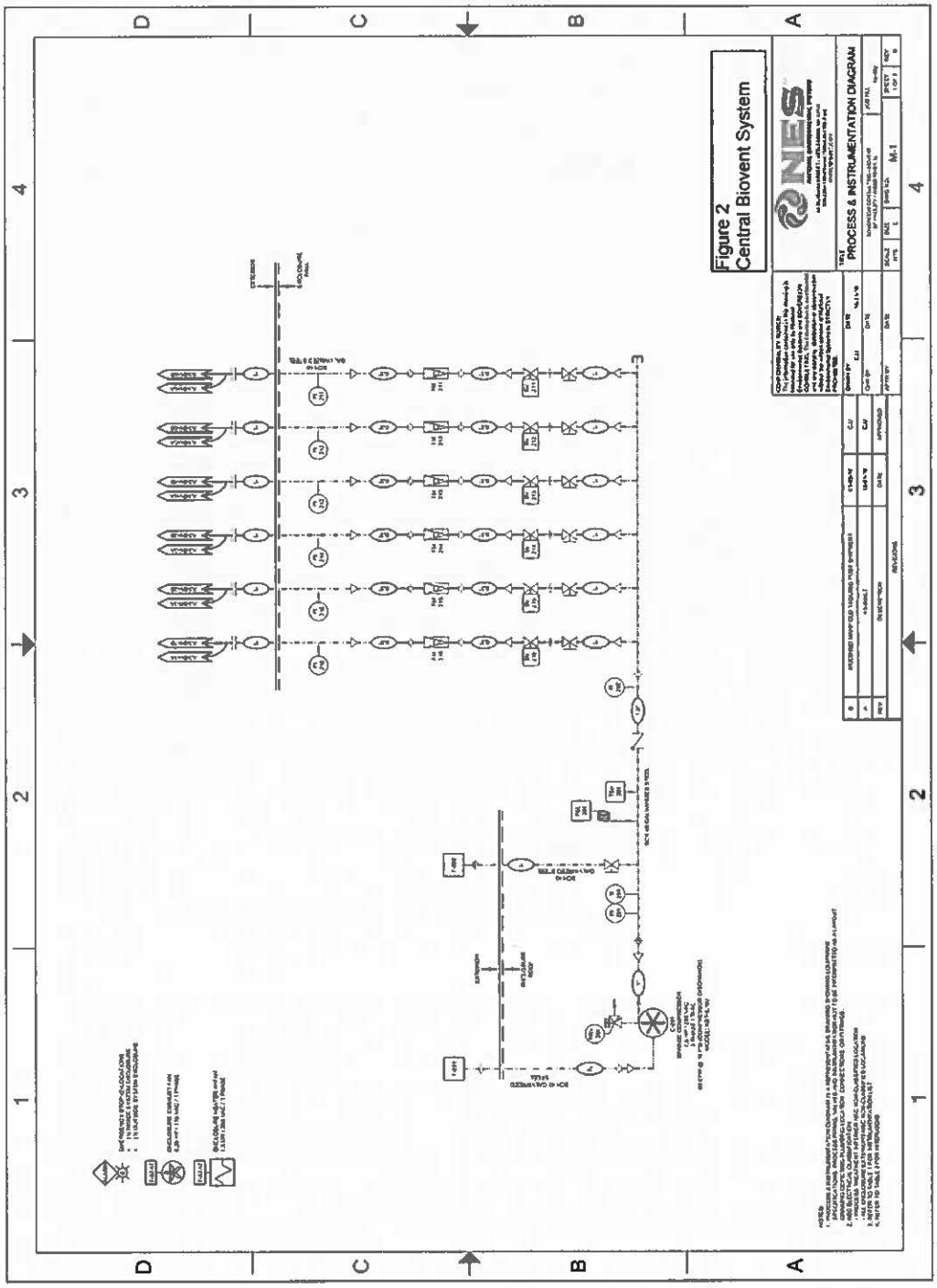


Figure E-2 -- Process and Instrumentation Plan – Central Biovent System

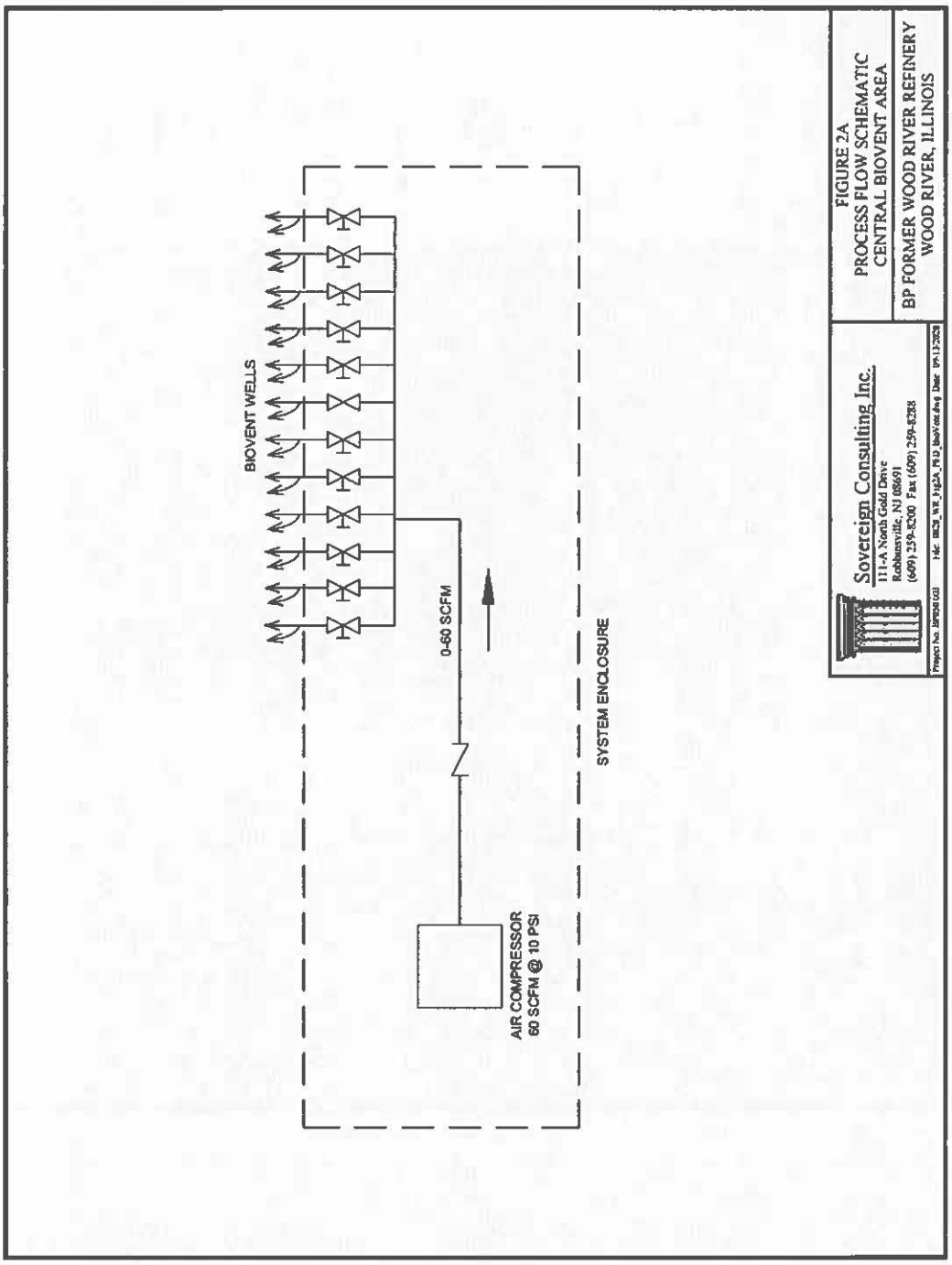


Figure E-2A- Process Flow Schematic Central Biovent Area

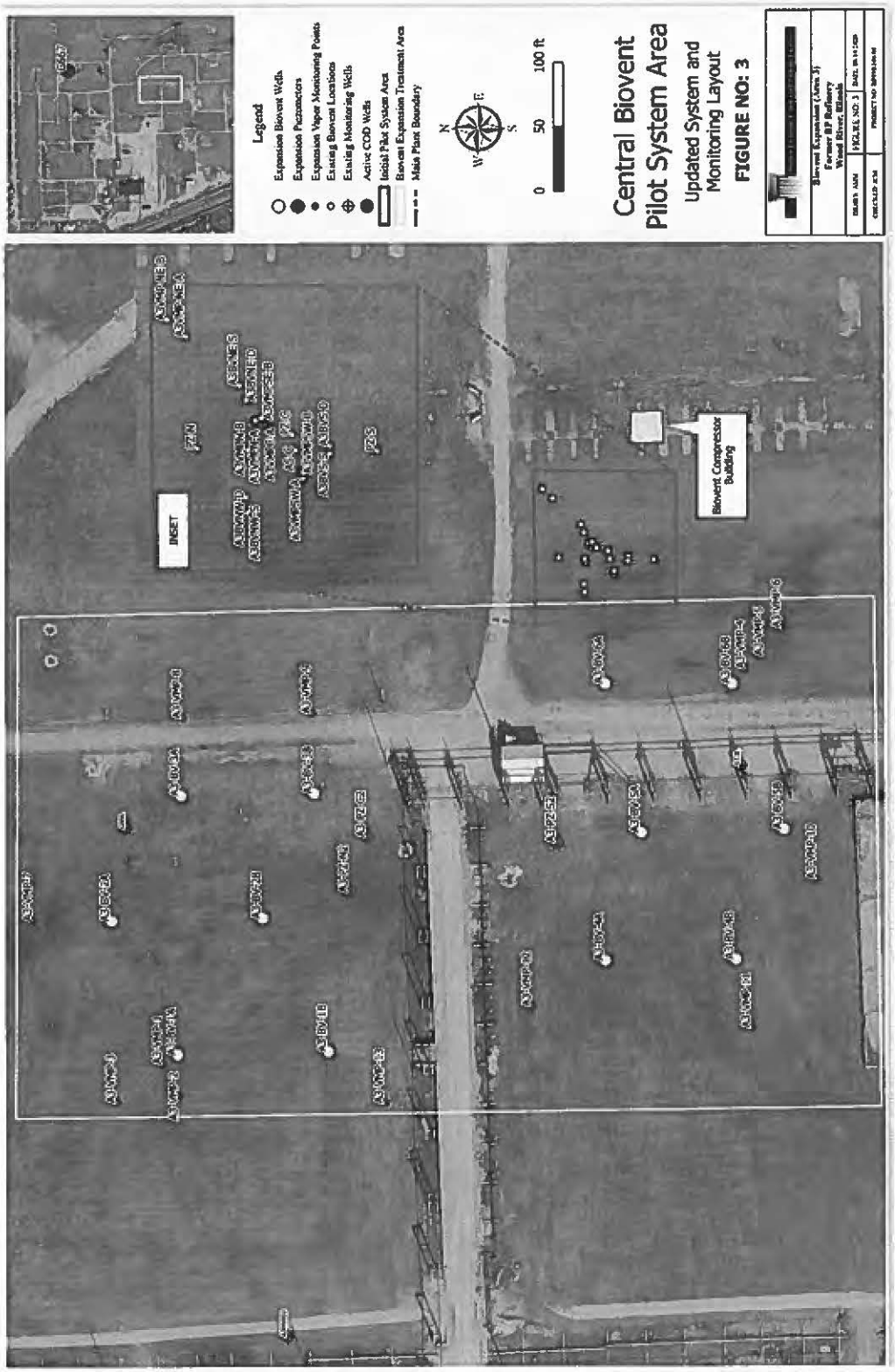


Figure E-3 – Area 3 Biovent Expansion

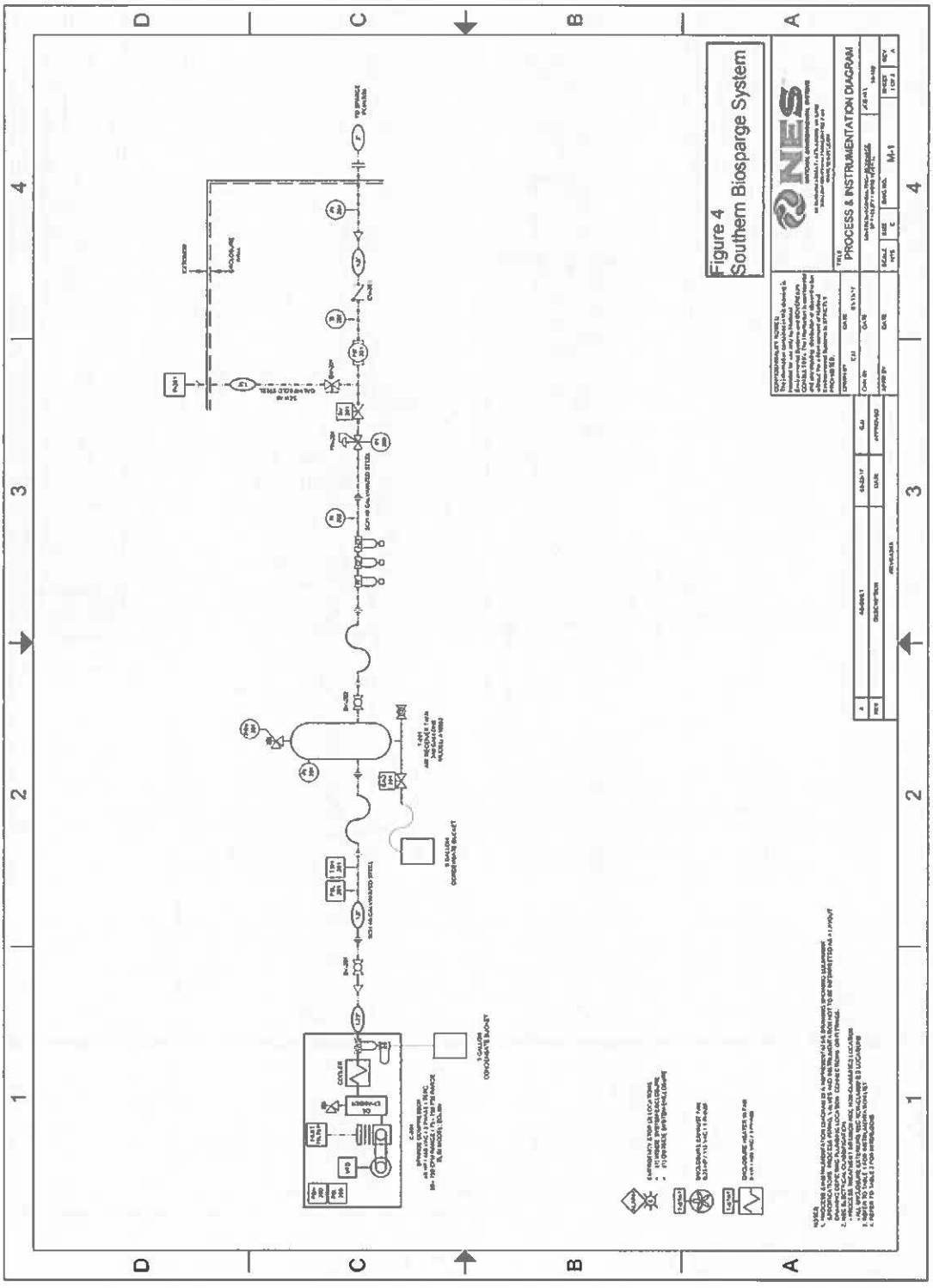


Figure E-4 -- Process and Instrumentation Plan – Southern Biosparge System

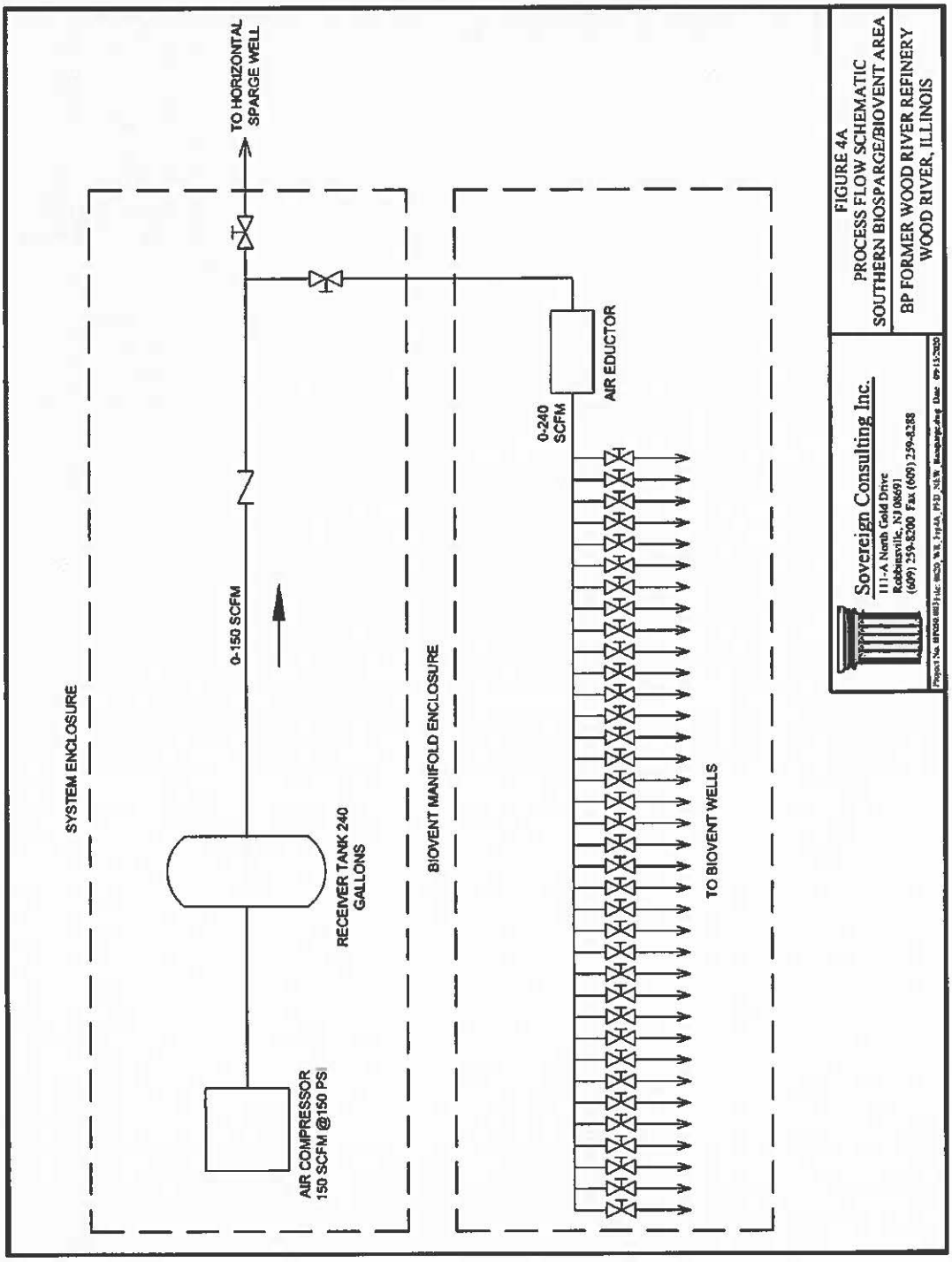


Figure E-4A-Process Flow Schematic Southern Biosparge/Biovent Area

Figure E-5 – Area 5 Biosparge/ Biovent System Area

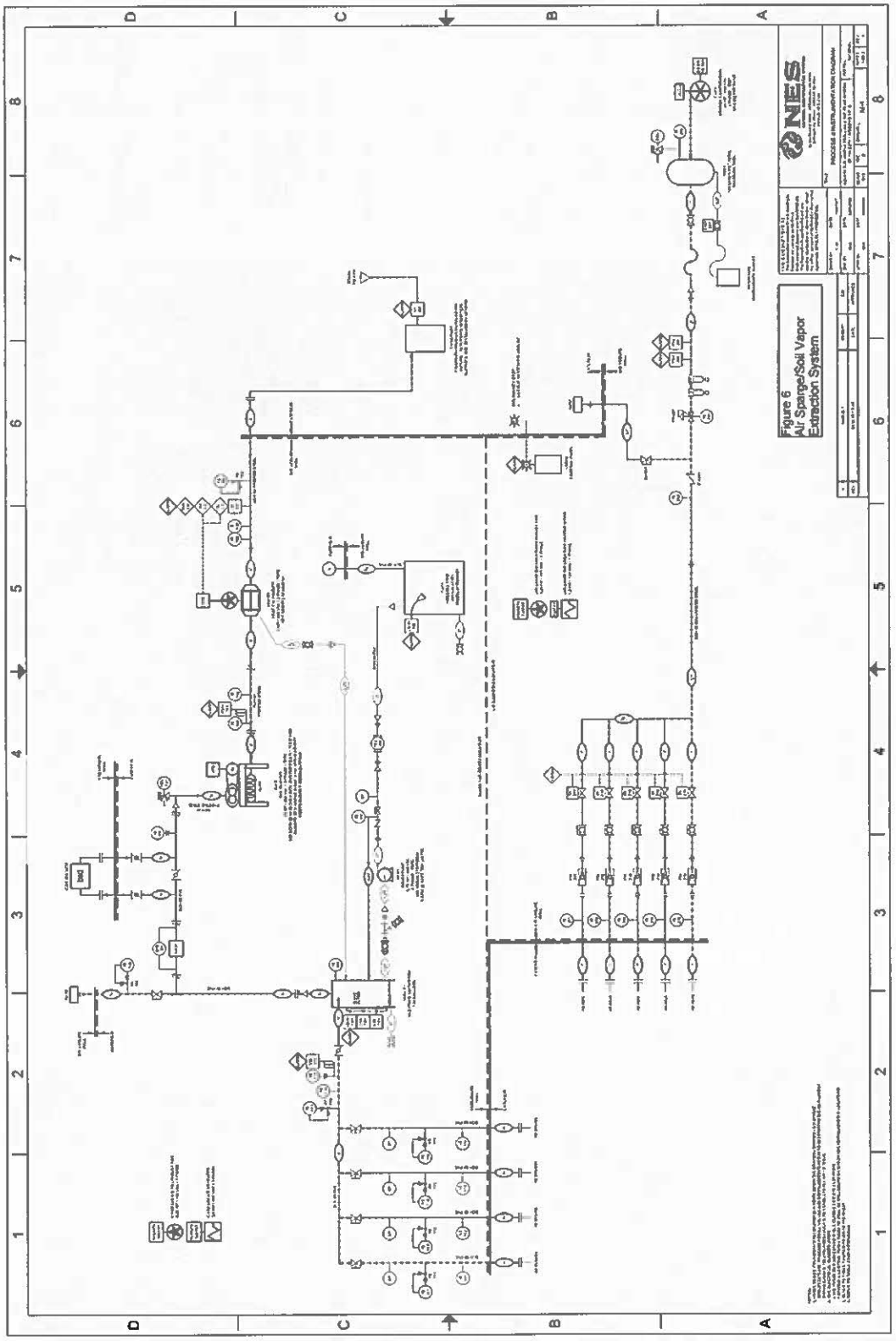


Figure E-6 – Process and Instrumentation Plan – Air Sparge/SVE System

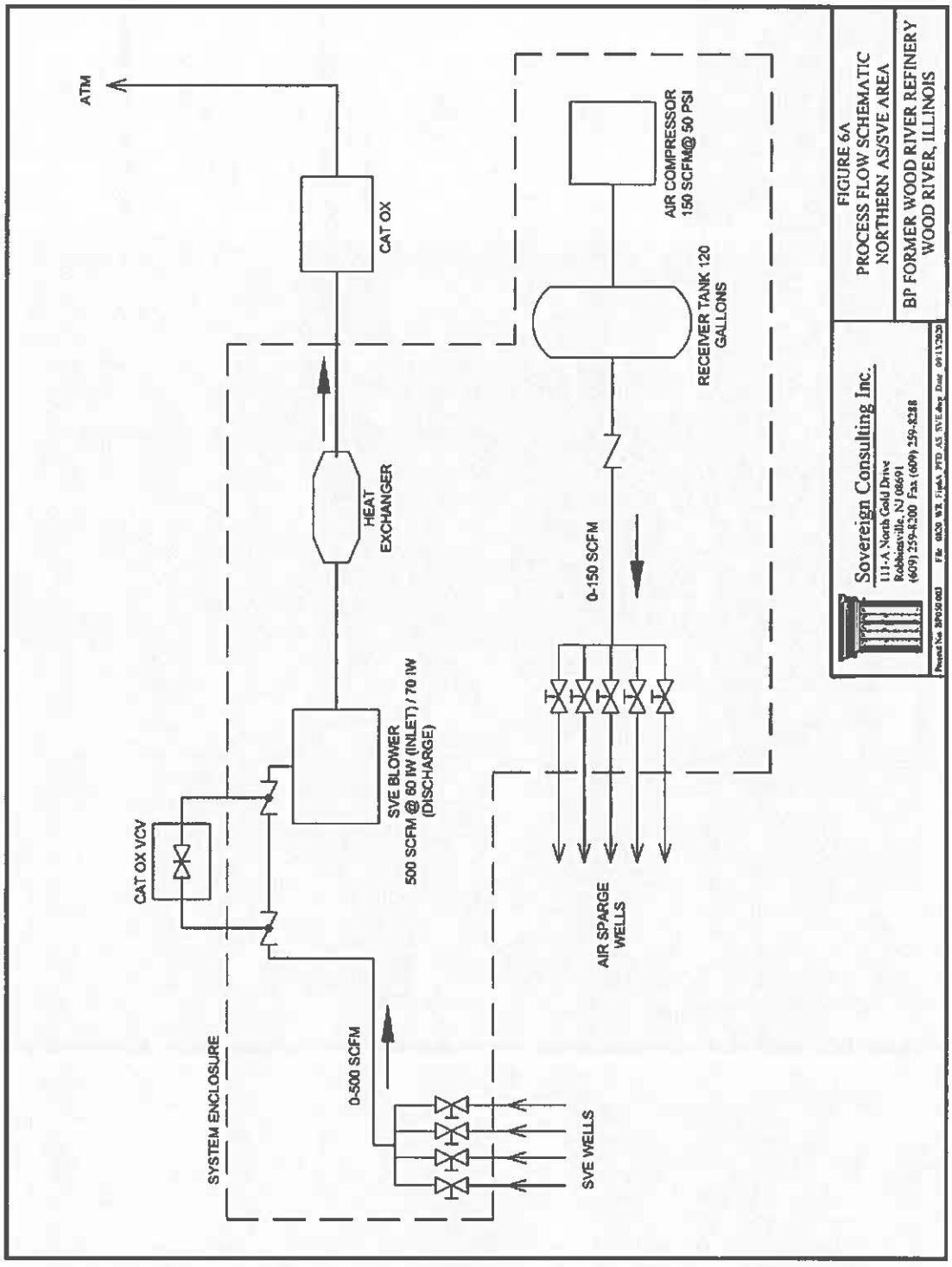


Figure E-6A-Process Flow Schematic Northern AS/SVE Area

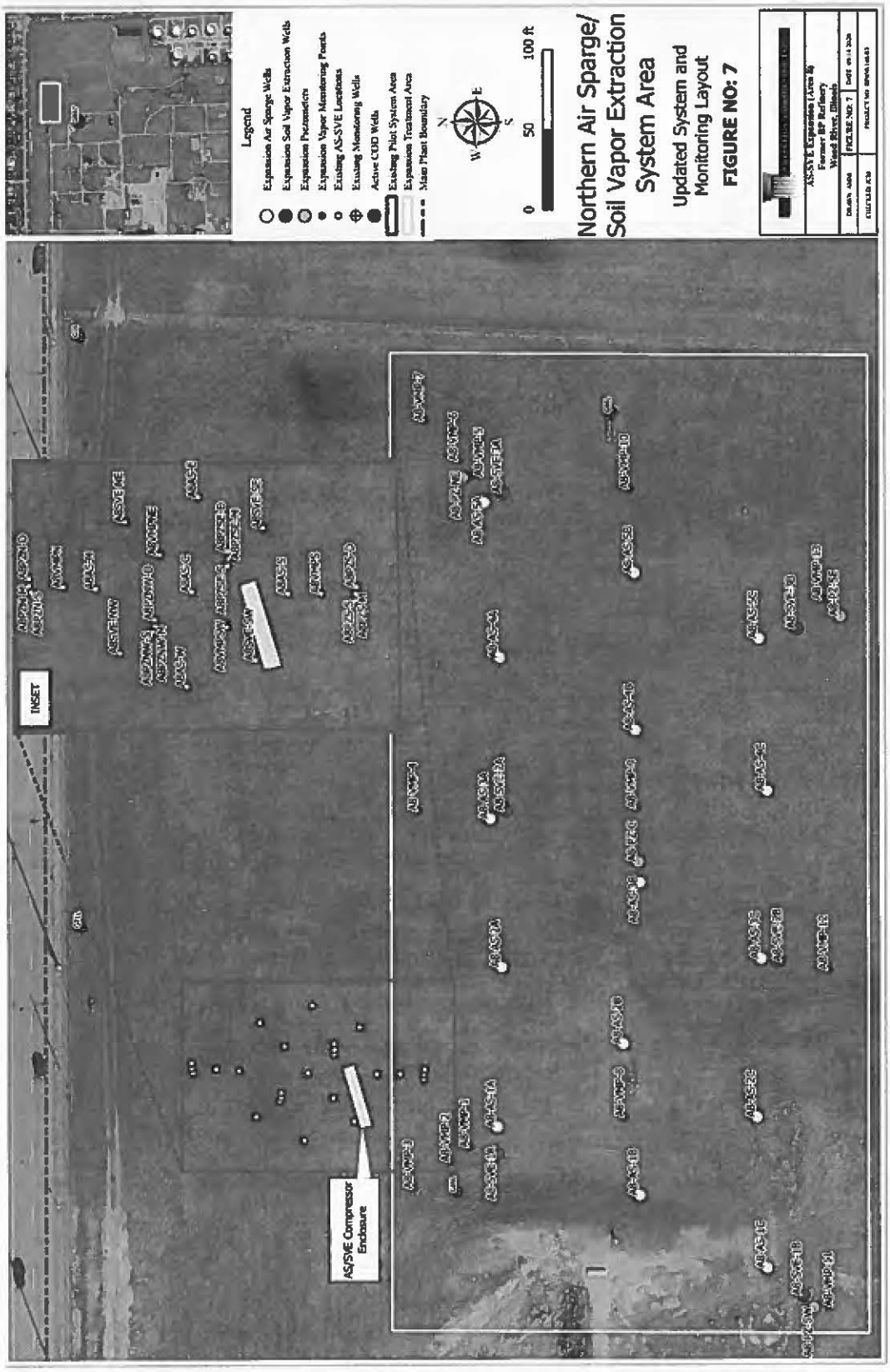


Figure E-7 – Northern Air Sparge/ Soil Vapor Extraction System Area

ATTACHMENT F

NORTHING AND EASTING WELL COORDINATES

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT F

NORTHING AND EASTING WELL COORDINATES

Facility Well ID	IEPA Well ID	Northing	Easting
G-01R	G002	2315679.6730	798263.3670
B-5D	G005	2320442.8070	794103.4080
B-6	G006	2321445.3990	792326.8380
B-8D	G008	2318701.1380	794139.4760
B-9	G009	2317504.0380	797808.5810
C-1	G011	2316145.9890	798128.1810
C-3	G013	2315486.7910	797313.6600
C-6	G016	2315568.4280	796545.3270
C-7	G017	2316068.8140	796709.5230
C-10	G020	2316846.4770	796084.5010
C-11	G021	2316032.8980	795553.1050
C-13	G023	2316726.7590	794627.7530
G-5	G045	2319331.7120	798107.7350
G-6	G046	2319352.1710	797717.7080
G-8	G048	2317665.9870	794905.3140
G-9	G049	2317730.1180	794933.0350
B-4R	G04R	2319383.4870	796886.7270
G-10	G050	2316647.7000	797276.8380
G-15	G055	2319304.5810	798579.1090
G-17	G057	2314016.8910	797192.5450
G18	G058	2313697.9150	797669.3160
G-19	G059	2314720.3470	796603.7740
G-22	G062	2316138.2830	798781.4700
G-24	G064	2317405.0010	798759.2780
G-25	G065	2318431.6080	798763.5760
G-27	G067	2317282.7860	798854.8410
G-28	G068	2317437.6450	798858.2920
G-33	G073	2316629.9380	798762.8210
G-39	G079	2314655.5710	796217.3950
G-42	G082	2315061.8680	796341.7040
G32R	G084	2315809.4730	798824.7170
G-26R	G085	2319412.1830	797888.5090
H-20	G10L	2318428.6930	796675.2540
SWMU12-MW02	G111	2321150.8470	792075.9720
G-H1	G112	2320408.7820	792141.5070
G128	G128	2321505.0490	791869.4520
H-23	G13L	2317555.5600	796223.3910
H-24	G14L	2318100.0690	796149.0410

Facility Well ID	IEPA Well ID	Northing	Easting
H-26A	G16L	2317933.9290	795414.3950
H-28	G18	2318392.0710	798666.2510
H-29	G19	2317302.5480	798664.2160
C-12R	G22R	2316821.8910	795303.2200
RP-1	G301	2318950.2690	793678.5400
RP-3D	G303	2317187.1060	793125.3120
RP-4D	G304	2316844.8760	794402.4720
RP-5	G305	2317182.2120	794484.3180
RP-6	G306	2317650.7810	794478.4090
RP-7D	G307	2318033.2090	794439.6030
H-30R	G30R	2316949.7660	798660.8350
H-31R	G31R	2316452.9700	798645.6100
H32R	G32R	2315452.6910	797881.6690
H-33	G33	2315831.1310	795895.8320
H-34	G34	2317227.4270	795061.9100
H-37	G37	2319887.0480	791941.2110
H-39	G39	2318294.9450	793276.9050
B-17	G417	2317985.3380	796482.1650
G-5B	G5B	2319331.6770	798112.5710
RC-1	G601	2317016.0710	797966.4900
RC-2	G602	2317021.1740	797306.8430
RC-3	G603	2317054.1820	796580.3380
RC-4	G604	2316673.2710	797256.1700
RC-5	G605	2317658.7670	794911.5820
RC-6	G606	2316366.9220	798334.8220
RC-7	G607	2316841.2620	798360.1430
RC-8	G608	2317174.6960	798373.7870
RC-9	G609	2317389.3470	798157.0880
RC-10	G610	2317589.3950	798369.7090
RC-11	G611	2317919.3640	798321.7330
RC-12	G612	2318326.6020	798335.2680
RC-13	G613	2317136.7880	795587.8480
RC-14	G614	2317659.8050	795257.5300
RC-15	G615	2317812.4390	795006.7230
RC-16	G616	2316988.7800	795311.7320
RC-17	G617	2316517.6020	797774.1780
RC-18	G618	2316620.1360	797976.4530
RC-19	G619	2316679.6860	798115.2650
RC-20	G620	2316673.3790	797366.0800
RC-H-29	G629	2317403.7210	798663.8640
G-29R	G69R	2317835.9950	798880.4770

Facility Well ID	IEPA Well ID	Northing	Easting
G-31	G71L	2318022.9480	798666.1450
G-34	G74L	2318878.5220	798776.9620
G-35	G75L	2318335.5340	798849.9300
G-36	G76L	2318005.7010	798852.2200
G-37	G77L	2317535.8570	798767.0950
H-3	G83L	2316856.7180	798243.9080
H-4	G84L	2317395.0430	798262.1620
H-6	G86L	2318343.7720	798335.5420
H-7	G87L	2315843.9780	797583.0780
H-9	G89L	2316801.1780	797725.1370
M-1D	G91	2320805.0380	793634.6680
H-11	G91L	2318078.0000	797797.7740
M-2D	G92	2320963.8860	793234.9600
H-12	G92L	2318520.0740	797772.2940
M-3D	G93L	2321139.3660	792810.7060
H-16	G96L	2318043.8500	797261.2130
H-17	G97L	2318509.0470	797205.0340
H-18	G98L	2315593.1660	796997.6950
H-19	G99L	2317507.8130	796699.9450
H-31B	H31B	2316448.2440	798648.0050
G-2D	R042	2319932.2010	793607.1120
G-23R	R063	2317101.3500	798768.1600
G-4DR	R083	2320117.5960	792916.8810
H-21R	R11L	2316250.0960	796182.4280
RP-2D	R302	2318146.3020	792164.0310
H36R	RG36	2318906.9170	796630.9950

ATTACHMENT G

WATER WELL SURVEY GUIDANCE FOR RCRA FACILITIES

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT G

WATER WELL SURVEY GUIDANCE FOR RCRA FACILITIES

In order to determine the impacts and potential impacts to potable water supply wells from soil, soil gas, or groundwater contamination, 35 IAC 1600, Subpart B establishes the minimum standards and requirements for performing water well surveys to ensure these wells are accurately identified and located. All Solid Waste permitted facilities, RCRA permitted facilities, and facilities pursuing RCRA closure, where exceedances of the applicable 35 IAC Part 620 groundwater quality standards (or in the case of RCRA closure, 35 IAC Part 742, Tier 1 groundwater remediation objectives), have the potential to impact potable water supply wells, must determine the existence and location of potable water supply wells as described in 35 IAC Part 1600 and this procedure. This procedure applies to projects that require the location of potable water wells to be identified as part of site investigation, corrective action activities, or Right to Know evaluation.

In order to meet these requirements, the facility in question must submit maps that identify the following:

1. All private, semi-private and non-community water system wells located at the property where the release occurred or within 200 feet of the property boundary where the release occurred;

2. All community water system wells located at the property where the release occurred or within 2,500 feet of the property boundary where the release occurred; and

3. All wellhead protection areas in which all or any portion of the property where the release occurred is located within that zone or area.

The facility must submit verification that all of the below sources have been investigated and the water well survey data (electronic, paper or physical) from these sources have been included on the map. This information shall be obtained from the following sources:

- Illinois State Geological Survey
- Illinois State Water Survey
- Illinois EPA Division of Public Water Supplies
- Illinois Department of Public Health
- County and Municipal Health Departments
- Local water supply entity (i.e., public water districts, public water supply companies), if data is not included in the previous listed sources.

If it is determined that groundwater contamination exceedances of the applicable 35 IAC Part 620, groundwater quality standards (or in the case of RCRA closure the 35 IAC Part 742, Tier 1, groundwater remediation objectives), are measured or modeled to migrate off-site, the area of the water well survey must be expanded based on the measured and/or modeled groundwater plume.

NOTE: If contamination at a remediation site cannot be modeled due to geological constraints (i.e. bedrock), the information requested above shall be collected inside a survey area to be determined by the Illinois EPA on a site-by-site basis.

Documentation of the results of the water well survey or the expanded water well survey, must include the following information:

- Map(s) to appropriate scale showing the location of community water supply wells, potable water supply wells, and all applicable wellhead protection areas of the wells identified in the survey. The location of the measured and modeled contamination plume shall also be shown on the map(s) if the measured or modeled plume extends off-site.

- Tables of potable water supply wells and their respective wellhead protection areas.

- Narrative to supplement the map(s) and table(s) identified above. This includes the person(s) contacted as part of the survey, that person's title, sources of information used, field observations, etc.

- Certification by a Licensed Professional Engineer or Licensed Professional Geologist that the entities listed above have been contacted as part of the well survey and the information obtained is included in the map(s), table(s) and narrative.

When data sources as identified above do not appear to have adequately identified the location of potable wells or site-specific conditions warrant, additional investigation may be required. Such conditions include, but are not limited to:

- The local water supply entity does not bill a residence/business located within the search area, and the other record searches do not show a potable well on the property; or

- The water well survey does not appear to identify an accurate number of potable wells for the area when the locational information is compared to aerial photography or local zoning maps which identify residential and commercial structures.

The additional investigation must include, at a minimum, notification in the form of written communication to properties within the water well survey area and may include a physical well survey (e.g. face-to-face interviews with property owners, a reconnaissance survey looking for wellheads, etc.)

EXHIBIT B

Remediation Management Services Company

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

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

November 13, 2024

Ms. Sarah Brubaker
Public Involvement Coordinator (#5)
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Re: 1191150001 - Madison County
BP Products North America Inc. – Main Plant
USEPA ILD980700967
Log No. B-147R2
RCRA Administrative Record – 24D
Public Notice Comments for Draft Permit

Dear Ms. Brubaker:

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 Resource Conservation and Recovery Act (RCRA) Corrective Action Permit (Draft Permit) for the bp Wood River Main Plant 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,

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

Page	Comment	Reference / Proposed Revision(s)
FACT SHEET		
I. INTRODUCTION		
1 of 7	*It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	The draft renewed RCRA permit for BP Main Plant contains all of the standard conditions required by 35 IAC Parts 702, 703 and 724; and the applicable conditions of 35 IAC 724.201 and Section 3004(u) of RCRA for the completion of corrective action activities at the subject facility.
IV. CORRECTIVE ACTION ACTIVITIES		
A. Solid Waste Management Units (SWMUs)		
3 of 7	*It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	35 IAC 724.201 and the original and current RCRA permit for this facility requires corrective action, as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any SWMUs and areas of concern at this facility.
B. Groundwater Corrective Action		
4 of 7	*It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	Therefore, a corrective action program for groundwater meeting the requirements of 35 IAC 724.201 must be implemented at the facility. In addition to the corrective action necessary to treat or remove hazardous constituents released to groundwater, this draft renewed RCRA permit also requires the Permittee to implement a corrective action program for the groundwater present in the uppermost aquifer beneath the facility, and off-site as necessary.

Page	Comment	Reference / Proposed Revision(s)
	a. Parameters	
4 of 7 and 5 of 7	*Please revise hazardous constituents list and footnotes to align with the optimized Groundwater Corrective Action Monitoring Program approved by Illinois EPA in a letter dated January 19, 2023 (Log Nos. B-147R-CA-85 and 89).* *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 groundwater quality standard for arsenic be established at a concentration of 0.036 mg/L. Please revise to include a footnote stating the Concentration Limit for arsenic may be increased to a site-specific groundwater quality standard if approved by Illinois EPA.*	Hazardous Constituents / Storet No. / Concentration Limits (mg/L) Antimony 01097 0.006 Arsenic 01002 0.01** Barium 01007 2.0 ~~Beryllium~~ ~~01012~~ ~~0.004~~ ~~Cadmium~~ ~~01027~~ ~~0.005~~ Chromium 01034 0.1 ~~Cobalt~~ ~~01037~~ ~~1.0~~ Lead 01051 0.0075 ~~Mercury~~ ~~71900~~ ~~0.002~~ Nickel 01067 0.1 Selenium 01147 0.05 ~~Vanadium~~ ~~01087~~ ~~0.049~~ VOCs 1,2-Dichloroethane 34531 0.005 1,3-Dichlorobenzene 34561 0.0002 ~~1,4-Dichlorobenzene~~ ~~34571~~ ~~0.075~~ ~~2-Butanone (MEK)~~ ~~81595~~ ~~4.2~~ Benzene 34030 0.005 ~~Carbon Disulfide~~ ~~77041~~ ~~0.7~~ ~~Chlorobenzene~~ ~~34301~~ ~~0.1~~ Chloroform 32106 0.0002 Ethylbenzene 78113 0.7 Toluene 34010 1.0 Total Xylenes 34020 10.0 Methyl Tertiary-Butyl Ether 46491 0.07 Styrene 77128 0.1

Page	Comment	Reference / Proposed Revision(s)		
4 of 7 and 5 of 7	*[Continued]*	SVOCs		
		2,4-Dimethylphenol	34606	0.14
		~~2,4 Dinitrophenol~~	~~34616~~	~~0.014~~
		~~2 Methylphenol (o cresol)~~	~~77152~~	~~0.35~~
		4-Methylphenol (p-cresol)	77146	0.035
		~~4 Nitrophenol~~	~~34646~~	~~–~~
		~~Anthracene~~	~~34220~~	~~2.1~~
		Benzo(a)anthracene	34526	0.00013
		Benzo(a)pyrene	34247	0.0002
		Benzo(b)fluoranthene	34230	0.00018
		Benzo(k)fluoranthene	34242	0.00017
		Bis(2-ethylhexyl)phthalate	39100	0.006
		~~Butyl benzyl phthalate~~	~~34292~~	~~1.4~~
		Chrysene	34320	0.0015
		Dibenzo(a,h)anthracene	34556	0.0003
		~~Diethyl phthalate~~	~~34336~~	~~5.6~~
		~~Dimethyl phthalate~~	~~34341~~	~~–~~
		~~Di n butyl phthalate~~	~~39110~~	~~0.7~~
		~~Di n octyl phthalate~~	~~34596~~	~~0.14~~
		~~Fluoranthene~~	~~34376~~	~~0.28~~
		Naphthalene	34696	0.14
		~~Phenanthrene~~	~~34461~~	~~0.21~~
		Phenol	34466	0.035
		~~Pyrene~~	~~34469~~	~~0.1~~
		~~Pyridine~~	~~77045~~	~~0.007~~
		Biogeochemical[1] Analytes	Storet No.	Concentration Limits (mg/L)
		Dissolved iron	N/A	--
		Dissolved sulfate	N/A	--
		Dissolved manganese	N/A	--

Page	Comment	Reference / Proposed Revision(s)
4 of 7 and 5 of 7	*[Continued]*	-- Not available N/A = Not applicable 1 = To monitor natural attenuation conditions ** Site-specific concentration limit may be used if approved by the Illinois EPA.
C. Standard Permit Conditions		
6 of 7	2nd sentence: *As noted in Condition I.C.1 of the draft permit, Illinois EPA should revise this language in the Fact Sheet to clarify that some standard conditions are not applicable to this facility.*	The standard conditions are of a general nature and are applicable to all hazardous waste management facilities regulated pursuant to an Illinois EPA RCRA permit except as noted within this draft renewed RCRA permit (e.g., Condition I.C.1). The standard conditions include the effectiveness of the permit, permit actions, permit severability, permit expiration, monitoring, retention of records, permit transfer, and compliance schedules.
V. CONSIDERED PERMIT ACTIONS OTHERS THAN RCRA		
B. Water		
6 of 7	2nd sentence: *Please revise the Water Pollution Control Permit No. to align with the current permit issued by Illinois EPA on September 16, 2024.*	The groundwater remediation and treatment system at the facility has a permit from Illinois EPA's Bureau of Water (Permit No. ~~2020-EP-64994~~2024-EP-71491).

Page(s)	Comment	Reference / Proposed Revision(s)
RCRA CORRECTIVE ACTION PERMIT – MAIN PLANT FACILITY Illinois EPA No. 1191150001 USEPA No: ILD980700967		
I. GENERAL FACILITY DESCRIPTION		
	B. LOCATION	
I-I	Condition 2.c, 2nd sentence: *Please revise to align with removal of the Area 2 Donation Parcel I – Stormwater Detention Basin (9.56 acres) and the Kinder Morgan Phoenix Holdings (KMPH) parcel (118.25 acres).*	The facility which is the subject of this permit, located between 418 ft above MSL and 428 ft above MSL, is approximately 442.19 acres in size. This is a reduction of approximately ~~7.5~~127.81 acres from the original BP Main Plant to remove the parcels described in Conditions I.B.2.a ~~(2)~~(1) and (3).
I-I	Condition 2.d, 2nd sentence: *Please revise to align with removal of only the KMPH parcel (118.25 acres).*	The facility which is the subject of this permit, located between 408 ft above MSL and 418 ft above MSL, is approximately 451.75 acres in size. This is a reduction of approximately ~~17.06~~118.25 acres from the original BP Main Plant to remove the parcels described in Conditions I.B.2.a ~~(1) and (2)~~(3).
	C. DESCRIPTION OF HAZARDOUS WASTE MANAGEMENT ACTIVITIES	
I-3	Condition 1, 3rd sentence: *Please revise to include closure and post-closure care (35 IAC 724, Subpart G), financial (35 IAC 724, Subpart H), and 35 IAC 727 (Standards for Owners and Operators of Hazardous Waste Facilities Operating Under a RCRA Standardized Permit) in the list of requirements that are not applicable to this permit as there are no regulated HWMUs operating or requiring closure/post-closure care under this permit at this facility.*	There are no regulated hazardous waste management units (HWMUs) operating or requiring closure/post-closure care under this permit at this facility. Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit. This includes the requirements for personnel training (35 IAC 724, Subpart B), preparedness and prevention (35 IAC 724, Subpart C), ~~and~~ contingency plan and emergency procedures (35 IAC 724, Subpart D), closure and post-closure care (35 IAC 724, Subpart G), and financial (35 IAC 724, Subpart H). Additionally, 35 IAC 727 requirements are not applicable to this permit. However, please note that through the application of other laws, regulations, and permit conditions, some of the concepts covered by these regulations may still apply to corrective action activities conducted at the site.

Page(s)	Comment	Reference / Proposed Revision(s)
I-4	Condition 3.b, 2nd paragraph: *Please revise to reflect that a certified ELUC for the South Flare Pit (SFP) was previously approved by the Illinois EPA as is documented for Land Reuse Area 18 in Section II.C.1 of this draft Permit.* *Please correct the reference to the condition with Groundwater Requirements for the SFP.*	~~Condition II.F of this permit addresses the requirements of Conditions I.C.3.b (1) and (2) above, the remaining corrective action activities that need to be completed at the SFP. An ELUC must be established in accordance with the Conditions II.F of this permit renewal before a No Further Action (NFA) can be issued for the SFP.~~ A certified ELUC for the SFP was submitted to Illinois EPA on December 31, 2015 and approved by Illinois EPA in a letter dated July 18, 2016 (Log No. B-147R-CA-58). Therefore, no further action is necessary for soil at the SFP. Condition II.C.~~5~~4 below (Groundwater Requirements for the SFP) addresses the requirements associated with Item 3 above.
II. CORRECTIVE ACTION		
A. INTRODUCTION		
II-1	Condition 1: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	In accordance with Section 3004(u) of RCRA and 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 waste constituents, listed in 35 IAC 721, Appendix H, from any Solid Waste Management Unit (SWMU) at the BP Main Plant in Wood River, Illinois. This section contains the conditions which must be followed to ensure these requirements are met.
II-1	Condition 4, 2nd sentence: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	The facility has completed a substantial amount of corrective action efforts to date at this facility. This permit summarizes these efforts and describes the corrective action efforts which must still be completed at this facility to ensure the requirements of Section 3004(u) and (v) of RCRA and 35 IAC 724.201 are met.

Page(s)	Comment	Reference / Proposed Revision(s)
II-1	Condition 6: *bp does not agree with the requirement to investigate NFA parcels for TACO Part 742. bp completed all regulatory requirements for closure that were in place when the NFA determinations were made and issued by Illinois EPA. bp requests removal of the requirement to reinvestigate parcels with NFA letters.*	As 35 IAC Part 742 was amended to include indoor inhalation exposure route, all SWMUs which obtained no further action for corrective action as listed in Condition II.B.1 must be re-evaluated for the indoor inhalation pathway and meet all updated remediation standards to meet the requirements of 35 IAC Part 742.
II-2	Condition 15: *bp does not agree that the Illinois EPA has the right to withdraw any NFA. Please remove this clause.*	Based on the results of the investigative efforts as required in corrective action, the Illinois EPA reserves the right to withdraw any "No Further Action" (NFA) determinations.
II-2	Condition 16: *bp requests clarification regarding whether this is standard language for all RCRA Permits in order to understand why this new language is included in the draft Permit. In addition, any guidance regarding what is intended by this language would be helpful.*	The Permittee shall incorporate, as necessary, climate change adaptation considerations into the corrective action required at this facility in accordance with the applicable USEPA guidance(s) regarding integrating climate change adaptation considerations into the RCRA corrective action process.
B. CORRECTIVE ACTION REQUIREMENTS		
II-4	Condition 4: *bp requests clarification regarding whether this is standard language for all RCRA Permits in order to understand why this new language is included in the draft Permit.*	Conduct additional investigation and remediation, as necessary, to address any on-site and/or off-site contamination, which has migrated beyond the property boundaries from the former operation of the facility.

Page(s)	Comment	Reference / Proposed Revision(s)
II-5	Condition 6, 2nd sentence: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	The requirements of 35 IAC Parts 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.
II-6	Condition 8.e, 1st sentence: *Please correct the reference as noted.*	A report documenting the results of the efforts described in Conditions II.B.~~9~~8.c and d above will be submitted to the Illinois EPA for review and approval (this report is referred to as the Investigation Report). 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.
C. SUMMARY OF CORRECTIVE ACTION EFFORTS COMPLETED		
II-9	Condition 1, Area 7 Accomplishments as of Date, 4th sentence: *Please correct the date range for the environmental data submitted in March 2024.*	CCR/IW approved August 7, 2003. Inv. Report submitted June 2, 2008 to IEPA. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2017-2018~~-2019~~ submitted March 8, 2024.
II-9	Condition 1, Area 8 Accomplishments as of Date, 4th sentence: *Please correct the date range for the environmental data submitted in March 2024.*	CCR/IW approved August 7, 2003. Inv. Report submitted June 2, 2008. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2017-2018-~~2019~~ submitted March 8, 2024.

Page(s)	Comment	Reference / Proposed Revision(s)
II-9	Condition 1, Area 9 Accomplishments as of Date: *Please revise to include the August 23, 2023, Corrective Action Modification request submitted by bp and approved by the Illinois EPA in a letter dated November 20, 2023 (Log No. B-147R-CA-122).*	CCR/IW approved September 9, 2002. Inv. Report submitted May 9, 2008; revised report received by IEPA on December 15, 2011. IEPA requested that the Permittee withdraw the 2011 Inv. Report in a letter dated May 30, 2019. Corrective Action Modification for microbial enhancement injection approved November 20, 2023.
II-9	Condition 1, Area 9 Current Status: *Please revise to include the reporting requirements related to the Corrective Action Modification request approved by the Illinois EPA in a letter dated November 20, 2023 (Log No. B-147R-CA-122).*	The Permittee to submit revised Inv. Report pending further discussion with IEPA. The Permittee to submit results of microbial enhancement injection in the Corrective Action Progress Reports required by Conditions II.L.1 and II.L.2.
II-10	Condition 1, Area 13 Accomplishments as of Date: *bp did not submit an Area 13 report on March 12, 2024. Please revise to reference the March 8, 2024, bp submittal of additional environmental data collected in 2017-2019.*	RFI Phase I report for SWMUs in area approved June 5, 2001. CCR/IW approved by IEPA on October 26, 2011. ~~Further revised Investigation Report submitted March 12, 2024.~~ Additional environmental data collected in 2017-2019 submitted March 8, 2024.
II-10	Condition 1, Area 14 Current Status: *Please revise to align with the Current Status language for other Land Reuse Areas requiring a revised Land Reuse Investigation (LRI) Report pending further discussion with Illinois EPA.*	~~March 2024 submittal under IEPA review.~~ The Permittee to submit revised Inv. Report pending further discussion with IEPA.
II-11	Condition 1, Area 18 Current Status, 2nd sentence: *Please replace period with a comma for clarity.*	NFA at NC-SP1. Regarding the SFP, ~~.~~ Tthe Permittee must continue to address groundwater of the uppermost aquifer in accordance with the RCRA Permit. The Permittee must also comply with conditions of the ELUC.

Page(s)	Comment	Reference / Proposed Revision(s)
II-12	Condition 3, Area 15 NFA and Media, 1st sentence: *Please revise to reflect that the November 19, 2003, Illinois EPA letter included a NFA determination for perched groundwater based on the following:* - *Condition 8.a: "The groundwater with the Parcel must still be addressed in accordance with Section V of the RCRA Part B Permit and all subsequent permit modifications.* - *Condition 8.b.: "…Therefore, no further action is required with response to the groundwater at the parcel except as required by Condition 8.a. above."*	NFA ~~letter~~ determination for soil and groundwater ingestion route for perched-groundwater only was issued on November 19, 2003 (Log No. B-147-CA-31, 36 & 37). ELUC was established for Area 15 (see Conditions II.C.4 and 6 below).

Page(s)	Comment	Reference / Proposed Revision(s)
II-14	Condition 5.b (2) and (3): *After the 2013 TACO Part 724 effective date, Illinois EPA issued a NFA letter dated August 22, 2016, for the indoor air inhalation exposure route for Area 2 Donation Parcel II – Police Station, requesting new PINs for Donation Parcel II & the bp Retained Parcel and a draft ELUC for Donation Parcel II requiring: a) basement with concrete wall & floors; b) concrete slab on grade; or c) combo of a & b; and draft revised ELUC for the bp Retained Parcel. bp submitted draft ELUCs to the Illinois EPA on March 29, 2017. Illinois EPA approved the draft ELUCs in letters dated April 21, 2017, and May 4, 2017. bp submitted the Certified ELUCs to Illinois EPA in a letter dated June 21, 2017, then resubmitted both Certified ELUCs in a letter dated May 1, 2024, following Illinois EPA notification that the June 21, 2017, submittal was lost.* *No further action is required by bp on Donation Parcel II – Police Station due to having the Illinois EPA approved ELUC already in place which addresses indoor air inhalation. Additionally, this parcel is no longer owned by bp, it is also no longer part of the RCRA permit, so it is not appropriate to include in permit conditions.*	(2) Due to the amendments made in 35 IAC Part 742 associated with indoor air inhalation exposure route these requirements must be addressed. Thus, BP must conduct an investigation to demonstrate that the soils present in this second donation parcel met remediation objectives for the indoor air inhalation exposure route before it was removed from the defined facility covered by this RCRA permit in accordance with plans approved by Illinois EPA. (3) The Illinois EPA issued a NFA letter on August 22, 2016 regarding the indoor air inhalation exposure route for the second donation parcel. This NFA determination was based in part on the establishment of an ELUC which would place certain restrictions on future activities within this parcel.
II-15	Condition 5.b (4), 1st sentence: *Please revise to clarify agency name and correct the Certified ELUC Document No.*	The Illinois EPA approved a draft ELUC for the 7.5-acre donation parcel on May 4, 2017 (Log No. B-147R-CA-78) and this document was filed with the Madison County Recorder's office on June 5, 2017 as Document No. 2017R18528.

Page(s)	Comment	Reference / Proposed Revision(s)
II-15	Condition 5.b (5), 1st sentence: *Please revise to correct the Certified ELUC Document No.*	The Illinois EPA approved a draft ELUC for the remainder of Area 2 being retained by BP on May 4, 2017 (Log No. B-147R-CA-77) and this document was filed with the Madison County Recorder's office on June 5, 2017 as Document No. ~~R~~2017R18529.
II-15	Condition 5.c (3), 2nd sentence: *Please correct typos for clarity.*	The Permittee and KMPH recognize that the post-closure conditions, operations or other activities at the property acquired by KMPH or its successor could impact property owned and/or operated by BP or its successors. The parties also acknowledge that post-closure conditions, operations, and ~~activates~~activities at the property retained by ~~the~~ BP, or its successors could impact property owned and/or operated by KMPH or its successors.

Page(s)	Comment	Reference / Proposed Revision(s)
II-17	Condition 6.i - k: *Please remove Area 2 Donation Parcel I – Stormwater Detention Basin and Donation Parcel II – Police Station from the list of parcels where bp is required to comply with ELUCs or voidance of NFAs could result. The Area 2 Donation Parcels are not owned by bp so are not appropriate to be included in the Permit. It is incumbent on the owner of the parcel to comply with the ELUC.*	6. In general, the ELUCs identified place the following restriction on Land Reuse Areas 1, 2 (bp retained parcel only), 4 and 15: i. Failure to comply with the limitations or requirements of an ELUC may result in voidance of an Illinois EPA's NFA determination in accordance with the program under which the determination was made. The failure to comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Act. j. The limitations or requirements of an ELUC apply in perpetuity or until: (1) The Illinois EPA issues a new NFA determination approving modification or removal of the limitation/requirement; and (2) A release or modification of the land use limitation is filed on the chain of title for the property that is the subject of the ELUC. k. At no time shall this site be used in a manner inconsistent with the land use limitations established in an approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved; and (2) a new NFA determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 IAC Part 742. (1) Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a: (I) request to amend the certification of closure; or (2) a permit modification request. Sufficient information must be provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC Part 742. (2) Any final approval by Illinois EPA of a request to release or modify an ELUC must be filed with the chain of title for the subject facility.

Page(s)	Comment	Reference / Proposed Revision(s)
D. SUMMARY OF CORRECTIVE ACTION EFFORTS STILL TO BE COMPLETED		
II-18	Condition 1.b: *bp disagrees that this requirement is applicable to solid waste management units (SWMUs) and Product Release Sites (PRSs) that have Illinois EPA approved NFAs. Please clarify that this requirement is only applicable for parcels which have not received NFA.* *Please correct the reference to the condition that lists the SWMUs and PRSs.*	1. The Permittee must meet the applicable indoor inhalation remediation objectives both on-site and the impacted off-site properties in accordance with 35 IAC Part 742. a. The Permittee must continue to address the primary objectives set forth in these documents entitled, "Revised Indoor Inhalation Exposure Route Evaluation and Work Plan" dated August 28, 2019 (Log No. B-147R-CA-96) and received by Illinois EPA on August 29, 2019; "Action Plan For Potential Man-Made Pathway Evaluation" dated November 25, 2019 (Log No. B-147R-CA-98) and received by Illinois EPA on November 26, 2019; "Soil Gas Pathway Evaluation Report" dated June 7, 2021 (Log No. B-147R-CA-111) and received by Illinois EPA on June 8, 2021; "Additional Info to the Revised Indoor Inhalation Exposure Route Eval And Work Plan Dated August 29, 2019 To Provide An Update on Changed Site Conditions" dated April 12,2024 (Log No. B-147RCA-126) and received by Illinois EPA on April 16, 2024. Note, these documents are currently under review by the Illinois EPA. b. Additional evaluation for the indoor inhalation exposure route requirements must be met for all SWMUs and PRSs listed in Condition ~~IV~~II.B.~~1~~.

Page(s)	Comment	Reference / Proposed Revision(s)
E. REMEDIATION OF HYDROCARBON AND REFINERY PRODUCTS		
II-19	Condition 2, 2nd paragraph: *Please revise to include updated information provided in Exhibit F-1 of the permit renewal application.* *As documented in the "Third Quarter 2024 Main Plant Corrective Action Progress Report" dated November 1, 2024, a mobile solar-powered biovent system was installed and commissioned in Third Quarter 2024 to address refinery LNAPL and impacts to groundwater at select monitoring wells.*	The locations of the three pilot remediation systems within the facility are shown in Figure E-1 of Attachment E. Since installation of the pilot-scale remediation systems, they have undergone upgrades and optimizations in response to performance monitoring. bp completed significant modifications to the pilot-scale bioremediation systems and technologies in 2019-2021 to maintain and enhance hydrocarbon remediation through treatment of expanded site areas at the Main Plant. In addition, passive bioventing was implemented in two of the initial pilot areas in 2021 and 2022, as previous remedial efforts progressed remediation in those areas to the point where passive bioventing is able to deliver sufficient oxygen to maintain an aerobic vadose zone for enhanced bioremediation. A mobile solar-powered biovent system was also put into service to address refinery product in 2024. Excluding the mobile solar-powered biovent system, the configuration and operation of the pilot-scale bioremediation systems is detailed in Attachment E, including a timeline of operations, enhancements, and modifications for each system.
II-19	Condition 3, 1st sentence: *Please correct the reference as noted.*	The facility shut down the above-mentioned HRS in Condition II.E.1 above under the Temporary Authorization issued by Illinois EPA (effective date of December 5, 2017) provided the facility collected data as required, and submitted: (1) a Pilot-Scale Bioremediation System Performance Report for the pilot-scale tests identified in Condition II.E.~~1~~2 above; and (2) a workplan for developing a site-wide hydrocarbon recovery/remediation system to address the hydrocarbon contamination in the groundwater and the smear zone above the facility's remedial objectives as defined in the workplan and applicable regulations, as approved by Illinois EPA. The workplan was required to provide a conceptual plan to implement the hydrocarbon recovery/remediation systems for the entire facility in the groundwater and smear zone as well as an outline of the next steps in full-scale implementation of the hydrocarbon remedial systems. A report entitled, "Remedial Action Selection Report and Main Plant Remedy Roadmap" was received January 31, 2022, to meet this requirement. The document is currently under review by the Illinois EPA.

Page(s)	Comment	Reference / Proposed Revision(s)
II-20	Condition 4, 1st sentence: *Please clarify if updates to Attachment E are only required to be documented in the Corrective Action Progress Reports (required by Condition II.L.1), or if updates must continue to be incorporated into the Permit on an annual basis through a Class 1* Permit Modification.*	The Permittee shall operate, expand and use the pilot-scale Bioremediation Systems and technologies in order to remediate hydrocarbons and refinery product from the smear zone and vadose zone as it contributes to dissolved phase impacts. The number and location of Bioremediation Systems and Bioremediation wells, as detailed in Attachment E, can be modified to maintain or enhance remediation of hydrocarbons and refinery product. As the Permittee has continued to successfully operate these systems, activities associated with these systems shall be summarized in the Corrective Action Progress Reports required by Condition II.L.1.
II-20	Condition 5.b (1): *Please revise for clarity.*	The refinery product recoverability shall be determined through product baildown testing or product skimming testing in accordance with applicable ASTM standards, and the data utilized to calculate product transmissivity using the Bouwer and Rice method (calculation method described in ASTM E2856-13 or most current method);
F. RCRA CLOSURE, RCRA POST-CLOSURE AND RCRA CORRECTIVE ACTION STATUS OF THE NORTH CELL SPRAY POND 1 AND THE SOUTH FLARE PIT		
II-21	Condition 1.b (2): *Please revise to reflect that a certified ELUC for the SFP was previously approved by the Illinois EPA as is documented for Land Reuse Area 18 in Section II.C.1 of this draft Permit. Accordingly, bp requests that Condition II.F.2 be deleted.*	A closure-by-removal demonstration for the soils at the SFP, was approved by the Illinois EPA on January 7, 2008 subject to the establishment of an ELUC meeting the requirements of 35 IAC Part 742 which places certain restriction on future activities at the HWMU. A certified ELUC for the SFP was submitted to Illinois EPA on December 31, 2015 and approved by Illinois EPA in a letter dated July 18, 2016 (Log No. B-147R-CA-58). Therefore, no further action is necessary for soil at the SFP. ~~The requirements regarding the restrictions that must be contained in the ELUC are set forth in Condition II.F.2.~~
H. CORRECTIVE MEASURES REQUIREMENTS		
II-25	*bp is following the Land Reuse process (Section II.G); therefore, Section H is only applicable if bp withdraws from the Land Reuse Process.*	N/A

Page(s)	Comment	Reference / Proposed Revision(s)
	I. REQUIREMENTS FOR ADDRESSING NEWLY IDENTIFIED SWMU(s)	
II-28	Condition 8: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	All efforts carried out at newly identified SWMU/AOCs must meet the requirements of 35 IAC 724.201.
	J. FUTURE RELEASES FROM SWMU(s)	
II-28	Last sentence: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	There exists a potential that a release may occur in the future from SWMUs identified in the RCRA Facility Assessment (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 II.I.1. Additional investigation and, as necessary, corrective measures efforts at this SWMU must be carried out in accordance with the procedure set forth in condition II.H. The results of all corrective action efforts required by this condition must meet the requirements of 35 IAC 724.201.

Page(s)	Comment	Reference / Proposed Revision(s)
	M. COST ESTIMATES/FINANCIAL ASSURANCE FOR CORRECTIVE ACTION	
II-31	Condition 2: *Please revise to clarify that cost estimates adjusted only for annual inflation are not required to be submitted to Illinois EPA.* *Also, it is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	The Permittee shall prepare a cost estimate for the completion of any corrective action required under this permit, in order to provide financial assurance for completion of corrective action, in order to provide financial assurance for the approved amount of that cost estimate within ninety (90) days of the date of the effective date of this permit, as required under 35 IAC 724.201(b). Such a cost estimate must be based upon the cost of contamination investigations and assessments for the SWMU(s), and design, construction, operation, inspection, monitoring, and maintenance of the corrective measure(s) to meet the requirements of 35 IAC 724.201 and this permit. These estimates must be based upon third party costs. The revised cost estimate for corrective action must be submitted to the Illinois EPA annually by January 1. Cost estimates adjusted only for annual inflation are not required to be submitted to the Illinois EPA.
II-31	Condition 3, 1st sentence: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	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 II.M.1 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 documentation shall be submitted to the Illinois EPA within sixty (60) days after the submittal of the initial or revised cost estimates required under Condition II.M.l. 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 at its discretion.

Page(s)	Comment	Reference / Proposed Revision(s)
II-31	Condition 4: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	It must be noted that cost estimates and financial assurance must be provided for the operation of the groundwater remediation system required by Section III of this permit as such a system is necessary to meet the requirements of 35 IAC 724.201.
II-31	Condition 5: *Please revise to clarify that cost estimates adjusted only for annual inflation are not required to be submitted to Illinois EPA.*	All cost estimates prepared under the requirements of Conditions II.M.1 through II.M.4 must be submitted as a Class 1* permit modification request in accordance with 35 IAC 703.281. Cost estimates adjusted only for annual inflation in accordance with 35 IAC 724.201 are not required to be submitted as a Class 1* permit modification request.
III. GROUNDWATER CORRECTIVE ACTION PROGRAM		
	A. Summary	
III-1	First paragraph, 2nd and 3rd sentences: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.* *Additionally, bp requests clarification regarding whether the last sentence is standard language for all RCRA Permits in order to understand why this new language is included in the draft Permit.*	Hazardous constituents associated with historical activities at the BP Main Plant have been detected in the groundwater across the site which exceed the groundwater quality standards established in 35 IAC Part 620. Therefore, a corrective action program for groundwater meeting the requirements of 35 IAC 724.201 must be implemented at the facility. In addition to the corrective action necessary to treat or remove hazardous constituents released to groundwater, this permit also requires the Permittee to implement a corrective action program for the groundwater present in the uppermost aquifer beneath the facility, and off-site as necessary.

Page(s)	Comment	Reference / Proposed Revision(s)
III-1	Condition 4: *Please consider the proposed revision.*	Remediating and/or removing refinery ~~product~~ hydrocarbon sources to groundwater impacts~~from above the water table~~, including hydrocarbon sources to groundwater at the water table and within the smear zone of the uppermost aquifer. The smear zone will be considered the minimum and maximum range of water table fluctuations observed at the BP Main Plant.
III-1	Condition 5: *Please revise to include the Demonstration Wells in the vicinity of Land Reuse Area 9 as referenced in Section III.E.12.*	In the event that the Permittee is unable to demonstrate an inward gradient in the southeast corner of the facility, or in the vicinity of Land Reuse Area 9, compliance will be satisfied by demonstration that the groundwater quality at designated Sentry Observation Monitoring Wells in the southeast corner and/or Demonstration Wells in the vicinity of Land Reuse Area 9 ~~in this portion of the facility~~ meet applicable groundwater quality standards. The Permittee shall comply with the requirements of III.E.12 in the event that groundwater quality in ~~this~~these portions of the facility does not meet groundwater quality standards. Contingent actions could include increased monitoring to demonstrate that contaminants do not migrate beyond the GMZ boundary and/or sentry well installation and monitoring, increased groundwater extraction, or other alternate measures.
III-2	Condition 6: *Please consider the proposed revision.*	Implementation of the bioremediation systems for impacted groundwater and refinery hydrocarbon zones impacting groundwater~~, treatment and reduction of free phase and residual product,~~ and interim removal actions for recoverable product must be completed as set forth in Condition II.E of the permit.

<table>
<tr><th>Page(s)</th><th>Comment</th><th>Reference / Proposed Revision(s)</th></tr>
<tr><td></td><td colspan="2">B. IMPLEMENTATION</td></tr>
<tr><td>III-2</td><td>Condition 4:

It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.</td><td>The Permittee must continue corrective action measures to the extent necessary to ensure that the groundwater protection standard is not exceeded to meet the requirements of 35 IAC 724.201.</td></tr>
<tr><td></td><td colspan="2">C. WELL LOCATIONS AND CONSTRUCTION</td></tr>
<tr><td>III-3
-
III-6</td><td>Condition 1:

Please revise well construction information (for select wells as noted) to match what was provided in permit renewal application replacement pages.

Also, please revise footnote 11 to reflect that former Riverfront Observation Well (RFOW) G030 no longer exists. RFOW G030 was abandoned due to an excavation for a natural gas pipeline repair as documented in the Main Plant GMZ Well G078 Well Condition Letter dated July 11, 2023 (Log No. B-147R-CA-121).</td><td>
<table>
<tr><th>IEPA Well No.</th><th>Facility Well No.</th><th>Well Depth ft.</th><th>Well Depth Elevation (ft. MSL)</th><th>Well Screen Interval (ft MSL)</th><th>Well Designation[1]</th></tr>
<tr><td colspan="6">GMZ Boundary Wells</td></tr>
<tr><td>G021</td><td>C-11</td><td>49.~~7~~50</td><td>382.27</td><td>417.27-382.27</td><td>UMA C</td></tr>
<tr><td>G067#</td><td>G-27</td><td>49.00</td><td>386.28</td><td>406.~~28~~0-386.28</td><td>UMA H</td></tr>
<tr><td>G085</td><td>G-26R</td><td>54.15</td><td>388.59</td><td>408.~~29~~4-388.94</td><td>UMA H</td></tr>
<tr><td colspan="6">Observation Monitoring Wells</td></tr>
<tr><td>G87L</td><td>H-7</td><td>51.50</td><td>377~~6~~.68</td><td>402.68-382.68</td><td>UMA C</td></tr>
<tr><td>G301</td><td>RP-1</td><td>49.00</td><td>377~~8~~.38</td><td>388.38-378.38</td><td>UMA H</td></tr>
<tr><td colspan="6">LNAPL Monitoring Network (6)</td></tr>
<tr><td>G515+(9)</td><td>~~G~~Q-14</td><td>+</td><td>+</td><td>_</td><td>unknown</td></tr>
<tr><td colspan="6">Demonstration Wells</td></tr>
<tr><td>R034(3B)</td><td>C-24R</td><td>35.24</td><td>393.64</td><td>403.88-393.88~~86.34~~</td><td>UMA C</td></tr>
</table>
11 = Per Condition IV.C.1.a, G078, G030, G97L, and G87L require a new or replacement well or well pairs be installed within ninety (90) days to monitor the previously screened interval. Of those wells, ~~only~~ G078 and G030 no longer exists because the wells were~~as~~ damaged or plugged.</td></tr>
</table>

Page(s)	Comment	Reference / Proposed Revision(s)
	D. GROUNDWATER PROTECTION STANDARD	
III-8	Condition 1, 2nd and 3rd sentences: *Please revise as there is no requirement for analysis of any dissolved hazardous constituents with the exception of biogeochemical analytes to monitor natural attenuation conditions only.*	The following hazardous constituents and their concentration limits comprise the groundwater protection standard for the groundwater monitoring wells found in Conditions III.C.1. ~~Total (unfiltered) values will be used for the comparison with the 35 IAC Part 620, Class I, Groundwater Quality Standards. Dissolved values shall be used for statistical evaluations required in Condition III.H unless otherwise noted.~~

III-9 and III-10	Condition 1, Hazardous Constituents: *Please revise hazardous constituents list and footnotes to align with the optimized Groundwater Corrective Action Monitoring Program approved by Illinois EPA in a letter dated January 19, 2023 (Log Nos. B-147R-CA-85 and 89).* *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 groundwater quality standard for arsenic be established at a concentration of 0.036 mg/L. Please revise to include a footnote stating the Concentration Limit for arsenic may be increased to a site-specific groundwater quality standard if approved by Illinois EPA.*	

Hazardous Constituents	Storet No.	Concentration Limits (mg/L)
Antimony	01097	0.006
Arsenic	01002	0.01**
Barium	01007	2.0
~~Beryllium~~	~~01012~~	~~0.004~~
~~Cadmium~~	~~01027~~	~~0.005~~
Chromium	01034	0.1
~~Cobalt~~	~~01037~~	~~1.0~~
Lead	01051	0.0075
~~Mercury~~	~~71900~~	~~0.002~~
Nickel	01067	0.1
Selenium	01147	0.05
~~Vanadium~~	~~01087~~	~~0.049~~
VOCs		
1,2-Dichloroethane	34531	0.005
1,3-Dichlorobenzene	34561	0.0002
~~1,4-Dichlorobenzene~~	~~34571~~	~~0.075~~
~~2-Butanone (MEK)~~	~~81595~~	~~4.2~~
Benzene	34030	0.005
~~Carbon Disulfide~~	~~77041~~	~~0.7~~
~~Chlorobenzene~~	~~34301~~	~~0.1~~
Chloroform	32106	0.0002
Ethylbenzene	78113	0.7
Toluene	34010	1.0
Total Xylenes	34020	10.0
Methyl Tertiary-Butyl Ether	46491	0.07
Styrene	77128	0.1
SVOCs		
2,4-Dimethylphenol	34606	0.14
~~2,4-Dinitrophenol~~	~~34616~~	~~0.014~~

III-9 and III-10	*[Continued]*	~~2-Methylphenol (o-cresol)~~	~~77152~~	~~0.35~~
		4-Methylphenol (p-cresol)	77146	0.035
		~~4-Nitrophenol~~	~~34646~~	~~--~~
		~~Anthracene~~	~~34220~~	~~2.1~~
		Benzo(a)anthracene	34526	0.00013
		Benzo(a)pyrene	34247	0.0002
		Benzo(b)fluoranthene	34230	0.00018
		Benzo(k)fluoranthene	34242	0.00017
		Bis(2-ethylhexyl)phthalate	39100	0.006
		~~Butyl benzyl phthalate~~	~~34292~~	~~1.4~~
		Chrysene	34320	0.0015
		Dibenzo(a,h)anthracene	34556	0.0003
		~~Diethyl phthalate~~	~~34336~~	~~5.6~~
		~~Dimethyl phthalate~~	~~34341~~	~~--~~
		~~Di n-butyl phthalate~~	~~39110~~	~~0.7~~
		~~Di n-octyl phthalate~~	~~34596~~	~~0.14~~
		~~Fluoranthene~~	~~34376~~	~~0.28~~
		Naphthalene	34696	0.14
		~~Phenanthrene~~	~~34461~~	~~0.21~~
		Phenol	34466	0.035
		~~Pyrene~~	~~34469~~	~~0.1~~
		~~Pyridine~~	~~77045~~	~~0.007~~
		Biogeochemical[1] Analytes	Storet No.	Concentration Limits (mg/L)
		Dissolved iron	N/A	--
		Dissolved sulfate	N/A	--
		Dissolved manganese	N/A	--
		-- Not available N/A = Not applicable 1 = To monitor natural attenuation conditions ** Site-specific concentration limit may be used if approved by the Illinois EPA.		

Page(s)	Comment	Reference / Proposed Revision(s)
	E. GROUNDWATER CORRECTIVE ACTION PROGRAM	
III-10	Condition 1: *Please correct the references as noted.*	The Permittee shall determine the groundwater quality for the Observation wells and the GMZ Boundary Wells designated in Condition III.~~D~~C.1 for the hazardous constituents listed in Condition III.~~E~~D.1 above.
III-11	Condition 2.a.i: *Please revise to include GMZ Boundary Well G085 as listed in Condition III.C.1.*	The following groundwater monitoring wells shall define the outermost horizontal extent of the approved GMZ: G005, G006, G008, G021, G023, G04R, G045, G055, G059, G062, R063, G067, G068, G073, G079, G084, G085, G111, G112, G32R, G37, G5B, G35A, G35B, G500, G69R, G74L, G75L, G76L, G91, G92, G93L, H3IB, RG36, R302, G303, G503, G504, G505.
III-11	Condition 2.a.ii, 2nd sentence: *bp does not understand the rationale for this new requirement as it is not necessary to protect human health and the environment. Please clarify this new requirement to better define the vertical extent/boundary of the GMZ.*	The vertical boundaries of the GMZ shall range from the approximate top of the uppermost aquifer (30 feet bgs) to the top of the bedrock surface at the BP Main Plant facility. As required by Condition IV.C.l.b, wells must be proposed to better define the vertical extent.
III-11	Condition 3: *The goal of the remediation program at this site is hydrocarbon remediation, and the language in the current permit (i.e., "hydrocarbon pool") is more appropriate. bp requests the text be revised to replace "hazardous constituents" with "hydrocarbon pool."*	The Groundwater 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~~hazardous constituents~~ released to groundwater as follows:

Page(s)	Comment	Reference / Proposed Revision(s)
III-12 and III-13	Condition 11: *The property owner has no contractual obligation to allow bp access to the property. bp requests this requirement be removed from the permit.*	The Permittee must continue to pursue access to the off-site property where former wells G060 and G061 are located for the purposes of properly abandoning these wells. Once access to the property is obtained, the facility must submit certification that plugging and abandonment of the well(s) was carried out in accordance with the approved procedures to Illinois EPA and the appropriate State Agencies in accordance with Condition III.C.6. Until the wells are abandoned, the status and details of any efforts must be reported in the reports required by Condition III.1.2.
III-13	Condition 12.b: *Please revise to include the Demonstration Wells in the vicinity of Land Reuse Area 9 as referenced in Section III.E.12.a.*	If the groundwater quality data from the most recent sampling event for the Sentry Observation Monitoring Wells and/or Demonstration Wells meets the permit-defined requirements for VOCs, the Permittee shall include a summary of the results in the semi-annual report required by Condition III.I.2.
III-13	Condition 12.c.ii: *Please revise to include the Demonstration Wells in the vicinity of Land Reuse Area 9 as referenced in Section III.E.12.a.*	Perform a "Resampling Event" for the Sentry Observation Monitoring Wells and/or Demonstration Wells within thirty (30) days of the date the determination is made.
III-14	Conditions 12.e.ii.1 and 2: *Please revise for clarity and to remove redundancy between these two conditions.*	1. For the Southeast portion of the GMZ, the groundwater gauging performed for Contingency Monitoring shall use at a minimum the following nine (9) monitoring wells in order to develop a groundwater flow gradient~~.~~ F~~f~~or the southeast portion of the GMZ: wells G301, G305, R042, R083, G501, G502, G005, G92, and G112. ~~For the vicinity of Land Reuse Area 9: wells R032, R034, R035, and G304.~~ 2. For the vicinity of Land Reuse Area 9, the groundwater gauging ~~and monitoring~~ performed for Contingency Monitoring shall use at a minimum the following four (4) monitoring wells in order to develop a groundwater flow gradient for the vicinity of Land Reuse Area 9 of the GMZ: R032, R034, R035, and G304.

Page(s)	Comment	Reference / Proposed Revision(s)
III-15	Condition 12.g.v: *Please revise to include the vicinity of Land Reuse Area 9.*	Evaluate Contingent Corrective Measures to address the potential for off-site contaminant migration from the southeast corner or in the vicinity of Land Reuse Area 9, including but not limited to, modification of pumping rates at the Gradient Control Wells, rehabilitation of one or more Gradient Control Wells to address loss of hydraulic capacity, supplemental groundwater investigation, and/or in-situ technologies.
III-15	Condition 13: *Please correct the references as noted.*	The Permittee shall operate, expand and use the Bioremediation Systems and/or other technologies approved by the Illinois EPA in order to remediate hydrocarbons and refinery product in accordance with Condition II.E~~D~~ of the Corrective Action Section of the Permit and 35 IAC Parts 620, 724, and 742. Historical information related to the development of these remediation systems is summarized in Attachment E. Current information related to the remediation activities of hydrocarbons and refinery product must be submitted within reports required by Condition II.L~~M~~.1. A discussion must also be provided in reports required by Condition III.1.6.

III-15	Condition 14: *bp is currently addressing the indoor inhalation exposure route through the Indoor Inhalation (or vapor intrusion [VI]) Exposure Route Evaluation and Work Plan as summarized in the chronology of correspondence, to date, between bp and Illinois EPA provided as **Exhibit A** of bp's "Public Notice Comments for Draft Permit" (and documented in Attachment C of this draft Permit).* *Appendix G of the Revised Indoor Inhalation Exposure Route Evaluation and Work Plan dated August 28, 2019, included a site-specific evaluation of the indoor inhalation pathway for the Main Plant GMZ wells using the Johnson & Ettinger calculation (per 35 IAC Part 742) modified for a dirt floor evaluation (using the Little, Daisy, Nazaroff attenuation factor) as recommended by Illinois EPA. The calculations were conducted for six applicable constituents under a residential building scenario using site-specific soil conditions including seasonal high water table depth. This site-specific evaluation documented that groundwater conditions at that time did not represent a risk to potential off-site indoor air receptors. As such, it is proposed to utilize this same site-specific approach during the semi-annual comparison of GMZ (and off-site) well groundwater sampling results to evaluate whether the indoor inhalation exposure pathway remains incomplete and potential off-site receptors remain protected. bp's proposed revisions outline the evaluation methodology and reporting criteria.*	14. Following each s~~S~~emi-annual groundwater sampling event, an evaluation~~s~~ for the indoor inhalation exposure route must be provided for exceedances of 35 IAC Part 620 based on comparison of groundwater sampling results ~~and screening levels identified in Table H of Appendix B in 35 IAC Part 742~~ at the groundwater monitoring wells located at the property boundary and at any off-site locations to site-specific residential screening levels calculated in accordance with the methodology presented in the August 28, 2019, *Revised Indoor Inhalation Exposure Route Evaluation and Work Plan*, Appendix G (Log No. B-147R-CA-96). ~~Screening levels for the current type of property use shall be used.~~ a. ~~Identify any homes or buildings potentially impacted by the exceedance and evaluate, in accordance with 35 IAC Part 742, if the indoor inhalation pathway is complete by conducting site-specific evaluations based on~~ The evaluation will compare current groundwater dissolved phase concentrations against the previously calculated site-specific screening values and must confirm that the most recent water level is not higher than the site-specific seasonal high water table used in the threshold screening level calculation. If the groundwater level is higher, then the screening level calculations must be revised accordingly (and will become the new site-specific screening values)~~, building-specific construction information if known, known occupancy and any other site-specific factors, as appropriate and applicable, at each building~~. b. If the comparison ~~evaluation~~ documents that groundwater dissolved-phase concentrations remain below 35 IAC Part 620 criteria and/or the site-specific screening values and demonstrates that the indoor inhalation pathway is incomplete, the Permittee shall include this comparison~~e demonstration~~ in the semi-annual report required by Condition III.I.2. c. If additional constituents beyond the six chemicals evaluated during the 2019 evaluation are detected above 35 IAC Part 620 criteria, then screening criteria must be developed consistent with the approach utilized in the 2019 evaluation, and these values will become new site-specific screening values (once approved by Illinois EPA). d~~e~~. If the comparison~~evaluation~~ documents groundwater dissolved-phase concentrations exceed the site-specific screening values, indicating

Page(s)	Comment	Reference / Proposed Revision(s)
III-15	*[Continued]*	~~demonstrates~~ that the indoor inhalation pathway is potentially complete, the Permittee must implement a~~submit the~~ location-specific evaluation of the pathway in accordance with the provisions of 35 IAC Part 742 and submit the results within the next semi-annual report required by Condition III.I.2, following the evaluation~~and propose additional corrective action within thirty (30) days of the discovery of the exceedance for the Illinois EPA review and approval~~. If the pathway is determined to be complete, the Permittee must propose additional corrective action within that semi-annual report for the Illinois EPA review and approval. ~~d. A new evaluation is required for each sampling to determine whether screening levels are exceeded.~~
I. REPORTING AND RECORDKEEPING		
III-17	Condition 6: *Please correct the references as noted.*	Free product thickness data measured pursuant to Condition III.E.5.C, and reduction of hydrocarbons and refinery product data collected in accordance with Condition II.E~~D~~ of the Corrective Action Section, shall be collected at least quarterly and submitted to the Illinois EPA as identified in Condition III.I.2. Reporting information must also be included in Corrective Action Progress Reports required by Condition II.L~~M~~.1.
III-17	Condition 7: *Please revise for clarity. Condition III.E.6 states, "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 III.C.1."*	The groundwater flow rate and direction, determined pursuant to Condition III.E.6, shall be submitted ~~annually~~ as a part of the first and second semi-annual reports as identified in Condition III.1.2.

Page(s)	Comment	Reference / Proposed Revision(s)
III-18	Condition 13: *Please clarify the number of copies required. As noted in the proposed revision, 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 the 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~~of each notice or report to the~~ Illinois EPA copies (i.e., Permit Section and the regional Field Operation Section). Additional paper copies must be provided upon Illinois EPA request. The form is not to be used for permit modification requests.
III-19	Condition 16.c: *Please revise for clarity and to remove redundancy.*	16. If the Permittee evaluation, when required by Condition III.E.12, determines verification of contaminant control is necessary due to a lack of inward gradient, the Permittee will complete the following reporting and notification requirements in III.E.12: a. Notify the Illinois EPA in writing within seven (7) days of the date the determination resampling is required. b. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made Contingency Monitoring is required. c. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made Contingency Monitoring does not meet the requirements for inward gradient and the permit-defined requirements for VOCs, the Permittee shall take steps to implement additional corrective measures as outlined in Condition III.E.12.g, and: ~~i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.~~ii. Submit a written report to the Illinois EPA within thirty (30) days describing the actions to be taken. iii~~i~~. Take necessary actions to meet applicable groundwater standards at GMZ Boundary wells.

Page(s)	Comment	Reference / Proposed Revision(s)
III-19	Condition 17: *Please correct the reference and revise to align with the proposed revisions to Condition III.E.14.*	If the comparison~~indoor inhalation exposure route evaluation~~ required by Condition III.E.14 documents groundwater dissolved-phase concentrations exceed the site-specific screening values, indicating~~demonstrates that~~ the indoor inhalation pathway is potentially complete, the Permittee must submit the evaluation and propose additional corrective action within thirty (30) days of the discovery of the exceedance for the Illinois EPA review and approval.
III-19 and III-20	Condition 18: *Please revise to clarify contaminant control monitoring, notification, and reporting requirements are detailed in Conditions III.E.12 and III.I.16.* *It was bp's understanding that the 7-day notification and subsequent 30-day report requirements would be removed in lieu of summarizing actions to regain control of groundwater flow and demonstrating that groundwater flow is being adequately controlled in the semi-annual reports required by Condition III.I.2. Please consider the proposed revisions to Conditions 18.a-d.*	18. If the Permittee determines that groundwater flow is not being adequately controlled, except as required by Conditions III.E.12 and III.I.16 regarding contaminant control in the Southeast portion of the GMZ and/or in the vicinity of Land Reuse Area 9 (western portion of the GMZ),~~and/or the contaminant control evaluations indicate contaminants are migrating beyond the GMZ boundaries,~~ the Permittee shall: ~~a. Notify the Illinois EPA in writing within seven (7) days of the date that this determination is made.~~ a~~b~~. Take actions as necessary to regain the control of groundwater flow as required by Condition III.E.3. b~~e~~. Include a summary of ~~Submit a written report to the Illinois EPA within thirty (30) days describing~~ the actions taken to regain control of groundwater flow and ~~. In addition, the report must contain~~ provide information which demonstrates that groundwater flow is being adequately controlled in the semi-annual report required by Condition III.I.2. c~~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.

Page(s)	Comment	Reference / Proposed Revision(s)
	J. REQUEST FOR PERMIT MODIFICATION	
III-20	Condition 1: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	If the Permittee determines that the Groundwater Corrective Action Program required by this permit no longer satisfies the requirements of 35 IAC 724.201, the Permittee must, within ninety (90) days, submit an application for permit modification to the Illinois EPA, Bureau of Land, Permit Section, to make any appropriate changes to the program which will satisfy the regulations.
IV. SPECIAL CONDITIONS		
	C. COMPLIANCE SCHEDULE	
IV-1	Condition 1.b: *Please correct the reference as noted. This requirement does not enhance the protection of human health and the environment. bp requests this requirement be removed from the permit.*	Within ninety (90) days of the effective date of this permit, propose monitoring wells with screens positioned to adequately define the vertical boundary of the GMZ in Condition III.E.2.a.
IV-1	Condition 2, 1st sentence: *It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.*	The Permittee must prepare and submit 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 ninety (90) days of the date of the effective date of this permit, as required in accordance with 35 IAC 724.201. This cost estimate must include a minimum of 10% contingency for all items necessary to complete corrective action.

Page(s)	Comment	Reference / Proposed Revision(s)
V. STANDARD CONDITIONS		
	GENERAL REQUIREMENTS	
V-2 and V-3	Condition 13.a, 2nd sentence: *bp is not required to have a "waste analysis plan" for this facility as the facility does not accept outside waste and 35 IAC 727 requirements are not applicable to this permit. As this is a Standard Condition, please consider the proposed note to be added for clarification or address the non-applicability of the requirement elsewhere in the permit. Please see comment and proposed revisions to Condition I.C.1.*	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 35 IAC 721, Appendix A. 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. NOTE: On the effective date of the permit, this requirement is not applicable because the Permittee does not accept waste. Illinois EPA can revise or modify the applicability of this requirement by a Permit modification or written notification to the Permittee.
V-5	Condition 21: *Please correct the references as noted.*	OTHER NONCOMPLIANCE. The Permittee shall report all instances of noncompliance not otherwise required to be reported under Standard Conditions 1416, 1519 and 2016, 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)).

Page(s)	Comment	Reference / Proposed Revision(s)
	GENERAL FACILITY STANDARDS	
V-6	Conditions 27 – 30: *Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit, including 35 IAC 724, Subpart B (General Facility Standards). Please see comment and proposed revisions to Condition I.C.1.*	27. GENERATOR REQUIREMENTS. Any hazardous waste generated at this facility shall be managed in accordance with the generator requirements at 35 IAC Part 722. 28. SECURITY. The Permittee shall comply with the security provisions of 35 IAC 724.114(b) and (c). 29. 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). 30. 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).

Page(s)	Comment	Reference / Proposed Revision(s)
	PREPAREDNESS AND PREVENTION	
V-6 and V-7	Conditions 31 – 36: *Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit, including 35 IAC 724, Subpart C (Preparedness and Prevention). Please see comment and proposed revisions to Condition I.C.1.*	31. 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) 32. 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. 33. 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) 34. ACCESS TO COMMUNICATIONS OR ALARM SYSTEM. The Permittee shall maintain access to the communications or alarm system as required by 35 IAC 724.134. 35. REQUIRED AISLE SPACE. The Permittee shall maintain aisle space as required by 35 IAC 724.135 and National Fire Protection Association (NFPA) requirements. 36. 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.

Page(s)	Comment	Reference / Proposed Revision(s)
	POST-CLOSURE	
V-7 and V-8	Conditions 38 – 42: *Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit, including 35 IAC 724, Subpart G (Closure and Post-Closure Care) and Subpart H (Financial Requirements). Please see comment and proposed revisions to Condition I.C.1.*	38. 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. 39. 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). 40. 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 sixty (60) days prior to each anniversary of the date on which the first closure cost estimate was prepared or if using the financial test or corporate guarantee, within thirty (30) days after close of the firm's fiscal year. b. Revised whenever there is a change in the facility's post-closure plan increasing the cost of closure. c. Kept on record at the facility and updated. (35 IAC 724.244). d. Maintained at the value approved by the Illinois EPA with annual adjustment for inflation and cannot be decreased unless approved by the Illinois EPA in a permit modification. 41. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE. The Permittee shall demonstrate compliance with 35 IAC 724.245 by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by Standard Condition 35. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 IAC 724.245. Financial assurance documents submitted to the Illinois EPA should be directed to the following address:

Page(s)	Comment	Reference / Proposed Revision(s)
V-7 and V-8	*[Continued]*	Illinois Environmental Protection Agency Bureau of Land #24 Financial Assurance Program 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 62794-9276 42. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS. The Permittee shall comply with 35 IAC 724.248 whenever necessary.
VI. REPORTING AND NOTIFICATION REQUIREMENTS		
VI-1	Condition II.M.2, Action: *Please revise to clarify that cost estimates adjusted only for annual inflation are not required to be submitted to Illinois EPA.*	Annual Cost Estimate for Corrective Action (excluding cost estimates adjusted for annual inflation only)
VI-1	Conditions III.C.3, III.C.5, III.C.2: *Please correct the Condition references as noted.*	**Condition** / **Action** / **Due Date** C.4~~3~~ / Notification that well has been damaged or its structural integrity compromised. / Within 30 days of identification C.6~~5~~ / Boring logs, construction diagrams and datasheets from installation and development of new/replaced well. / Within 30 days after well installed C.1~~2~~ General schedule for collection and reporting of groundwater data:
VI-2	Condition III.I.15, Due Date: *Please revise to "semi-annually" to align with Condition III.I.7. Note, bp has proposed a revision to Condition III.1.7 as well for better clarification.*	Semi-annually~~By August 1 of each year~~

<table>
<tr><th>Page(s)</th><th>Comment</th><th>Reference / Proposed Revision(s)</th></tr>
<tr><td>VI-2</td><td>Conditions III.I.18.a-c:

As noted above under Condition III.I.18, it was bp's understanding that the 7-day notification and subsequent 30-day report requirements would be removed in lieu of summarizing actions to regain control of groundwater flow and demonstrating that groundwater flow is being adequately controlled in the semi-annual reports required by Condition III.I.2. Please consider removing the associated Actions under Conditions I.18.a and I.18.b from this table.

Please correct the Condition reference for Condition III.1.18.c as noted.</td><td>
<table>
<tr><th>Condition</th><th>Action</th><th>Due Date</th></tr>
<tr><td>~~I.18.a~~</td><td>~~Notify the Illinois EPA in writing that groundwater flow is not being adequately controlled.~~</td><td>~~Within 7 days of the date the determination is made~~</td></tr>
<tr><td>~~I.18.b~~</td><td>~~Submit a report to Illinois EPA describing the actions taken to regain control of groundwater flow.~~</td><td>~~Within 30 days of the date the determination is made~~</td></tr>
<tr><td>I.18.d~~e~~</td><td>Submit a request for permit modification to Illinois EPA describing any changes to the corrective action program to regain control of groundwater flow.</td><td></td></tr>
</table>
</td></tr>
<tr><td>VI-3</td><td>Condition J.1, Due Date:

It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.</td><td>Within 90 days of determination existing program does not meet the requirements of 35 IAC 724.201</td></tr>
</table>

<table>
<tr><th>Page(s)</th><th>Comment</th><th>Reference / Proposed Revision(s)</th></tr>
<tr><td>VI-3 and VI-4</td><td>Conditions V.34, V.35.a and b, V.36, and V.37:

Please correct the references as noted although these requirements are not applicable to this permit as there are no regulated HWMUs operating or requiring closure/post-closure care under this permit at this facility.</td><td>
<table>
<tr><th>Condition</th><th>Action</th><th>Due Date</th></tr>
<tr><td><s>35</s>40.a</td><td>Adjust post-closure cost estimates for inflation.</td><td>Within 60 days before anniversary date, or within 30 days after close of the firm’s fiscal year.</td></tr>
<tr><td><s>35</s>40.b</td><td>Revision post-closure cost estimates.</td><td>As needed, within 90 days of discovery of revision.</td></tr>
<tr><td>41<s>36</s></td><td>Change in financial assurance mechanism for post-closure.</td><td>As needed</td></tr>
<tr><td>42<s>37</s></td><td>Notify Illinois EPA of commencement of voluntary or involuntary bankruptcy proceedings.</td><td>Within 10 days after commencement of proceeding.</td></tr>
</table>
</td></tr>
<tr><td colspan="3">ATTACHMENTS</td></tr>
<tr><td>A</td><td>IDENTIFICATION OF APPROVED PERMIT APPLICATION

Please revise bp document dates as noted.</td><td>1. RCRA Post-Closure Renewal Application (Log No. B-147R2) dated October 8, 2020.

2. Additional Information for B-147R2- Replacement Pages submitted 1) Condition C.8.1.5-Page 13 and 2) Exhibit C-l, Table 1- Page 4, dated <s>April 28</s>May 10, 2022.

3. Time extension request for submittal of a response to the IEPA RCRA Permit Renewal Application NOD letter, dated July <s>5</s>3, 2024.

4. “Response to Illinois EPA Comments dated July 18, 2024” dated August 1, 2024.

5. Additional Information for B-147R2. Replacement pages, for Section C, dated August 29, 2024.</td></tr>
</table>

EXHIBIT C

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2520 WEST ILES AVENUE, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397

JB PRITZKER, GOVERNOR JAMES JENNINGS, ACTING DIRECTOR

217/524-3301

APR 29 2025

Certified Mail
Return Receipt Requested

9589 0710 5270 0389 7040 84

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

Re: 1191150001 -- Madison County
BP Products North American Inc./Main Plant
ILD980700967
Log No. B-147R2
RCRA Administrative Record – 24D
Permit Approval

Dear Ms. Knapp:

Enclosed is a final Resource Conservation and Recovery Act (RCRA) corrective action permit. 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 (IAC) 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 RCRA corrective action permit were from BP Products North American Inc./Main Plant (BP). The Illinois EPA's responses to BP's 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 Environment Protection Act (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
2520 West Iles Avenue
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
60 East Van Buren St., Suite 630
Chicago, IL 60605-1241
312/814-3620

For questions regarding the groundwater portions of the permit, contact Shawntay Dial by phone at 217/558-0177 or by email at Shawntay.Dial@Illinois.gov. For all other questions concerning this permit, please contact Omar Faruk, E.I.T by phone at 217/557-9764 or by email at Omar.Faruk@illinois.gov.

Sincerely,

Joshua L. Rhoades, P.G.
Permit Section Manager
Bureau of Land

JLR:OF:1191150001-RCRA-B147R2-Approval.docx
OF TNH AMB SDD

Attachments: 1. Illinois EPA's Response to Comments
2. RCRA Corrective Action Permit

cc: Norberto Gonzalez, U.S. EPA – Region V
Emily Keener, U.S. EPA – Region V
Michelle Knapp, BP Products North America, Inc
Michael Hoffman, WSP USA Environment & Infrastructure, Inc
Starlet S. Wright, Sovereign Consulting, Inc.

ILLINOIS EPA'S RESPONSE TO COMMENTS
BP Products North America Inc. – Main Plant
Draft Hazardous Waste Management RCRA Corrective Action Permit
Dated September 30, 2024

ILLINOIS EPA'S RESPONSE TO COMMENTS
BP Products North America Inc. – Main Plant
Draft Hazardous Waste Management RCRA Corrective Action Permit
Dated September 30, 2024 (Log No. B-147R2)

The Illinois EPA's responses below address comments from BP Products North America Inc. (BP) received by Illinois EPA on November 14, 2024 pertaining to the draft RCRA Corrective Action permit for BP issued on September 30, 2024. Note that italicized language on each comment, paraphrases the comments by BP (which is refer to as "bp" in its comment).

Comment 1: Fact Sheet I:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
The original RCRA permit issued to the facility in 1993 (Log No B-147) required post-closure care for the two hazardous waste management units, North Cell Spray Pond 1 (NC-SP1) and South Flare Pit (SFP), and also corrective action for any Solid Waste Management Units (SWMUs) at the facility under the requirements of 35 IAC 724.201. This permit was renewed in 2011 (Log No. B-147R), which also required a site-wide corrective action under 35 IAC 724.201. As the corrective action requirements were still not met at the facility, any remaining corrective action must still be addressed though the final RCRA corrective action permit. In addition, as described in Condition I.C.1 of the final RCRA corrective action permit, even though there are no regulated Hazardous Waste Management Units (HWMUs) operating or requiring closure/post-closure care, "the application of the other laws, regulations, and permit conditions, some of the concepts covered by these regulations may still apply to corrective action activities conducted at the site". As the corrective action has not been completed at the facility, the corrective action requirements and obligations under 35 AC 724.201 are applicable at this facility. The Condition remains unchanged. Please also see Comment 3. However, the Fact Sheet will not be included as a part of the final permit.

Comment 2: Fact Sheet IV.A:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1.

Comment 3: Fact Sheet IV.B:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
RCRA corrective action activities required in Section II of the final RCRA corrective action permit, as well as Section IV of the previous RCRA permit (Log No. B-147R), have been conducted in accordance with 35 IAC 724.201, not under 35 IAC 724.200 since the regulated units were approved for closure by removal. Section V (Groundwater Corrective Action Program) in the previous RCRA permit historically referenced 35 IAC 724.192 through 200 (Log No. B-147R) as the two hazardous waste management units (NC-SP1and SFP) previously required post-closure care. Under the final RCRA corrective action permit, as BP indicated in its comments, the former hazardous waste units were closed in accordance with the requirements of 35 IAC 724 Subpart G. In accordance with 35 IAC 724.210(c), it is appropriate to address remaining groundwater contamination from the former regulated units as well as from other SWMUs/Areas of Concern (AOCs) under corrective action section requirements in accordance with 35 IAC 724.201 as no other closure or post-closure care requirements remain for the two units. Condition IV.B remains unchanged. Please also refer to response to the Comment 1.

Comment 4: Fact Sheet IV.B.a:
Please revise hazardous waste constituents list and footnotes to align with the optimized Groundwater Corrective Action Monitoring Program approved by Illinois EPA in a letter dated January 19, 2023 (Log Nos. B-147R-CA- 85 and 89).

ILLINOIS EPA RESPONSE
The hazardous waste constituent list and footnotes have been updated to reflect changes in the Fact Sheet. However, the Fact Sheet will not be included as a part of the final RCRA corrective action permit.

Comment 5: Fact Sheet IV.C:
As noted in Condition I.C.1 of the draft permit, Illinois EPA should revise this language in the Fact Sheet to clarify that some standard conditions are not applicable to this facility.

ILLINOIS EPA RESPONSE
The standard conditions are standard for all RCRA corrective action permits. However, if any of these conditions aren't applicable to BP, the corresponding requirements are not applicable. Circumstances may arise where regulations that

were not applicable at the time of issuing permit, becomes applicable at a later time. Condition I.C.1 remains unchanged.

Comment 6: Fact Sheet V.B:
Please revise the Water Pollution Control Permit No. to align with the current permit issued by Illinois EPA on September 16, 2024.

ILLINOIS EPA RESPONSE
Water Pollution Control Permit No. has been revised from "2020-EP-64994" to "2024-EP-71491" in the Fact Sheet.

Comment 7: Section I General Facility Description, Condition I.B.2.c:
Please revise to align with removal of the Area 2 Donation parcel I- Stormwater Detention Basin (9.56 acres) and the Kinder Morgan Phoenix holdings (KMPH) parcel (118.25 acres).

ILLINOIS EPA RESPONSE
The Second sentence of Condition I.B.2.c has been revised from "7.5" acres to "127.81" acres and from "Condition I.B.2.a (2)" to "Conditions I.B.2.a (1) and (3)".

Comment 8: Section I General Facility Description, Condition I.B.2.d:
Please revise to align with removal of only the KMPH parcel (118.25 acres).

ILLINOIS EPA RESPONSE
The Second sentence of Condition I.B.2.d, 2nd sentence has been revised from "17.06" acres to "118.25" acres and from "Conditions I.B.2.a (1) and (2)" to "Condition I.B.2.a (3)".

Comment 9: Section I General Facility Description, Condition I.C.1:
Please revise to include closure and post-closure care (35 IAC 724, Subpart G), financial (35 IAC 724, Subpart H), and 35 IAC 727 (Standards for Owners and Operators of Hazardous Waste Facilities Operating Under a RCRA Standardized Permit) in the list of requirements that are not applicable to this permit as there are no regulated HWMUs operating or requiring closure/post-closure care under this permit at this facility.

ILLINOIS EPA RESPONSE
For 35 IAC 724, Subpart G, closure and post-closure care cannot be excluded until such time the Correction Action requirements under this subpart are fully completed and it is determined that the requirements of Subpart G are no longer required for any hazardous constituents for this site.

For 35 IAC 724, Subpart H, financial requirements cannot be excluded because the assurances of financial responsibility are required in accordance with 35 IAC 724.201.

For Subpart H of 35 IAC Part 727 (Standards for Owners and Operators of Hazardous Waste Facilities Operating Under a RCRA Standardized Permit), since this final RCRA corrective action permit is a RCRA corrective action permit, 35 IAC Part 727 does not need to be considered in the context of the RCRA permit renewal. The Condition I.C.1 remains unchanged.

Comment 10: Section I General Facility Description, Condition, Condition I.C.3.b:
Please revise to reflect that a certified ELUC for the South Flare Pit (SFP) was previously approved by the Illinois EPA as is documented for Land Reuse Area 18 in Section II.C.1 of this draft Permit.
Please correct the reference to the condition with Groundwater Requirements for the SFP.

ILLINOIS EPA RESPONSE
This comment is acknowledged. The proposed language has been incorporated into the final RCRA Correction Action permit.

The Second Paragraph of Condition I.3.b has been corrected from "Condition II.C.5" to "Condition II.C.4".

Comment 11: Section II Corrective Action, Condition II.A.1:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. Condition II.A.1 remains unchanged.

Comment 12: Section II Corrective Action, Condition II.A.4:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. Condition II.A.4 remains unchanged.

Comment 13: Section II Corrective Action, Condition II.A.6:
bp does not agree with the requirement to investigate NFA parcels for TACO Part 742. bp completed all regulatory requirements for closure that were in place when the NFA determinations were made and issued by Illinois EPA. bp requests removal of the requirement to reinvestigate parcels with NFA letters.

ILLINOIS EPA RESPONSE
According to 3004(u) of RCRA and 35 IAC 724.201, the obligations for the corrective actions associated with any releases of any hazardous waste or hazardous waste constituents from SWMUs at the facility still applies. The facility must institute corrective action as necessary to adequately protect human health and the environment for all releases of hazardous waste or constituents at the facility. As the facility is still under the obligation of the RCRA corrective action requirements and indoor inhalation is a potential concern at the facility, it is necessary for the facility to evaluate for indoor inhalation exposure route based on the current regulations and standards to protect human health and the environment.

Comment 14: Section II Corrective Action, Condition II.A.15:
bp does not agree that the Illinois EPA has the right to withdraw any NFA. Please remove this clause.

ILLINOIS EPA RESPONSE
The comment has been noted; however, if there is a risk to human health and environment present, the Illinois EPA has an authority to require additional investigation and remediation, as necessary, to meet the requirements of Section 3004 (u) and (v) of RCRA, 35 IAC 724.201, and 35 IAC Part 742 in accordance with Condition II.A.4 and II.A.6. The Illinois EPA has revised the condition II.A.15 as follows:

Based on the results of the investigative efforts, additional investigation and remediation, as necessary, may be required at any SWMUs or AOC to protect human health and the environment to meet the remedial objectives in accordance with 35 IAC Part 742.

Comment 15: Section II Corrective Action, Condition II.A.16:
bp requests clarification regarding whether this is standard language for all RCRA Permits in order to understand why this new language is included in the draft Permit. In addition, any guidance regarding what is intended by this language would be helpful.

ILLINOIS EPA RESPONSE
The U.S. Environmental Protection Agency (USEPA) issued a memorandum on February 6, 2024, titled "Integrating Climate Change Adaptation Considerations

into the Resource Conservation and Recovery Act Corrective Action Process" and another memorandum on June 5, 2024, titled "Implementing Climate Resilience in Hazardous Waste Permitting under RCRA". These documents are attached to this Illinois EPA Response to Comments. As an authorized state of RCRA corrective action, Illinois EPA has an obligation to implement such recommended action by USEPA, and this language is being incorporated into the Corrective Action Section of all newly renewed RCRA permits. Therefore, for example, any corrective measures and remedial actions associated with increased volume or intensity of precipitation, groundwater level fluctuations due to changes in the river surface water level, or extreme low and high temperature, etc., should be considered into the design and evaluation, as necessary.

Comment 16: Section II Corrective Action, Condition II.B.4:
bp requests clarification regarding whether this is standard language for all RCRA Permits in order to understand why this new language is included in the draft Permit.

ILLINOIS EPA RESPONSE
Condition II.B.4 is included to be consistent with the requirements of 35 IAC 724.201(c) and 3004(v) of RCRA.

Comment 17: Section II Corrective Action, Condition II.B.6:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. Conditions II.B.6 remains unchanged.

Comment 18: Section II Corrective Action, Condition II.B.8.e:
Please correct the reference as noted.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the change has been made to the final RCRA corrective action permit.

Comment 19: Section II Corrective Action, Condition II.C.1, Area 7 Accomplishments as of Date:
Please correct the date range for the environmental data submitted in March 2024.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the change has been made from "2018-2019" to "2017-2018" in the final RCRA corrective action permit.

Comment 20: Section II Corrective Action, Condition II.C.1, Area 8 Accomplishments as of Date:
Please correct the date range for the environmental data submitted in March 2024.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the change has been made from "2018-2019" to "2017-2018" in the final RCRA corrective action permit.

Comment 21: Section II Corrective Action, Condition II.C.1, Area 9 Accomplishments as of Date:
Please revise to include the August 23, 2023, Corrective Action Modification request submitted by bp and approved by the Illinois EPA in a letter dated November 20, 2023 (Log No. B-147R-CA-122).

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the proposed language inclusion has been incorporated into the final RCRA corrective action permit.

Comment 22: Section II Corrective Action, Condition II.C.1, Area 9 Current Status:
Please revise to include the reporting requirements related to the Corrective Action Modification request approved by the Illinois EPA in a letter dated November 20, 2023 (Log No. B-147R-CA-122).

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the proposed language inclusion has been incorporated into the final RCRA corrective action permit.

Comment 23: Section II Corrective Action, Condition II.C.1, Area 13 Accomplishments as of Date:
bp did not submit an Area 13 report on March 12, 2024. Please revise to reference the March 8, 2024, bp submittal of additional environmental data collected in 2017-2019.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the change has been incorporated into the final RCRA corrective action permit.

Comment 24: Section II Corrective Action, Condition II.C.1, Area 14 Current Status:
Please revise to align with the Current Status language for other Land Reuse Areas requiring a revised Land Reuse Investigation (LRI) Report pending further discussion with Illinois EPA.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the change has been incorporated into the final RCRA corrective action permit.

Comment 25: Section II Corrective Action, Condition II.C.1, Area 18 Current Status:
Please replace period with a comma for clarity.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the change has been incorporated into the final RCRA corrective action permit.

Comment 26: Section II Corrective Action, Area 15 NFA and Media:
Please revise to reflect that the November 19, 2003, Illinois EPA letter included a NFA determination for perched groundwater based on the following:

- *Condition 8.a: "The groundwater with the Parcel must still be addressed in accordance with Section V of the RCRA Part B Permit and all subsequent permit modifications.*
- *Condition 8.b.: "...Therefore, no further action is required with response to the groundwater at the parcel except as required by Condition 8.a. above."*

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the change has been incorporated into the final RCRA corrective Action permit.

Comment 27: Section II Corrective Action, Condition II.C.5.b (2) and (3):
After the 2013 TACO Part 724 effective date, Illinois EPA issued a NFA letter dated August 22, 2016, for the indoor air inhalation exposure route for Area 2 Donation Parcel II – Police Station, requesting new PINs for Donation Parcel II & the bp Retained Parcel and a draft ELUC for Donation Parcel II requiring: a) basement with concrete wall & floors; b) concrete slab on grade; or c) combo of a & b; and draft revised ELUC for the bp Retained Parcel. bp submitted draft ELUCs to the Illinois EPA on March 29, 2017. Illinois EPA approved the draft ELUCs in letters dated April 21, 2017, and May 4, 2017. bp submitted the Certified ELUCs to Illinois EPA in a letter dated June 21, 2017, then resubmitted both Certified ELUCs in a letter dated May 1, 2024, following Illinois EPA notification that the June 21, 2017, submittal was lost.

No further action is required by bp on Donation Parcel II – Police Station due to having the Illinois EPA approved ELUC already in place which addresses indoor air inhalation. Additionally, this parcel is no longer owned by bp, it is also no longer part of the RCRA permit, so it is not appropriate to include in permit conditions.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition II.C.5.b (2) has been removed from the permit condition, as this subsection pertains to the Summary of Corrective Action Efforts Completed. Condition II.C.5.b (3) has also been revised and incorporated into the previous Condition II.C.5.b (4), now renumbered as Condition II.C.5.b (2), as follows:

The Illinois EPA issued a NFA letter on August 22, 2016 regarding the indoor air inhalation exposure route for the second donation parcel. The Illinois EPA approved a draft Environmental Land Use Control (ELUC) for the 7.5-acre donation parcel on May 4, 2017 (Log No. B-147R-CA-78) and this document was filed with the Madison County Recorder's office on June 5, 2017 as Document No. 2017R18528. This ELUC contained the same restrictions on this parcel as was in the revised ELUC for Area 2 as identified in Condition II.C.5.a (3) above in addition to restrictions required by Illinois EPA's August 22, 2016 letter discussed in Condition II.C.5.b (3) above.

Regarding the Illinois EPA notification comment dated May 1, 2024, concerning the June 21, 2017 submittal which included a certified ELUC, later it has been determined that the subject certified ELUC was reviewed and approved as a permit modification, as required under Log No. B-147R-M-16, dated August 9, 2017.

Comment 28: Section II Corrective Action, Condition II.C.5.b(4):
Please revise to clarify agency name and correct the Certified ELUC Document No.

ILLINOIS EPA RESPONSE
The first sentence of Condition II.C.5.b (4) has been revised from "Illinois" to "Illinois EPA" and "Document No. 201718528" to "2017R18528".

Comment 29: Section II Corrective Action, Condition II.C.5.b (5):
Please revise to correct the Certified ELUC Document No.

ILLINOIS EPA RESPONSE
The first sentence of Condition II.C.5.b (5) has been revised from "Document No. R201718528" to "2017R18529".

Comment 30: Section II Corrective Action, Condition II.C.5.c (3):
Please correct typos for clarity.

ILLINOIS EPA RESPONSE
The second sentence of Condition II.C.5.c (3) has been revised from "activates" to "activities" and "the BP" to "BP".

Comment 31: Section II Corrective Action, Condition II.C.6.i-k:
Please remove Area 2 Donation Parcel I – Stormwater Detention Basin and Donation Parcel II – Police Station from the list of parcels where bp is required to comply with ELUCs or voidance of NFAs could result. The Area 2 Donation Parcels are not owned by bp so are not appropriate to be included in the Permit. It is incumbent on the owner of the parcel to comply with the ELUC.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the Illinois EPA has revised the Condition II.C.6 as follows:

In general, the ELUCs identified place the following restriction on Land Reuse Areas 1, 2 (the Permittee retained parcel only), 4 and 15:

Comment 32: Section II Corrective Action, Condition II. D.1.b:
bp disagrees that this requirement is applicable to solid waste management units (SWMUs) and Product Release Sites (PRSs) that have Illinois EPA approved NFAs. Please clarify that this requirement is only applicable for parcels which have not received NFA.

Please correct the reference to the condition that lists the SWMUs and PRSs.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 13. Condition II.D.1.b remains unchanged.

The comment is acknowledged, and the reference to the condition that lists the SWMUs and PRSs have been corrected in the final RCRA corrective action permit.

Comment 33: Section II Corrective Action, Condition II.E.2:
Please revise to include updated information provided in Exhibit F-1 of the permit renewal application.

As documented in the "Third Quarter 2024 Main Plant Corrective Action Progress Report" dated November 1, 2024, a mobile solar-powered biovent system was installed and commissioned in Third Quarter 2024 to address refinery LNAPL and impacts to groundwater at select monitoring wells.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the proposed language inclusion has been incorporated in Condition II.E.2 into the final RCRA corrective action permit.

Comment 34: Section II Corrective Action, Condition II.E.3:
Please correct the reference as noted.

ILLINOIS EPA RESPONSE

The first sentence of condition II.E.3 has been updated to correct the reference from "Condition II.E.1" to "Condition II.E.2".

Comment 35: Section II Corrective Action, Condition II.E.4:

Please clarify if updates to Attachment E are only required to be documented in the Corrective Action Progress Reports (required by Condition II.L.1), or if updates must continue to be incorporated into the Permit on an annual basis through a Class 1 Permit Modification.*

ILLINOIS EPA RESPONSE

Updates of Attachment E are only required to be documented in the Corrective Action Progress reports (required by Condition II.L.1).

Comment 36: Section II Corrective Action, Condition II.E.5.b (1):

Please revise for clarity.

ILLINOIS EPA RESPONSE

Condition II.E.5.b(1) has been revised from "ASTM E2856-13 or most current method" to "calculation method described in ASTM E2856-13 or most current method".

Comment 37: Section II Corrective Action, Condition II.F.1.b (2):

Please revise to reflect that a certified ELUC for the SFP was previously approved by the Illinois EPA as is documented for Land Reuse Area 18 in Section II.C.1 of this draft Permit. Accordingly, bp requests that Condition II.F.2 be deleted.

ILLINOIS EPA RESPONSE

The comment is acknowledged. The proposed changes have been incorporated into the final RCRA corrective action permit, and Condition II.F.2 has been revised as follows:

The ELUC was established for the SFP, which placed the following restrictions, at a minimum, on the future activities of the subject property:

Comment 38: Section II Corrective Action, Condition II.H:

bp is following the Land Reuse process (Section II.G); therefore, Section H is only applicable if bp withdraws from the Land Reuse Process.

ILLINOIS EPA RESPONSE

Corrective measures requirements are still applicable for the facility regardless of the requirements established in Condition II.G. If any corrective measures are

necessary for any areas or SWMUs, corrective measures must be incorporated into the Land Reuse Process and implemented in accordance with Condition II.H.

Comment 39: Section II Corrective Action, Condition II.I.8:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. Condition II.I.8 remains unchanged.

Comment 40: Section II Corrective Action, Condition II.J:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. Condition II.J remains unchanged.

Comment 41: Section II Corrective Action, Condition II.M.2:
Please revise to clarify that cost estimates adjusted only for annual inflation are not required to be submitted to Illinois EPA.

Also, it is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
In reference to BP's comment regarding 35 IAC 742.200, please refer to response to Comment 1. The revised cost estimate for corrective action must be submitted when it is necessary or requested by Illinois EPA. The Condition remains unchanged, except for the last sentence of Condition II.M.2 which has been revised as follows:

The revised cost estimate for corrective action must be submitted to the Illinois EPA as necessary or requested by Illinois EPA.

Comment 42: Section II Corrective Action, Condition II.M.3:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous

waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. Condition II.M.3 remains unchanged.

Comment 43: Section II Corrective Action, Condition II.M.4:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. The condition II.M.4 remains unchanged.

Comment 44: Section II Corrective Action, Condition II.M.5:
Please revise to clarify that cost estimates adjusted only for annual inflation are not required to be submitted to Illinois EPA.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 41.

Comment 45: Section III Groundwater Corrective Action Program, Condition III.A:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate. Additionally, bp requests clarification regarding whether the last sentence is standard language for all RCRA Permits in order to understand why this new language is included in the draft Permit.

ILLINOIS EPA RESPONSE
RCRA corrective action activities in Section II of the final RCRA corrective action permit, as well as Section IV of the previous RCRA permit (Log No. B-147R), have been conducted in accordance with 35 IAC 724.201, not under 35 IAC 724.200 since the regulated units were approved for closure by removal. Section V (Groundwater Corrective Action Program) in the previous RCRA permit historically referenced 35 IAC 724.192 through 200 (Log No. B-147R) as the two hazardous waste management units (NC-SP 1and SFP) previously required post-closure care. Under the final RCRA corrective action permit, as BP indicated in its comments, the former hazardous waste units were closed in accordance with the requirements of 35 IAC 724 Subpart G. In accordance with

35 IAC 724.201(c), it is appropriate to address remaining groundwater contamination from the former regulated units under corrective action section requirements in accordance with 35 IAC 724.201 as no other closure or post-closure care requirements remain for the two units. The final sentence of the condition is added to highlight the conditions of 35 IAC 724.201(c) and is applicable for all RCRA permits subject to 35 IAC 724.201. This condition remains unchanged. Please also refer to the response to Comment 1.

Comment 46: III Groundwater Corrective Action Program, Condition III.A.4:
Please consider the proposed revision.

Remediating and/or removing refinery hydrocarbon sources to groundwater impacts, including hydrocarbon sources to groundwater at the water table and within the smear zone of the uppermost aquifer. The smear zone will be considered the minimum and maximum range of water table fluctuations observed at the bp Main Plant.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.A.4 has been revised as requested.

Comment 47: III Groundwater Corrective Action Program, Condition III.A.5:
Please revise to include the Demonstration Wells in the vicinity of Land Reuse Area 9 as referenced in Section III.E.12.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.A.5 has been revised as requested. As Condition III.E.12 has been renumbered due to revisions as part of requests by BP's Comment 57, Condition III.A.5 has also been updated to reference Condition III.E.11.

Comment 48: III Groundwater Corrective Action Program, Condition III.A.6:
Please consider the proposed revision.

Implementation of the bioremediation systems for impacted groundwater and refinery hydrocarbon zones impacting groundwater and interim removal actions for recoverable product must be completed as set forth in Condition II.E of the permit.

ILLINOIS EPA RESPONSE
Exhibit F-1, Section B (Definitions), of the approved Permit Application defines "remediating refinery product" as, "the use of physical, chemical, or biological means to recover or treat refinery product located from the smear zone or vadose zone as it contributes to dissolved phase impacts in order to reduce the mass present at the Site." Condition II.A.6 remains unchanged.

Comment 49: III Groundwater Corrective Action Program, Condition III.B.4:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Condition III.B.4 remains unchanged. Please also refer to the response to Comment 1 and Comment 45.

Comment 50: III Groundwater Corrective Action Program, Condition III.C.1:
Please revise well construction information (for select wells as noted) to match what was provided in permit renewal application replacement pages.

Also, please revise footnote 11 to reflect that former Riverfront Observation Well (RFOW) G030 no longer exists. RFOW G030 was abandoned due to an excavation for a natural gas pipeline repair as documented in the Main Plant GMZ Well G078 Well Condition Letter dated July 11, 2023 (Log No. B-147R-CA-121).

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.C.1 has been revised as requested.

Comment 51: III Groundwater Corrective Action Program, Condition III.D.1:
Please revise as there is no requirement for analysis of any dissolved hazardous constituents with the exception of biogeochemical analytes to monitor natural attenuation conditions only.

ILLINOIS EPA RESPONSE
The comment is acknowledged and Condition III.D.1 has been revised as requested.

Comment 52: III Groundwater Corrective Action Program. Condition III.D.1:
Please revise hazardous waste constituents list and footnotes to align with the optimized Groundwater Corrective Action Monitoring Program approved by Illinois EPA in a letter dated January 19, 2023 (Log Nos. B-147R-CA- 85 and 89).

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.D.1 has been revised as requested.

Comment 53: III Groundwater Corrective Action Program. Condition III.E.1:
Please correct the references as noted.

The Permittee shall determine the groundwater quality for the Observation wells and the GMZ Boundary Wells designated in Condition III.C.1 for the hazardous constituents listed in Condition III.D.1 above.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.E.1 has been revised as requested.

Comment 54: III Groundwater Corrective Action Program. Condition III.E.2.a.i:
Please revise to include GMZ Boundary Well G085 as listed in Condition III.C.1.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.E.2.a.i has been revised as requested.

Comment 55: III Groundwater Corrective Action Program. Condition III.E.2.a.ii:
bp does not understand the rationale for this new requirement as it is not necessary to protect human health and the environment. Please clarify this new requirement to better define the vertical extent/boundary of the GMZ.

ILLINOIS EPA RESPONSE
In accordance with 35 IAC 620.250, a GMZ is a three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contaminants from the facility. The three-dimensional region contains a horizontal and vertical component. The statement in Condition III.E.2.a.ii was included to better define the vertical dimension of the GMZ. Condition III.E.2.a.ii remains unchanged.

Comment 56: III Groundwater Corrective Action Program. Condition III.E.3:
The goal of the remediation program at this site is hydrocarbon remediation, and the language in the current permit (i.e., "hydrocarbon pool") is more appropriate. bp requests the text be revised to replace "hazardous constituents" with "hydrocarbon pool."

ILLINOIS EPA RESPONSE
The use of "hazardous constituents" is more representative of the dissolved phase and/or free phase. Condition III.E.3 remains unchanged.

Comment 57: III Groundwater Corrective Action Program. Condition III.E.11:
The property owner has no contractual obligation to allow bp access to the property. bp requests this requirement be removed from the permit.

ILLINOIS EPA REPONSE
The comment is acknowledged, and Condition III.E.11 has been removed and remaining conditions in III.E renumbered.

Comment 58: III Groundwater Corrective Action Program. Condition III.E.12.b:
Please revise to include the Demonstration Wells in the vicinity of Land Reuse Area 9 as referenced in Section III.E.12.a.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.E.11.b (formerly III.E.12.b) has been revised as requested.

Comment 59: III Groundwater Corrective Action Program. Condition III.E.12.c.ii:
Please revise to include the Demonstration Wells in the vicinity of Land Reuse Area 9 as referenced in Section III.E.12.a.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.E.11.c.ii (formerly III.E.12.c.ii) has been revised as requested.

Comment 60: III Groundwater Corrective Action Program. Condition III.E.12.e.ii.1 and 2:
Please revise for clarity and to remove redundancy between these two conditions.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Conditions III.E.11.e.ii.1 and 2 (formerly III.E.12.e.ii.1 and 2) and have been revised as requested.

Comment 61: III Groundwater Corrective Action Program. Condition III.E.12.g.v:
Please revise to include the vicinity of Land Reuse Area 9.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.E.11.g.v (formerly III.E.12.g.v) has been revised as requested.

Comment 62: III Groundwater Corrective Action Program. Condition III.E.13:
Please correct the references as noted.

The Permittee shall operate, expand and use the Bioremediation Systems and/or other technologies approved by the Illinois EPA in order to remediate hydrocarbons and refinery product in accordance with Condition II.E of the Corrective Action Section of the Permit and 35 IAC Parts 620, 724, and 742. Historical information related to the

development of these remediation systems is summarized in Attachment E. Current information related to the remediation activities of hydrocarbons and refinery product must be submitted within reports required by Condition II.L.1. A discussion must also be provided in reports required by Condition III.1.6.

ILLINOIS EPA RESPONSE

The comment is acknowledged, and Condition III.E.12 (formerly III.E.13) has been revised as requested.

Comment 63: III Groundwater Corrective Action Program. Condition III.E.14:

*bp is currently addressing the indoor inhalation exposure route through the Indoor Inhalation (or vapor intrusion [VI]) Exposure Route Evaluation and Work Plan as summarized in the chronology of correspondence, to date, between bp and Illinois EPA provided as **Exhibit A** of bp's "Public Notice Comments for Draft Permit" (and documented in Attachment C of this draft Permit).*

Appendix G of the Revised Indoor Inhalation Exposure Route Evaluation and Work Plan dated August 28, 2019, included a site-specific evaluation of the indoor inhalation pathway for the Main Plant GMZ wells using the Johnson & Ettinger calculation (per 35 IAC Part 742) modified for a dirt floor evaluation (using the Little, Daisy, Nazaroff attenuation factor) as recommended by Illinois EPA. The calculations were conducted for six applicable constituents under a residential building scenario using site-specific soil conditions including seasonal high water table depth. This site-specific evaluation documented that groundwater conditions at that time did not represent a risk to potential off-site indoor air receptors. As such, it is proposed to utilize this same site-specific approach during the semi-annual comparison of GMZ (and off-site) well groundwater sampling results to evaluate whether the indoor inhalation exposure pathway remains incomplete and potential off-site receptors remain protected. bp's proposed revisions outline the evaluation methodology and reporting criteria.

ILLINOIS EPA RESPONSE

The Illinois EPA can agree, in part, with the approach described in the BP's comments to Condition III.E.13 (formerly III.E.14) for evaluating the indoor inhalation pathway; however, the referenced in-house document has not been approved. Therefore, the approach cannot currently be used while the majority of proposed revisions are considered acceptable. The following comments are noted based on the provided comments:

1. An alternative procedure must be submitted as a Class 1* modification request to propose a procedure for evaluating the indoor inhalation pathway for dissolved groundwater concentrations measured at all groundwater monitoring wells located at the property boundary and off-site locations each time groundwater is sampled. The proposal may include a procedure using the Johnson & Ettinger Calculation (per 35 IAC Part 742) modified for a dirt floor evaluation (using the Little, Daisy, Nazaroff attenuation factor).

2. The procedure must include evaluation of all wells, not limited to GMZ wells, at the property boundary and off-site locations to assess potential concerns at any existing buildings.

3. The Illinois EPA concurs with comparison to current results; however, the site-specific calculations have not been approved. Site-specific soil conditions are not currently collected at the off-site areas of concern, and Table H of Appendix B in 35 IAC Part 742 only allows comparison to groundwater or soil gas results; therefore, soil gas or groundwater must be proposed for calculations. An alternative screening level for each hazardous constituent may be calculated using the highest observed groundwater elevation in recorded events for the property boundary and available off-site monitoring wells.

4. The constituents evaluated must consist of a complete list of hazardous constituents listed in Condition III.D.1 which are also identified in Table H of Appendix B in 35 IAC Part 742.

5. A new evaluation is required for each sampling event to determine whether screening levels are exceeded.

6. If the pathway is determined to be complete, the proposal for correction action cannot be provided within the semi-annual groundwater monitoring report, as these are not responded to by the Illinois EPA. Instead, the request to propose corrective action must be submitted in accordance with Condition II.A.13 and II.D.4.

Condition III.E.13 (formerly III.E.14) has been modified to require a proposal be submitted within 90 days. As a result, Condition III.I.17 has been modified to take effect upon approval of the required proposal. A typographical error in Condition III.I.17 was also corrected to reflect reference to Condition III.E.13 instead of Condition II.E.13.

Comment 64: III Groundwater Corrective Action Program. Condition III.I.6:
Please correct the references as noted.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.I.6 has been revised as requested.

Comment 65: III Groundwater Corrective Action Program. Condition III.I.7:
Please revise for clarity.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.I.7 has been revised as requested.

Comment 66: III Groundwater Corrective Action Program. Condition III.I.13:
Please clarify the number of copies required. As noted in the proposed revision, bp's preference is to mail one (1) original copy and send electronic copies for all Illinois EPA CCs.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.I.13 has been revised as requested.

Comment 67: III Groundwater Corrective Action Program. Condition III.I.16.c:
Please revise for clarity and to remove redundancy.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and Condition III.I.16.c has been revised as requested.

Comment 68: III Groundwater Corrective Action Program. Condition III.I.17:
Please correct the reference and revise to align with the proposed revisions to Condition III.E.14.

ILLINOIS EPA RESPONSE
Revisions to Condition III.E.14 now allow for evaluation of a potentially complete pathway. Condition III.E.17 remains unchanged.

Comment 69: III Groundwater Corrective Action Program. Condition III.I.18:
Please revise to clarify contaminant control monitoring, notification, and reporting requirements are detailed in Conditions III.E.12 and III.I.16.
It was bp's understanding that the 7-day notification and subsequent 30-day report requirements would be removed in lieu of summarizing actions to regain control of groundwater flow and demonstrating that groundwater flow is being adequately controlled in the semi-annual reports required by Condition III.I.2. Please consider the proposed revisions to Conditions 18.a-d.

ILLINOIS EPA RESPONSE
The intent of Condition III.I.18 is to provide notification and necessary actions if corrective action is not effective to protect human health and the environment with the currently approved groundwater corrective action remedies. Illinois EPA acknowledges the requirements of III.E.12 and reporting requirements of III.I.16; however, there are instances when additional corrective action may be necessary.

In addition, the GMZ boundary encompasses the majority of the property and extends off-site; therefore, certain scenarios are not captured by Condition III.E.12.

Acceptable revisions have been incorporated into Condition III.I.18.

Comment 70: III Groundwater Corrective Action Program. Condition III.J.1:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.: If the Permittee determines that the Groundwater Corrective Action Program required by this permit no longer satisfies the requirements of 35 IAC 724.201, the Permittee must, within ninety (90) days, submit an application for permit modification to the Illinois EPA, Bureau of Land, Permit Section, to make any appropriate changes to the program which will satisfy the regulations.

ILLINOIS EPA RESPONSE
This Condition III.J.1 remains unchanged. Please also refer to response to Comment 1 and Comment 45.

Comment 71: Section IV Compliance Schedule, Condition IV.C.1.b:
Please correct the reference as noted. This requirement does not enhance the protection of human health and the environment. bp requests this requirement be removed from the permit.

ILLINOIS EPA RESPONSE
The comment is acknowledged and Condition IV.C.1.b has been revised. Additionally, please refer to response to Comment 13. Condition IV.C.1.b remains in the Permit.

Comment 72: Section IV Compliance Schedule, Condition IV.C.2:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1. The condition IV.C.2 remains unchanged.

Comment 73: Section V General Requirements, Condition V.13.a:
bp is not required to have a "waste analysis plan" for this facility as the facility does not accept outside waste and 35 IAC 727 requirements are not applicable to this permit. As

this is a Standard Condition, please consider the proposed note to be added for clarification or address the non-applicability of the requirement elsewhere in the permit. Please see comment and proposed revisions to Condition I.C.1.

ILLINOIS EPA RESPONSE

The standard conditions are standard for all RCRA corrective action permits. However, if any of these conditions aren't applicable to BP, the corresponding requirements are not applicable. Circumstances may arise where regulations that were not applicable at the time of issuing permit, becomes applicable on a later time. Condition V.13.a remains unchanged.

Comment 74: Section V General Requirements, Condition V.21:

Please correct the references as noted.

ILLINOIS EPA RESPONSE

There has been error in referencing Condition V.16 which should be referenced as Condition V.18, instead of Condition V.16, according to 35 IAC 702.152(g). Error has been corrected in the final RCRA corrective action permit.

Comment 75: Section V General Facility Standards, Condition V.27-30:

Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit, including 35 IAC 724, Subpart B (General Facility Standards). Please see comment and proposed revisions to Condition I.C.1.

ILLINOIS EPA RESPONSE

Please refer to response to Comment 73.

Comment 76: Section V General Facility Standards, Condition V.31-36:

Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit, including 35 IAC 724, Subpart C (Preparedness and Prevention). Please see comment and proposed revisions to Condition I.C.1.

ILLINOIS EPA RESPONSE

Please refer to response to Comments 5 and 73.

Comment 77: Section V Post-Closure, Condition V.38-42:

Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit, including 35 IAC 724, Subpart G (Closure and Post-Closure Care) and Subpart H (Financial Requirements). Please see comment and proposed revisions to Condition I.C.1.

ILLINOIS EPA RESPONSE

Please refer to response to Comment 9.

Comment 78: Section VI Reporting And Notification Requirements, Condition VI.II.M.2, Action:
Please revise to clarify that cost estimates adjusted only for annual inflation are not required to be submitted to Illinois EPA.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the changes have been made to the final RCRA corrective action permit.

Comment 79: VI. Reporting And Notification Requirements, Condition III.C.3, III.C.5, III.C.2:
Please correct the Condition references as noted.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the condition references have been corrected.

Comment 80: VI. Reporting And Notification Requirements, Condition III.I.15:
Please revise to "semi-annually" to align with Condition III.I.7. Note, bp has proposed a revision to Condition III.1.7 as well for better clarification.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the condition references have been corrected.

Comment 81: VI. Reporting And Notification Requirements, Conditions III.I.18.a-c:
As noted above under Condition III.I.18, it was bp's understanding that the 7-day notification and subsequent 30-day report requirements would be removed in lieu of summarizing actions to regain control of groundwater flow and demonstrating that groundwater flow is being adequately controlled in the semi-annual reports required by Condition III.I.2. Please consider removing the associated Actions under Conditions I.18.and I.18.b from this table.

Please correct the Condition reference for Condition III.1.18.c as noted.

ILLINOIS EPA RESPONSE
The comment is acknowledged. Condition III.I.18 remains unchanged. Please refer to response to Comment 69.

Comment 82: Section VI Reporting And Notification Requirements, Condition VI.III.J.1, Due Date:
It is bp's understanding that 35 IAC 724.200 is applicable to the Main Plant facility rather than 35 IAC 724.201 which is applicable to permit applicants for a hazardous waste treatment, storage, or disposal (TSD) facility. bp is not an applicant for a TSD permit. bp requests that Illinois EPA review and correct the citation as appropriate.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 1.

Comment 83: Section VI Reporting And Notification Requirements, Condition VI.V.34, VI.V.35.a and b, VI.V.36, and VI.V.37:
Please correct the references as noted although these requirements are not applicable to this permit as there are no regulated HWMUs operating or requiring closure/post-closure care under this permit at this facility.

ILLINOIS EPA RESPONSE
Please refer to response to Comment 74. The references have been corrected into the final RCRA corrective action permit.

Comment 84: Identification of Approved Permit Application, Attachment A
Please revise bp document dates as noted.

ILLINOIS EPA RESPONSE
The comment is acknowledged, and the changes have been made to the final RCRA corrective action permit.

Attachments: 1. Integrating Climate Change Adaptation Considerations into the Resource Conservation and Recovery Act Corrective Action Process
2. Implementing Climate Resilience in Hazardous Waste Permitting under RCRA

OFFICE OF RESOURCE CONSERVATION AND RECOVERY
WASHINGTON, D.C. 20460

February 6, 2024

MEMORANDUM

SUBJECT: Integrating Climate Change Adaptation Considerations into the Resource Conservation and Recovery Act Corrective Action Process

FROM: Carolyn Hoskinson, Director Digitally signed by CAROLYN HOSKINSON Date: 2024.02.06 12:59:29 -05'00'

TO: Land, Chemicals, and Redevelopment Division Directors, Regions 1-10

PURPOSE

This memorandum[1] conveys the U.S. Environmental Protection Agency's (EPA or Agency) recommendations on how EPA regions and authorized states should work with RCRA facility owners or operators to integrate climate change adaptation considerations into the corrective action process under the Resource Conservation and Recovery Act (RCRA) of 1976 as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984.[2]

Corrective action is the process under which owners and operators of RCRA treatment, storage and disposal facilities investigate and clean up releases of hazardous waste and constituents into soil, ground water, surface water and air, as necessary to protect human health and the environment.

Climate change can increase the frequency and intensity of extreme weather events, such as heavy precipitation and storms; or can cause more gradual changes such as sea level rise. Seasonal changes in precipitation or temperatures, increasing risk of floods, increasing intensity and frequency of hurricanes and wildfires, and thawing of permafrost in northern regions are additional examples of climate-related changes which could impact RCRA cleanups. These changes can lead to the release of

[1]This document provides recommendations to regional staff and management, as well as state hazardous waste programs authorized under RCRA, regarding how to approach the RCRA corrective action process with respect to climate adaptation. This document does not substitute for applicable statutory or regulatory requirements, nor is it a regulation itself. Thus, it cannot impose legally binding requirements on EPA, states, or the regulated community, and may not apply to a particular situation depending upon the circumstances. Any decisions regarding a particular situation will be made based on the statute and the regulations, and EPA and authorized state decision makers retain the discretion to adopt approaches on a site-specific basis that differ from these recommendations where appropriate.

[2]42 USC §6924 et seq.

hazardous waste or constituents from, or interfere with the operation of remedies at, RCRA corrective action cleanups. Such impacts can pose increased threats to human health and the environment, thereby supporting the need to integrate climate adaptation considerations into RCRA corrective action cleanups.

Although this memorandum addresses integrating climate adaptation into the corrective action process, the Agency also encourages considering climate mitigation, e.g., green remediation strategies, in the RCRA corrective action process, while, of course, assuring that each cleanup is protective.

This memorandum supplements the Agency's existing policy statements and guidance addressing RCRA corrective action cleanups,[3] including guidance on RCRA Corrective Action Decision Documents.[4] However, it does not amend or modify RCRA regulations in any way.

Definitions of key terms pertaining to climate adaptation used in this memorandum and a list of additional resources are included in the Attachment.

BACKGROUND

EPA released a Climate Adaptation Plan (CAP) in October 2021 which laid out five priority actions for the agency to implement in the coming years, including integrating consideration of climate impacts into EPA's programs, policies, rulemaking processes, and enforcement activities.[5]

In October 2022, EPA's Office of Land and Emergency Management (OLEM) released its Climate Adaptation Implementation Plan which included the commitment to develop a memorandum that calls for climate change impacts to be considered as part of the corrective action process for any necessary corrective action at RCRA treatment, storage, and disposal facilities.

Incorporating climate adaptation considerations into the corrective action process for RCRA cleanups will ensure that remedies remain effective and prevent the migration of hazardous waste or constituents. These considerations should be factored into the corrective action process consistent with existing EPA guidance that applies to RCRA corrective action cleanups.[6]

LEGAL AUTHORITY

Under RCRA section 3004(u), each RCRA permit must require corrective action for all releases of hazardous waste or constituents from any solid waste management unit at the permitted facility. EPA has codified this requirement at 40 CFR § 264.101(a) and (b), which specify that permits shall require corrective action as necessary to protect human health and the environment. RCRA section 3004(v) requires corrective action beyond the facility boundary where necessary to protect human health and the environment; EPA has codified this requirement at 40 CFR § 264.101(c). RCRA section 3008(h)

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[3]For additional information, see https://www.epa.gov/hw/documents-pertaining-remedy-implementation-corrective-action-sites

[4]Guidance on RCRA Corrective Action Decision Documents: Statement of Basis and Response to Comments (PDF): https://www.epa.gov/sites/default/files/2013-10/documents/rcradecisiodoc-mem.pdf

[5]For additional information, see https://www.epa.gov/climate-adaptation/climate-adaptation-plan

[6]Policies and Guidance Documents that Provide EPA and Authorized States with Assistance Regarding Corrective Action: https://www.epa.gov/rcra/policies-and-guidance-documents-resource-conservation-and-recovery-act-rcra-state-authorization

authorizes EPA to issue orders requiring corrective action as necessary to protect human health and the environment to addresses releases of hazardous waste from facilities that have interim status, facilities that should have had interim status, and facilities that have lost interim status through actions (or a failure to take action) of the owner or operator of the facility. Most states have been authorized for 40 CFR § 264.101, which codifies the permitting corrective action authority in RCRA sections 3004(u) and (v); EPA has not authorized states for RCRA section 3008(h) authorities, which EPA implements. In addition to these corrective action specific authorities, the RCRA "omnibus" permit authority requires EPA and authorized states to include in permits such terms and conditions as EPA or the state determines necessary to protect human health and the environment. RCRA section 3005(c)(3); 40 CFR § 270.32(b)(2).

Under these authorities, EPA, or authorized states, are empowered to impose corrective action requirements that will be protective of human health and the environment taking into account potential climate impacts on the effectiveness of cleanups over time.

CLIMATE ADAPTATION CONSIDERATIONS IN THE CORRECTIVE ACTION PROCESS

EPA regions and authorized states should work with RCRA facility owners and operators during the RCRA corrective action process to identify and address climate-related risks to ensure protection of human health and the environment. Particular consideration should be given to ensuring long-term reliability and effectiveness of selected remedies.

EPA regions and authorized states should consider climate-related risks as they implement the RCRA corrective action process. Considerations for recommended steps in the process are discussed below, although a screening and, if necessary, an assessment, could be implemented at any appropriate point in the corrective action process.

1. **RCRA Facility Assessment, RCRA Facility Investigation, and/or Corrective Measures Study**

   1.1 Climate Vulnerability Screening: EPA Regions and authorized states should work with facility owners and operators to screen RCRA corrective action facilities' vulnerability to any potential climate change impacts that may be relevant, such as:

   Temperature changes: Rising temperatures can influence the efficiency of certain cleanup technologies and treatment processes. It is important to consider how temperature variations might impact the overall vulnerability of RCRA corrective action cleanups to temperature changes.

   Precipitation patterns: Changes in long-term precipitation patterns, including increased rainfall, snow and hail, or prolonged droughts, can affect groundwater elevations and movement and the transport and fate of contaminants at RCRA corrective action cleanups. Where a vulnerability screening indicates the potential for impacts, analyzing potential changes in precipitation in a climate vulnerability assessment will be helpful in understanding how the fate and transport of contaminants may be impacted.

   Sea level rise: If RCRA corrective action cleanups are located in coastal areas, sea level rise caused by climate change can pose significant challenges. Where sea level rise may cause impacts, assessing the potential extent of sea level rise and its impacts on facility

infrastructure, groundwater levels, shoreline erosion, effects of storm surges, and potential contaminant migration can be crucial.

Long-term changes in weather patterns: Reviewing climate models and trends will help identify potential long-term changes in weather patterns, such as shifts in seasons, increased frequency of heatwaves, wildfires, permafrost thaw, or altered storm tracks. These alterations can have indirect impacts on the effectiveness of cleanup activities.

1.2 Climate Vulnerability Assessment: Once the climate vulnerability screening is complete, if there are climate change impacts that could plausibly impact a corrective action cleanup, EPA regions and authorized states may require the facility owners or operators to conduct a climate vulnerability assessment, as appropriate and necessary for the facility's specific circumstances.[7]

2. Remedy Selection

EPA proposed a regulation in 1990 to expand on the codification of RCRA 3004(u) and (v) in 40 CFR § 264.101. 55 FR 30798 (July 27, 1990). The proposal included nine remedy selection criteria. EPA did not finalize that regulation but uses the nine proposed criteria as guidance in remedy selection. 61 FR 19432, 19449 (May 1, 1996).

Following this guidance, selection of final remedies for RCRA corrective action cleanups typically includes a two-phased evaluation. During the first phase, potential remedies are screened to see if they meet four "remedy threshold criteria": (1) be protective of human health and the environment; (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate, to the extent practicable, further releases of hazardous waste and hazardous constituents that might pose threats to human health and the environment; and (4) comply with applicable standards for waste management. Remedies which meet the threshold criteria are then evaluated using five "balancing criteria" to identify the remedy that provides the best relative combination of attributes: (1) Long-term reliability and effectiveness; (2) reduction of toxicity, mobility or volume of wastes; (3) short-term effectiveness; (4) implementability; and (5) cost.

During remedy selection, the adaptive capacity of the remedial alternatives to potential adverse impacts of climate change should be considered, as relevant based on the climate vulnerability assessment. Consideration should be given to building adaptive approaches into remedies, so that the remedies can be evaluated and adjusted over time, if necessary, based on updated climate-related information. Where climate-related risks are a concern, such risks might weigh in favor of selecting remedies that leave less waste in place.

3. Remedy Implementation

During remedy implementation for RCRA corrective action cleanups, EPA regions and authorized states should work with facility owners or operators to ensure that adaptation

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[7]Vulnerability Assessment: https://www.epa.gov/superfund/superfund-climate-resilience-vulnerability-assessment#vulnerability

measures are implemented to ensure the long-term integrity of constructed remedies and their protectiveness of human health and the environment, consistent with any adaptive approaches included in the remedies and with authorities for the modification of remedies. Multiple adaptation measures may be appropriate based on evaluation on a case-by-case basis.

4. **Long-Term Stewardship**
   For remedies already in place, long-term stewardship reviews can provide opportunities to assess the adaptive capacity of the remedy considering new information regarding potential (or actual observed) climate change impacts. Any vulnerabilities identified that may not have been known during remedy selection should be considered and addressed as appropriate, consistent with any adaptive approaches included in the remedies and with authorities for the modification of remedies.

EXAMPLES OF CLIMATE ADAPTATION STRATEGIES THAT CAN BE IMPLEMENTED IN THE CORRECTIVE ACTION PROCESS

A facility-by-facility analysis is required to properly determine the specific climate-related risks that may need to be mitigated for each corrective action. Measures[8] that can be taken to address climate-related risks include:

- Constructing physical barriers to contain contaminants (e.g., sand cap, retaining wall) that are impervious to the identified climate threat (e.g., flooding, intense storms, fire).
- Placing engineering controls (e.g., pumps, electrical equipment) that are necessary for properly managing and containing hazardous wastes or constituents in locations not likely to be impacted by identified climate threats.
- Designing containment, monitoring and treatment systems, and subgrade infrastructure to withstand changing conditions from identified climate threats.
- Designing caps to be impervious to identified threats, e.g., by use of drought-resistant plants for a vegetated soil cap for long-term erosion control.
- Incorporating climate resilience into the design and construction of waste containment systems, infrastructure, and remediation technologies.
- Considering flexible and adaptive design approaches to accommodate changing climate conditions.
- Implementing measures to enhance resilience, such as reinforced barriers, improved stormwater management, or enhanced erosion control.
- Establishing or enhancing monitoring systems, including those for groundwater, air quality and weather, by integrating parameters to detect climate-related changes and potential impacts on cleanups.
- Developing early warning systems to anticipate and respond to climate-related events that may affect facility integrity or increase the risk of releases of hazardous wastes or constituents.
- Implementing adaptive management approaches that allow for adjustments to remediation strategies based on changing climate conditions.

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[8]Adapted from Vulnerability of Waste Infrastructure to Climate Induced Impacts in Coastal Communities: https://www.epa.gov/sites/default/files/2019-11/documents/vulnerability_of_waste_infrastructure_to_climate_induced_impacts_in_coastal_communities.pdf

- Regularly reassessing the effectiveness of remedies considering climate change impacts and adapting as necessary.
- Developing contingency plans to address potential climate-related disruptions to remediation efforts.

Additional examples of climate adaptation strategies may be found in the resources list in the Attachment.

CONCLUSION

Integrating climate change adaptation considerations into the RCRA corrective action process provides for the protection of human health and the environment by ensuring the integrity and effectiveness of the remedy and preventing or limiting exposure to hazardous wastes or constituents.

Throughout the RCRA corrective action process, EPA regions and authorized states should work with owners or operators to ensure that climate adaptation considerations that ensure protection of human health and the environment are implemented.

EPA regions and authorized states should continue to use the existing corrective action process consistent with RCRA and relevant EPA guidance and policies.

If you have questions about this memorandum or would like assistance with evaluating climate vulnerabilities and adaptation strategies during the RCRA corrective action process, please contact Seun Akinlotan (akinlotan.seun@epa.gov), Office of Resource Conservation and Recovery (ORCR).

cc: Ken Patterson, Office of Site Remediation Enforcement
Gregory Gervais, Federal Facilities Restoration and Reuse Office
Kathryn Caballero, Federal Facilities Enforcement Office
Larry Douchand, Office of Superfund Remediation and Technology Innovation
Rosemarie Kelley, Office of Civil Enforcement
Dania Rodriguez, Executive Director, Association of State and Territorial Solid Waste Management Officials
Mark Junker, Chair, Tribal Waste and Response Steering Committee
Gerald Wagner, Executive Committee Chair, National Tribal Caucus

ATTACHMENT

KEY TERMS PERTAINING TO CLIMATE ADAPTATION

For purposes of this memorandum, key terminology[9, 10] includes:

Climate change or climate adaptation means taking action to prepare for and adjust to both the current and projected impacts of climate change.

Adaptive capacity is the ability of a human or natural system to adjust to climate change (including climate variability and extremes) by moderating potential damages, taking advantage of opportunities, or coping with the consequences.

Climate change refers to changes in global or regional climate patterns attributed largely to human-caused increased levels of atmospheric greenhouse gases.

Resilience can be generally defined as the capacity of a system to maintain function in the face of stresses imposed by climate change and to adapt the system to be better prepared for future climate impacts.

Vulnerability means the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes; it is a function of the character, magnitude, and rate of climate variation to which a system is exposed; its sensitivity; and its adaptive capacity.

ADDITIONAL RESOURCES

1. The U.S. Climate Resilience Toolkit: A Platform Designed to Help People Find and Use Tools, Information, and Subject Matter Expertise to Build Climate Resilience. (https://toolkit.climate.gov/#steps).
2. EPA's Adaptation Actions for Protecting Waste Facilities. (https://www.epa.gov/arc-x/adaptation-actions-protecting-waste-facilities#tab-1).
3. EPA Superfund Climate Resilience Technical Fact Sheet: Groundwater Remediation Systems (https://semspub.epa.gov/work/11/175851.pdf).
4. EPA Superfund Climate Resilience Technical Fact Sheet: Contaminated Sediment Sites. (https://semspub.epa.gov/work/11/177110.pdf).
5. EPA Superfund Climate Resilience Technical Fact Sheet: Contaminated Waste Containment Systems. (https://www.epa.gov/sites/default/files/2019-12/documents/cr_containment_fact_sheet_2019_update.pdf).

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[9]Vocabulary Catalog; Topic: Climate Change; Publisher: EPA Office of Air and Radiation/Office of Atmospheric Programs/Climate Change Division. https://sor.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=Glossary%20Climate%20Change%20Terms#formTop

[10]Climate Adaptation and EPA's Role: https://www.epa.gov/climate-adaptation/climate-adaptation-and-epas-role

6. Superfund Climate Resilience: EPA's Superfund program approach addressing climate vulnerabilities as a standard operating practice in cleanup projects. (https://www.epa.gov/superfund/superfund-climate-resilience).
7. Fed Center Climate Adaptation Program Area: Federal government resource that supports federal agency climate adaptation planning. (https://www.fedcenter.gov/programs/climate/).

OFFICE OF RESOURCE CONSERVATION AND RECOVERY
WASHINGTON, D.C. 20460

June 5, 2024

MEMORANDUM

SUBJECT: Implementing Climate Resilience in Hazardous Waste Permitting Under the Resource Conservation and Recovery Act (RCRA)

FROM: Carolyn Hoskinson, Director

Digitally signed by CAROLYN HOSKINSON
Date: 2024.06.05 20:15:53 -04'00'

TO: Land, Chemicals, and Redevelopment Division Directors, Regions 1-10

PURPOSE

The purpose of this memorandum is to provide guidance to EPA Regions, states, and territories on when and how to consider potential adverse climate change impacts in the hazardous waste permitting process under the RCRA. This includes recommendations for conducting climate change vulnerability screenings and assessments for treatment, storage, and disposal facilities (TSDFs) to determine whether there are climate vulnerabilities that hazardous waste permits should address.

Adverse impacts of climate change can include the frequency and intensity of extreme weather events, changing wind patterns, temperature fluctuations, increased precipitation, sea level rise, storm surges, inland and coastal flooding, bank and shoreline erosion, changes in groundwater levels and direction of flow, drought, increased risk of wildfires, and permafrost thaw. These potential impacts can threaten the resilience of engineering and other controls at TSDFs for which applicants seek permits from EPA Regions or states and territories authorized to implement the RCRA program. This memorandum identifies authorities, provides interpretations of relevant RCRA provisions, and recommends approaches to ensure that controls will provide long-term effectiveness through resilience to adverse climate change impacts into the future.[1]

Definitions of key terms pertaining to climate adaptation used in this memorandum are included in the attachment.

[1] This document does not substitute for the statute or regulations, nor is it a regulation itself. Thus, it cannot impose legally binding requirements on EPA, states, or the regulated community, and may not apply to a particular situation based upon the circumstances. Any decisions regarding a particular situation will be made based on the statute and the regulations, and EPA and authorized state/territory decision makers retain the discretion to adopt approaches on a site-specific basis that differ from these recommendations where appropriate.

BACKGROUND

EPA released a Climate Adaptation Plan (CAP) in October 2021 which laid out five priority actions for the agency to implement in the coming years, including integrating consideration of climate impacts into EPA's programs, policies, rulemaking processes, and enforcement activities.[2] In October 2022, EPA's Office of Land and Emergency Management (OLEM) released its Climate Adaptation Implementation Plan, which included the commitment to incorporate climate adaptation into OLEM's mission, programs, and management functions.

IMPLEMENTATION

The 40 CFR Part 264 standards for RCRA TSDFs are designed to ensure that hazardous waste treatment, storage and disposal are conducted in a manner that protects human health and the environment (See RCRA 3004(a)). These standards are implemented through RCRA permits at permitted TSDFs. RCRA permits must ensure that facility operations will comply with these standards (RCRA 3005(c)(1)) and must contain any additional terms or conditions that EPA or the authorized state determines are necessary to protect human health and the environment (RCRA 3005(c)(3)).

The climate change impacts described above may affect what a facility needs to do to comply with the RCRA standards applicable to TSDFs. EPA expects that EPA Regional offices and authorized states and territories will consider the potential for adverse climate change impacts to affect TSDF operations in the permitting process, and that RCRA permits will include the conditions that the permitting authority determines are necessary to ensure that facility operations will be compliant and protective in the face of such impacts. Climate change adaptation considerations should be incorporated as appropriate during initial permit issuance, permit renewal, and/or permit maintenance (e.g., permit modification). The potential for climate impacts should be considered and addressed throughout the expected active life of the facility, as well as during post-closure, as appropriate, not just for the term of the permit or permit modification under consideration.

Conducting climate vulnerability screenings and analyses at TSDFs can help determine whether changes to facility permits are necessary to ensure that TSDFs are resilient to climate events and remain so into the future. For example, prior to receiving a renewal permit application, or during the process of reviewing an application for an initial permit or modification, EPA Regions, states, and territories should perform an initial climate vulnerability screening as appropriate to determine which adverse climate change impacts might apply to the facility. The vulnerability screening is a high-level screening step to determine if a site or facility is located in a geographic area at risk to adverse climate change impacts. If the results of the screening indicate that climate change impacts might plausibly impact the protectiveness of facility operations, EPA, states, and territories should conduct, or should request or require an owner or operator to conduct, a more detailed climate vulnerability assessment to determine whether adaptive measures are necessary. If an initial climate vulnerability screening indicates that adaptative measures are necessary, and no further information or analysis is needed, then the more detailed climate vulnerability assessment is not necessary. However, if the initial climate vulnerability screening indicates a plausible basis for concern and there is uncertainty as to the level of

[2] For additional information, see https://www.epa.gov/climate-adaptation/climate-adaptation-plan.

climate risk or the adaptive measures that may be needed, then the regulator may require a climate vulnerability assessment.

KEY RCRA REGULATORY AUTHORITIES RELEVANT TO CLIMATE CHANGE CONSIDERATIONS IN PERMITTING

Several regulatory authorities support consideration of potential adverse climate change impacts on permitted activities and the development of permit conditions, as needed, to ensure that such activities will be protective of human health and the environment in the face of such impacts. Below is a list of regulatory provisions, although this is not an exhaustive list of the potentially relevant regulatory provisions.

Facility Design and Operation [§ 264.31]
Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a release of hazardous waste or hazardous waste constituents that could threaten human health and the environment. EPA Regions and authorized states/territories should consider the potential adverse climate change impacts in ensuring that this standard is satisfied. For example, more frequent storm events as well as temperature fluctuations can influence how a facility's units (e.g., containers, tanks, landfills) should be designed and operated to protect human health and the environment. Facility design and operation may need to change in the face of future climate conditions.

Facility Location Standards [§ 264.18(b)]
The RCRA regulations generally require facilities located within a 100-year floodplain to be designed, constructed, operated and maintained to prevent washout, should there be a flood. The number of facilities within a 100-year floodplain will likely increase as a result of potential adverse climate change impacts causing floodplains to expand. TSDFs located in a 100-year floodplain will need to ensure their operations comply with this requirement, and permit writers should take care to ensure that permits adequately address this requirement. These requirements should be considered during permit renewal as well as initial permit issuance. In view of changing climate conditions, it will be important to employ an approach for identifying the 100-year floodplain that considers predicted future conditions, and recent flooding events and their impact on the facility, rather than simply long-term historical data.

Contingency Plans [§ 264.50 – 264.56]
The RCRA regulations require that TSDFs have contingency plans designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water. Development and review of contingency plans should consider potential adverse climate change impacts.

Omnibus Authority under Section 3005(c)(3) [§ 270.32(b)(2)]
The omnibus permit authority provides that "Each permit issued under section 3005 of this act shall contain terms and conditions as the Administrator or State Director determines necessary to protect human health and the environment." EPA expects that climate change impacts can generally be addressed using more specific regulatory authorities such as those identified above. However, where permitting authorities determine that permit conditions beyond those required under these specific authorities are necessary to protect human health or the environment from potential adverse climate change impacts, the EPA Region or the state/territory has the responsibility to impose such terms and conditions by exercising their omnibus authority.

Review of State Permits [§ 271.19]
EPA has the authority to oversee state program implementation to ensure it is consistent with the state's own authorized requirements. This includes the authority for EPA to comment on a draft permit. EPA can enforce the terms of the comment, even if those terms are not incorporated into the permit, if the comment indicates that the terms are necessary to implement the approved program, as provided in § 271.19(b). EPA Regions should consider potential adverse climate change impacts in evaluating the use of its comment authority.

Agency Initiated Permit Modifications [§ 270.41(a)(2)]
This provision authorizes the permitting authority to modify a permit based on "information [that] was not available at the time of permit issuance ... and would have justified the application of different permit conditions at the time of issuance." Such a basis for permit modifications could include changes due to climate change-related factors (e.g., updated floodplain maps or precipitation data from federal or state sources) that may impact facility operations.

Part B Permit Application [§ 270.14-270.28]
The RCRA Part B permit application regulations specify information that must be submitted in permit applications. Particularly relevant are the provisions of § 270.14(11)(iii) and (iv), which relate to floodplains, and also § 270.14(19) relating to mapping and location. EPA Regions and authorized states/territories should work with facility owners and operators to ensure that Part B permit applications are prepared using up-to-date climatological data and data projections for the anticipated life of the facility. This ensures that unit-specific designs and permit conditions remain protective in the face of potential adverse climate change impacts. While not part of the specific Part B Application requirements, a general permit application requirement under § 270.10(k) provides broader authority to require additional information necessary to develop permit conditions that can be used to address climate adaptation concerns.

CLIMATE ADAPTATION TOOLS

RCRA climate vulnerability screening tools and assessment methodologies are currently under development. One screening tool has been released in RCRAInfo for sea level rise projections at RCRA facilities (https://rcrapublic.epa.gov/rcra-public-web/action/posts/5). EPA also anticipates releasing further policy and guidance regarding how permits can incorporate climate change adaptation considerations through its effort to update the RCRA Model Permit and through development of the

Updates to the RCRA Hazardous Waste Permitting Regulations and Other Technical Corrections rulemaking.

In the interim, for further information, please see the Superfund Climate Resilience website which provides an overview of climate-related initiatives within the Superfund program, with information about strategies that can be used to evaluate and strengthen climate resilience at Superfund sites. While this website offers guidance on Superfund sites, it can also help inform decisions at RCRA facilities. EPA intends to develop a climate vulnerability assessment methodology for the RCRA program, based on Superfund's methodology.

CONCLUSION

RCRA permits must be protective of human health and the environment. Climate change has the potential to impact TSDF compliance with RCRA regulatory provisions, and more broadly, the protectiveness of TSDF operations. Thus, throughout the RCRA permitting process, including issuance of initial permits, permit renewals, and permit modifications, EPA Regions and authorized states and territories should work with facilities to consider potential adverse climate change impacts in assuring that RCRA requirements are met and that RCRA permits are protective of human health and the environment in the face of those impacts.

If you have questions about this document or would like assistance with evaluating climate vulnerabilities and adaptation measures as they relate to RCRA permitting, please contact Jeff Gaines, Office of Resource Conservation and Recovery (ORCR), at (202) 566-0332 or gaines.jeff@epa.gov.

KEY TERMS PERTAINING TO CLIMATE ADAPTATION

For purposes of this memo, key terminology[3] includes:

Adaptation: Taking action to prepare for and adjust to both the current and projected impacts of climate change.

Adaptive Capacity: The ability of a human or natural system to adjust to climate change (including climate variability and extremes) by moderating potential damages, taking advantage of opportunities, or coping with the consequences.

Climate Change: Climate change refers to changes in global or regional climate patterns attributed largely to human-caused increased levels of atmospheric greenhouse gases.

Extreme Weather Event: An extreme weather event is an event that is rare at a particular place and time of year. Definitions of rare vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense.

Resilience: Climate resilience can be generally defined as the capacity of a system to maintain function in the face of stresses imposed by climate change and to adapt the system to be better prepared for future climate impacts.

Vulnerability: The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes; it is a function of the character, magnitude, and rate of climate variation to which a system is exposed; its sensitivity; and its adaptive capacity.

[3] https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf

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RCRA CORRECTIVE ACTION PERMIT

1191150001 -- Madison County
BP Products North America, Inc./Main Plant
ILD 980700967
Log No. B-147R2
RCRA Administrative Record

Issue Date: APR 29 2025
Effective Date: JUN 03 2025
Expiration Date: JUNE 03, 2035

PERMITTEE

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

A Resource Conservation and Recovery Act (RCRA) corrective action 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 (35 IAC) Subtitle G.

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:

Corrective Action: Twenty-one (21) Solid Waste Management Units (SWMUs) and eight (8) Product Release Sites (PRSs) in nineteen (19) Land Reuse Areas.
Groundwater Monitoring: Corrective action for the SWMUs and PRSs in Land Reuse Areas.

This permit consists of the conditions contained herein and those in 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 on the effective date of this RCRA 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 approved 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)).

Joshua L. Rhoades, P.G.
Permit Section Manager
Bureau of Land

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OF -IAH AMB SDD

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RCRA Corrective Action Permit
BP Products North America/Main Plant

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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" (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

B. LOCATION

1. Location of the facility:

   The BP Products North America, Inc. (formerly Amoco) Main Plant facility is located at 301 Evans Avenue, Wood River, Madison County, Illinois.

2. Definition of facility covered by this Permit:

   a. The boundary of the facility subject to this permit has been modified to reflect the previous corrective action and permit decisions made under the previous permit (Log No. B-147R). The original permitted facility (approximately 570 acres) was previously parceled to remove three specific portions of land, by parceling horizontally and vertically, as described below:

      1) A 9.56-acre donated parcel which extends from the ground surface vertically downward to a subsurface horizontal plane at an elevation of 418 feet above mean sea level (ft above MSL); this plane is located approximately 23 feet below ground surface (ft-bgs). The Property Index Number (PIN) for this parcel is 19-2-08-27-14-301-003. The PIN for the parcel directly beneath the 9.56-acre donated parcel is 19-2-08-27-301-004, which is still owned by the Permittee and included in the permitted facility boundary.

      2) A 7.5-acre donated parcel which extends from the ground surface vertically downward to a subsurface horizontal plane at an elevation of 428 ft above MSL; this plane is located approximately 15 ft-bgs. The PIN for this parcel is 19-2-08-27-10-101-002. The PIN for the parcel

directly beneath the parcel is 19-2-08-27-10-101-003, which is still owned by the Permittee and included in the permitted facility boundary.

3) An approximate 118.25-acre parcel purchased by Kinder Morgan Phoenix Holdings LLC (KMPH) which only extends from ground surface vertically downward to a subsurface horizontal plane at an elevation of 408 ft above MSL, which is located approximately 25 ft-bgs. The Property Index Numbers (PINs) for the 118.25-acre KMPH parcel are:

19-1-08-27-18-301-001.001
19-1-08-34-00-000-001.004
19-1-08-34-00-000-001.005
19-1-08-34-00-000-001.006
19-1-08-34-00-000-001.007

Note that the parcel of land which lies directly beneath each of the KMPH parcels is owned by the Permittee and is a part of the permitted facility.

b. The facility which is the subject of this permit, located between the ground surface and an elevation of 428 ft above MSL, is approximately 434.69 acres in size. This is a reduction of approximately 135.31 acres from the original BP Main Plant to remove the parcels described in Conditions I.B.2.a (1) through (3).

c. The facility which is the subject of this permit, located between 418 ft above MSL and 428 ft above MSL, is approximately 442.19 acres in size. This is a reduction of approximately 127.81 acres from the original BP Main Plant to remove the parcels described in Conditions I.B.2.a (1) and (3).

d. The facility which is the subject of this permit, located between 408 ft above MSL and 418 ft above MSL, is approximately 451.75 acres in size. This is a reduction of approximately 118.25 acres from the original BP Main Plant to remove the parcels described in Condition I.B.2.a (3).

e. The facility which is the subject of this permit, located between 408 ft above MSL and below, is approximately 570 acres in size. This is identical to the original BP Main Plant boundary.

3. Facility Maps:

The general location of the facility is shown on Figure B-1, Attachment B of this permit. The location of the solid waste management units (SWMUs), product release sites (PRSs) and Land Reuse Areas are shown on Figure B-2, Attachment

B of this permit. The facility layout map is shown on Figure B-3, Attachment B of this permit.

C. DESCRIPTION OF HAZARDOUS WASTE MANAGEMENT ACTIVITIES

1. There are no regulated hazardous waste management units (HWMUs) operating or requiring closure/post-closure care under this permit at this facility. Because no HWMUs remain at the site, several portions of 35 IAC Part 724 are not applicable to this permit. This includes the requirements for personnel training (35 IAC 724, Subpart B), preparedness and prevention (35 IAC 724, Subpart C) and contingency plan and emergency procedures (35 IAC 724, Subpart D). However, please note that through the application of other laws, regulations, and permit conditions, some of the concepts covered by these regulations may still apply to corrective action activities conducted at the site.

2. The Permittee currently proposes no corrective action activities that would subject the facility to a RCRA Remedial Action Plan Permit (RAPP). If plans change in the future such that one or more corrective action activities would subject the facility to a RCRA RAPP, the Permittee must submit a modification request to incorporate requirements for a RAPP into this permit in addition to the plans submitted as a part of a normal corrective action document, as well as certification in accordance with Section 39(i) of the Illinois Environmental Protection Act.

3. Requirements for HWMUs: NC-SP1 and SFP

   a. At the North Cell of Spray Pond 1 (NC-SP1) the closure-by-removal requirements of 35 IAC 703.159 have been met. This determination was made in the Illinois EPA's January 7, 2008 letter (Log No. B-147-CA-70) and was based upon the review of the October 17, 2007 "Supplemental Soil Investigation Report for the North Cell of Spray Pond 1" and the Illinois EPA's May 29, 2007 (Log No. B-147-M-7) letter to BP. This letter also required a Class 3 modification of the permit requesting that the NC-SP1 be removed as a regulated unit subject to the requirements of the permit. With the approval of this permit, this requirement has been considered to be met and accordingly, no further action is necessary for the NC-SP1.

   b. At the South Flare Pit (SFP), Condition 2 of the Illinois EPA's January 7, 2008 letter (Log No. B-147-CA-70) stated that the review of soil data contained in the October 17, 2007 "Supplemental Soil Investigation Report" determined that the closure-by-removal demonstration had been met for soil and no further action was needed for soil:

      (1) With the implementation of a Health and Safety Plan for Construction Workers in the area of the SFP shown within the hyphenated line by Attachment 1 of the January 7, 2008 letter;

(2) With the eventual implementation of an Environmental Land use Control (ELUC) as required by Attachment C of the Illinois EPA's May 29, 2007 letter and the conditions set forth in the January 7, 2008 letter;

(3) Provided that groundwater issues for the SFP are addressed as outlined by Items 1 through 4 in Attachment C of the Illinois EPA's May 29, 2007 letter (Log No. B- 147-M-7 and B-147-M-1).

A certified ELUC for the SFP was submitted to Illinois EPA on December 31, 2015 and approved by Illinois EPA in a letter dated July 18, 2016 (Log No. B-147R-CA-58). Therefore, no further action is necessary for soil at the SFP. Condition II.C.4 below (Groundwater Requirements for the SFP) addresses the requirements associated with Item 3 above.

4. Groundwater Requirements for the SFP

a. The Illinois EPA approved the March 18, 2010 submittal for the SFP demonstration to exclude the groundwater ingestion exposure route for perched groundwater (locally encountered groundwater in surficial fill and fine-grained native materials (Cahokia Clay facies) at the former SFP area.

(1) As a result of the perched groundwater route being excluded, the Groundwater Detection Monitoring Program was removed with the issuance of the renewed RCRA Permit (Log No. B-147R).

(2) The facility must satisfy the requirement of Condition II.F.2 of this permit.

(3) The facility must continue to address groundwater of the uppermost aquifer in accordance with Section III of this permit.

SECTION II: CORRECTIVE ACTION

A. INTRODUCTION

1. In accordance with Section 3004(u) of RCRA and 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 waste constituents, listed in 35 IAC 721, Appendix H, from any Solid Waste Management Unit (SWMU) at the BP Main Plant in Wood River, Illinois. This section contains the conditions which must be followed to ensure these requirements are met.

2. The original permit issued by the Illinois EPA for this facility on September 30, 1993 required that the facility conduct corrective action at twenty-one (21) SWMUs and nine (9) product release sites (PRSs) (locations where product was known to have been released or where product could have potentially been released). On June 21, 2002, the Illinois EPA approved a plan to expand the scope of this corrective action program to include all recognized environmental conditions (RECs) at the facility. To accomplish this, the facility was broken up into nineteen (19) investigation areas (Land Reuse Areas) so that corrective action at the facility could be addressed on an Area-by-Area basis.

3. One of the Land Reuse Areas (Area 18) contains two units that were identified and regulated as hazardous waste management units (HWMUs) in the permit issued to this facility on September 30, 1993. The facility has since accomplished closure by removal for these two units (referred to as the North Cell Spray Pond 1 (NC-SP1) and the South Flare Pit (SFP)). This section summarizes the status of these units relative to RCRA closure, RCRA post-closure and RCRA corrective action (it must be noted that HWMUs are a subset of SWMUs).

4. The facility has completed a substantial amount of corrective action efforts to date at this facility. This permit summarizes these efforts and describes the corrective action efforts which must still be completed at this facility to ensure the requirements of Section 3004(u) and (v) of RCRA and 35 IAC 724.201 are met.

5. The Permittee must provide corrective action, as appropriate, for any future releases from SWMUs present at the facility or any SWMUs found during the course of facility operations in the future.

6. As 35 IAC Part 742 was amended to include indoor inhalation exposure route, all SWMUs which obtained no further action for corrective action as listed in Condition II.B.1 must be evaluated for the indoor inhalation pathway and meet all updated remediation standards to meet the requirements of 35 IAC Part 742.

7. The Permittee must develop and implement a Corrective Measures Program (CMP), as necessary, to protect human health and the environment from any SWMUs and Areas of Concern (AOCs) at the facility.

8. 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.

9. The Permittee must provide corrective action, as appropriate, for: (1) any newly discovered SWMUs and AOCs; and/or (2) future releases for existing SWMUs at the facility.

10. 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) the Illinois EPA and the USEPA guidance documents regarding such efforts; and (3) the Illinois EPA letters regarding such activities.

11. Unless there is a desire to modify specific requirements set forth in this Section, information submitted to Illinois EPA regarding the corrective action requirements set forth in this Section is not a request to modify this permit nor subject to the requirements of 35 IAC 703 Subpart G.

12. All Illinois EPA final decisions regarding RCRA corrective action at this facility are subject to the appeal provisions of Sections 39(a) and 40(a) of the Illinois Environmental Protection Act (Act).

13. All documents submitted to the Illinois EPA regarding corrective action efforts must be accompanied by a completed RCRA Corrective Action Certification Form (LPC 632). This form can be found on the Illinois EPA website.

14. 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.

15. Based on the results of the investigative efforts, additional investigation and remediation, as necessary, may be required at any SWMUs or AOC to protect human health and the environment to meet the remedial objectives in accordance with 35 IAC Part 742.

16. The Permittee shall incorporate, as necessary, climate change adaptation considerations into the corrective action required at this facility in accordance with the applicable USEPA guidance(s) regarding integrating climate change adaptation considerations into the RCRA corrective action process.

B. CORRECTIVE ACTION REQUIREMENTS

A plan to conduct a Phase I RCRA Facility Investigation (RFI) of the twenty-one (21) SWMUs and nine (9) product release sites (PRSs) of concern as identified in the 1993 permit and listed below was approved by Illinois EPA on September 7, 1994; a report documenting the results of this investigation was approved by Illinois EPA on June 5, 2001. In 2016, as the approximate 118.25-acre KMPH parcel at and above 408 feet above mean sea level (ft above MSL), which contained of one of the PRSs (PRS 7), was removed from the facility subject to this permit, the number of PRSs requiring corrective action under this permit is now eight (8), while groundwater throughout the original permitted boundaries of the facility is still subject to corrective action. The requirements to addresses corrective action at these areas are included in Section II of this permit.

SWMU #	SMMU Description
8	Three Leaded Tank Bottom Disposal Area
9	Northeast Sand Pits
12	Southeast Disposal Area
13	API Separator Sludge Landform
14	North Cell/Spray Pond 1
15	Spray Ponds Other Than North Cell/Spray Pond 1
16	Old API Separator
17	Additive Waste Pit
18	DAP Spent Filter Cake Storage Area
21	Former APAC Waste Transfer Area
22	New APAC Waste Transfer Area
23	MAP Spent Filter Cake Storage Area
24	APAC Slop Oil Tank 70
25	APAC Slop Oil Tank 176
26	APAC Slop Oil Tanks 189, 190, 845, and 846
27	APAC Slop Oil Tank 277 Area
30	Korea Tank Form Disposal Area
31	Waste Phenol Accumulation Area
33	South Flare Pit
34	Amoco's Sewer System
36	Liquid Waste Collection Bin

PRS #	PRS Description
1	Former Tank 228 Dike Area
2	Former Tank 256 Dike Area
3	Waste Oil Leak Area
4	Hydrocarbons on Water Table
5	North Tank Farm
6	East Tank Farm
8	Korea Tank Farm
9	Gasoline Piping Manifold

1. A Phase II RFI workplan for the SWMUs and PRSs mentioned above was approved by Illinois EPA on February 5, 2002 that was subsequently modified on June 21, 2002. The February 5, 2002 approval letter expanded the scope of corrective action at this facility to all recognized environmental conditions (not just the SWMUs and PRSs identified in the original 1993 permit) and divided the facility into nineteen (19) Land Reuse Areas for remediation and potential redevelopment. A map of the BP Main Plant Land Reuse Areas is presented in Attachment A-1 to this section; these areas are also identified as follows:

Land Reuse Area No.	Name
Area 1	Northwest Corner
Area 2	Northeast Corner
Area 3	North Central Area
Area 4	Former Rail Yard
Area 5	South Central Area
Area 6	Former APAC Area
Area 7	Former Alkyl Plant
Area 8	North Tank Farm
Area 9	Korea Tank Farm
Area 10	East Tank Farm
Area 11	Spray Pond Area (Ponds 1 & 2 and Intake Channel Areas)
Area 12	South Tank Farm
Area 13	Wildlife Enhancement Area
Area 14	Southeast Corner
Area 15	Administration Building
Area 16	Marketing Operations Area
Area 17	Liquid Propane Gas (LPG) Caverns
Area 18	North Cell Spray Pond 1 and South Flare Pit
Area 19	Spray Pond 3

2. Condition II.C.1 below includes the facility's corrective action efforts that have been completed, updated to June 2024. Condition II.D below includes the required corrective action that still must be completed at the facility.

3. All investigation efforts conducted at each Land Reuse Area must be sufficient as to thoroughly characterize contamination associated with all the identified recognized environmental conditions present in the area. The Land Reuse Area investigations will focus on soil and perched groundwater.

4. Conduct additional investigation and remediation, as necessary, to address any on-site and/or off-site contamination, which has migrated beyond the property boundaries from the former operation of the facility.

5. All plans and reports associated with all aspects of corrective action at this facility should be submitted to the Illinois EPA for review and approval before implemented. A summary of the plans/reports submitted to date regarding corrective action at this facility, organized by the Illinois EPA log number (and

thus the chronologic order in which the plans/reports were submitted) is provided in Attachment C; this attachment also identifies the Illinois EPA's final action on each submittal.

6. The requirements of 35 IAC Parts 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.

7. Components of the corrective action program must include:

   a. Continued groundwater monitoring and corrective action program in accordance with the conditions in Section III of this permit.

   b. Continued operation of the bioremediation systems and remediation of hydrocarbon in accordance with Condition II.E and as approved in Illinois EPA letters.

   c. Continued submittal of Corrective Action Progress Reports in accordance with Condition II.L.1 of this permit.

   d. Continued implementation of ELUC – Condition II.C of this permit.

8. The Permittee plans to complete corrective action for the soil and perched groundwater at the facility through the land reuse investigation remediation process. The goal in following this process is to obtain a NFA determination for a given Land Reuse Area by addressing recognized environmental conditions in that area. If the Permittee determines that redevelopment is not likely to occur in a given area, the Permittee will follow the corrective action process only for the SWMUs and PRSs in that area. If the potential for redevelopment of the Land Reuse Area becomes viable in the future, the Permittee would pursue an NFA determination for the entire area (including RECs) at that time. The general process for investigation and remediation of each Land Reuse Area is as follows:

   a. Current conditions will be established for the parcel/area.

   b. An Investigation Workplan incorporating the current conditions will be developed and submitted to the Illinois EPA for review and approval to investigate data gaps required to properly characterize the area (this submittal is referred to as the Current Conditions Report/Investigation Workplan).

   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 III of this permit.

   d. The results of the investigation will be analyzed; as well as all other data remediation objectives will be developed in accordance with 35 IAC Part

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 Conditions II.B.8.c and d above will be submitted to the Illinois EPA for review and approval (this report is referred to as the Investigation Report). 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 review of the Investigation Report, the 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 the 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 the Illinois EPA, until the 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 final NFA letter can be issued. Plans for establishing the required engineered barrier, if necessary, and associated institutional control(s) required must be submitted to the 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.

h. Development of the area may proceed so as long as such activities are conducted, meeting all the requirements and conditions of the NFA letter and any applicable conditions of this permit.

C. SUMMARY OF CORRECTIVE ACTION EFFORTS COMPLETED

1. The status of investigations and corrective action for each Land Reuse Area as of September 2024, is presented on the table below.

Notes: CCR/IW = Current Conditions Report/Investigation Work Plan
Inv Report = Investigation Report
ELUC = Environmental Land Use Control
APAC = Amoco Petroleum Additives Company
NFA = No further Action
IEPA = Illinois EPA

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
Area 1-Northwest Corner	PRS 5 – North Tank Farm	NFA for soils approved December 5, 2001. Recorded ELUC approved March 25, 2005.	Comply with conditions of NFA and ELUC.
Area 2-Northeast Corner	PRS 1 – Former Tank 228 Dike Area	NFA for soils approved August 13, 2002. Recorded ELUC approved March 29, 2005. Revised recorded ELUC approved February 27, 2012. A revised recorded ELUC approved August 9, 2017.	Comply with conditions of NFA and ELUC. The Permittee retains ownership and responsibility for RCRA corrective action activities associated groundwater in the vicinity of two parcels removed from the facility as described in Conditions II.C.5 (a) and (b) below.
	PRS 5 – North Tank Farm		
	PRS 6 – East Tank Farm		
	SWMU 9 – Northeast Sand Pit		
Area 3-North Central Area	SWMU 24 – APAC Slop Oil Tank 70	CCR/IW approved September 27, 2002. Inv. Report submitted December 22, 2006; revised Inv. Report submitted May 8, 2012. IEPA requested that the Permittee withdraw the 2012 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.
	SWMU 26 – APAC Slop Oil Tanks 189, 190, 845, 846		

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
Area 4-Former Rail Yard	SWMU 13 – Separator Sludge Landfarm SWMU 21 – Former APAC Waste Transfer Area	NFA for soils approved August 22, 2003. Recorded ELUC approved September 29, 2005.	Comply with conditions of NFA and ELUC. * See Notes below.
Area 5-South Central Area	SWMU 27 – APAC Slop Oil Tank 177 Area PRS 3 – Waste Oil Leak Area	CCR/IW approved September 27, 2002. Inv. Report submitted December 22, 2006; revised report received by IEPA February 12, 2012. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA. * See Notes below.
Area 6-Former APAC Area	SWMU 17 - Additives Waste Pit SWMU 18 - Detergent Additives Plant (DAP) Spent Filter Cake Storage Area SWMU 22 – New APAC Waste Transfer Area SWMU 23 – Multipurpose Additives Plant (MAP) Spent Filter Cake Storage Area SWMU 31 – Waste Phenol Accumulation Area SWMU 36 – Liquid Waste Collection Bin	CCR/IW approved September 5, 2002. Inv. Report submitted December 22, 2006; revised report received by IEPA March 16, 2012. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2018-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.
Area 7-Former Alkyl Plant	PRS 5 – North Tank Farm	CCR/IW approved August 7, 2003. Inv. Report submitted June	The Permittee to submit revised Inv.

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
		2, 2008 to IEPA. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2017-2018 submitted March 8, 2024.	Report pending further discussion with IEPA.
Area 8-North Tank Farm	PRS 2 – Former Tank 246 Dike Area PRS 5 – North Tank Farm SWMU 8 – Bottom Disposal Areas SWMU 25 – APAC Slop Oil Tank 189	CCR/IW approved August 7, 2003. Inv. Report submitted June 2, 2008. IEPA requested that the Permittee withdraw the 2011 Inv Report in a letter dated May 30, 2019. Additional environmental data collected in 2017-2018 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.
Area 9-Korea Tank Farm	SWMU 30 – Korea Tank Farm Disposal Area PRS 8 – Korea Tank Farm	CCR/IW approved September 9, 2002. Inv. Report submitted May 9, 2008; revised report received by IEPA on December 15, 2011. IEPA requested that the Permittee withdraw the 2011 Inv. Report in a letter dated May 30, 2019. Corrective Action Modification for microbial enhancement injection approved November 20, 2023.	The Permittee to submit revised Inv. Report pending further discussion with IEPA. The Permittee to submit results of microbial enhancement injection in the Corrective Action Progress Reports required by Conditions II.L.1 and II.L.2.
Area 10-East Tank Farm	PRS 6 – East Tank Farm	CCR approved June 4, 2003. Inv. Report submitted March 21, 2008; revised Inv. Report received by IEPA on May 5, 2011. IEPA requested that the Permittee withdraw the 2011 Inv. Report in a letter dated May 30, 2019. Revised Inv. Report submitted December 20, 2019, superseding 2011 Inv. Report.	Revised Inv. Report pending IEPA review. * See Notes below.

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
Area 11-Spray Pond Area (Ponds 1 and 2 and Intake Channel Areas)	SWMU 15 – Spray Ponds Other than NC-SP1 / Spray Pond 1	RFI Phase I report for SWMUs in this area approved June 5, 2001. CCR/IW approved by IEPA January 24, 2012.	The Permittee implementing approved CCR/IW. * See Notes below.
Area 12-South Tank Farm	PRS 7 – South Tank Farm SWMU 12 – Southeast Disposal Area	RFI Phase I report for SWMUs in this area approved June 5, 2001. IEPA notified of the Ownership Transfer of the Permittee to Kinder Morgan Phoenix Holdings LLC (KMPH) on November 2, 2015.	KMPH is responsible for RCRA corrective action activities at and above elevation 408 ft above MSL in Area 12. The Permittee retains ownership and responsibility for RCRA corrective action activities below elevation 408 ft above MSL.
Area 13-Wildlife Enhancement Area	SWMU 12 – Southeast Disposal Area	RFI Phase I report for SWMUs in area approved June 5, 2001. CCR/IW approved by IEPA on October 26,2011. Additional environmental data collected in 2017-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA. * See Notes below.
Area 14-Southeast Corner	None	RFI Phase I report for SWMUs in area approved June 5, 2001. CCR/IW approved July 12, 2012. Environmental data collected in 2017-2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA.
Area 15-Administration Building	None	NFA for soils approved November 19, 2003. Recorded ELUC approved September 29, 2005.	Comply with conditions of NFA and ELUC.
Area 16-Marketing Operations Area	SWMU 16 – Old American Petroleum Institute (API) Separator SWMU 34 – Amoco's Sewer System	CCR/IW approved May 5, 2009. Inv. Report submitted December 23, 2014 and received by IEPA on December 24, 2014. IEPA requested a revised Inv. Report in a letter dated June 14, 2016. Additional environmental data	The Permittee to submit revised Inv. Report pending further discussion with IEPA.

Land Reuse Area	SWMUs/PRSs contained in Areas	Accomplishments as of Date	Current Status
		collected in 2018-2019 submitted March 8, 2024.	
Area 17-LPG Caverns	None	CCR/IW approved May 5, 2009. Inv. Report submitted October 22, 2012. IEPA requested that the Permittee withdraw the 2012 Inv. Report in a letter dated May 30, 2019. Additional environmental data collected in 2019 submitted March 8, 2024.	The Permittee to submit revised Inv. Report pending further discussion with IEPA. * See Notes below.
Area 18-North Cell Spray Pond 1 (NC-SP1) and South Flare Pit (SFP)	SWMU 14 – NC-SP1 SWMU 33 – SFP	On January 7, 2008, Illinois EPA approved closure by removal demonstration for the NC-SP1. IEPA has determined that the facility has satisfied the groundwater requirements of IEPA's May 29, 2007 and September 9, 2008 letters. Based upon 35 IAC 742.925, the groundwater ingestion route for perched groundwater can be excluded at the SFP area. A closure by removal demonstration for the soils at the SFP was approved by IEPA on January 7, 2008 subject to the establishment of an ELUC meeting the requirements of 35 IAC Part 742 which places certain restriction on future activities at the unit. Recorded ELUC approved July 18, 2016.	NFA at NC-SP1. Regarding the SFP, the Permittee must continue to address groundwater of the uppermost aquifer in accordance with the RCRA Permit. The Permittee must also comply with conditions of the ELUC.
Area 19 Spray Pond 3	SWMU 15 – Spray Ponds Other than NC-SP1 / Spray Pond 1	IEPA approved Inv. Report on December 6, 2007; IEPA revised this letter on April 13, 2009. This letter determined that no further action required in area provided certain requirements are met and certain restrictions are placed on future activities in the area.	The Permittee must carry out requirements set forth in IEPA's April 13, 2009 letter. * See Notes below.

*Notes: In accordance with the KMPH RCRA Permit issued March 4, 2024, small portions of the following Land Reuse Areas were included in the transfer of ownership to KMPH: 4, 5, 10, 11, 13, 17 and 19. The Permittee retains ownership and responsibility for RCRA corrective action activities at and below elevation 408 ft above MSL.

2. As provided by 35 IAC 742.1000(a), an institutional control satisfactory to the Illinois EPA must be established for property or media that have been remediated to any acceptable standard identified in 35 IAC Part 742 other than those for a residential use. As of September 2024, the Permittee has completed the required environmental investigation and remedial activities associated with the corrective action for soil and perched groundwater at Land Reuse Areas 1, 2, 4, and 15 identified in Condition II.C.3. As discussed in Condition II.C.3, No Further Action (NFA) determinations for soil and perched groundwater at Land Reuse Areas 1, 2, 4, and 15 have been made by Illinois EPA.

3. As of September 2024, the Permittee has obtained NFA for the specific media at the following parcels and SWMUs:

Land Reuse Area/ SWMUs Present in Area	**NFA and Media**
Area 1	NFA letter for soil and groundwater ingestion route for perched-groundwater only was issued on December 5, 2001 (Log No. B-147-CA-11). ELUC was established for Area 1 (see Conditions II.C.4 and 6 below).
Area 2	NFA letter for soil only was issued on August 13, 2002 (Log No. B-147-CA-14). ELUC was established for Area 2 (see Conditions II.C.4 and 6 below). No perched groundwater was encountered during the investigation.
Area 4	NFA letter for soil only was issued on August 22, 2003 (Log No. B-147-CA-30). Exclusion of groundwater ingestion exposure route for perched-groundwater in this parcel was approved on August 22, 2003 (B-147-CA-30). ELUC was established for Area 4 (Conditions II.C.4 and 6 below).
Area 15	NFA letter for soil and groundwater ingestion route for perched groundwater only was issued on November 19, 2003 (Log No. B-147-CA-31,36 & 37). ELUC was established for Area 15 (see Conditions II.C.4 and 6 below).

4. As of September 2024, 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 Main Plant

Area Name	**Size (Acres)**	**Parcel ID for Site**	**Date of NFA Letter**	**County Recorder's No. /Date Recorded**	**PIN/TAX ID**
Area 1	6.3	Northwest Parcel	December 5, 2001	2003R05241/ January 23, 2003	19-1-08-28-12-201-001.001
Area 2	43	Police Station	August 13,	2003R08605/	19-2-08-27-14-301-

		Donation Parcel & BP retained Parcel	2002	February 5, 2003	003;19-2-08-27-301-004; 19-2-08-27-10-101-002; 19-2-08-27-10-101-003.
Area 4	29.44	Former Rail Yard	August 22, 2003	2005R38583/ July 13, 2005	19-1-08-28-00-000-010; 19-1-08-33-00-000-013;19-1-08-34-00-000-001; 19-1-08-34-00-000-001.001
Area 15	11.73	Administration Building Parcel	November 19, 2003	2004R59615/ October 1, 2004	19-1-08-28-00-000-010.001

5. Three parcels have been removed from the original definition of the facility that are subject to corrective action under this permit as described below:

   a. BP donated a 9.56-acre parcel in Area 2 to the City of Wood River. This parcel received a NFA for soils only and extends from the ground surface to a horizontal plane approximately 23 ft-bgs at an elevation of 418 ft above MSL. The Parcel Index No. assigned to this parcel of land is 19-2-08-27-14-301-003. BP retained ownership of that portion of the 9.56- acre parcel which extends below a horizontal plane at an elevation of 418 ft above MSL. The Parcel Index No. assigned to this latter parcel of land is 19-2-08-27-301-004.

      (1) As a result of this action, BP established two new ELUCs to supersede the one filed for Area 2 on February 5, 2003, one for the parcel being donated to the City of Wood River and one for that portion of Area 2 being retained by BP.

      (2) The Illinois EPA approved a draft ELUC for the 9.56-acre donation parcel on November 3, 2011 (Log No. B-147R-CA-12) and this document was filed with the Madison County Recorder's office on December 7, 2011 as Document No. 2011R45888. This ELUC contained the same restrictions on this parcel as was in the original ELUC for Area 2 (Document No. 2003R0865 filed with the Madison County Recorder on February 5, 2003.

      (3) The Illinois EPA approved a draft ELUC for the remainder of Area 2 being retained by BP on November 3, 2011 (Log No. B-147R-CA-12) and this document was filed with the Madison County Recorder's office on December 7, 2011 as Document No. 2011R45887. This ELUC contained the same restrictions on this parcel as was in the original ELUC for Area 2 (Document No. 2003R08605 filed with the Madison County Recorder on February 5, 2003) and superseded the original ELUC for Area 2.

(4) The Illinois EPA issued a modified permit for this facility on December 21, 2012 which allowed the 9.56-acre donation parcel (Parcel Index No. 19-2-08-27-14-301-003) to be removed from the defined facility covered by this permit. The basis for this modification was that: (1) a NFA was issued for soils in Area 2 by Illinois EPA on August 3, 2002 (which would include the 9.56-acre donation parcel), subject to certain restrictions being in place on future activities in Area 2; and (2) an ELUC specific to this parcel was in place which restricted future activities in the donation parcel as required by the NFA Letter for Area 2.

b. BP donated a 7.5-acre parcel within Area 2 to the City of Wood River for the construction of a new police station. This parcel received a NFA for soils only and extends from the ground surface to a horizontal plane approximately 15 ft-bgs at an elevation of 428 ft above MSL. The Parcel Index No. assigned to this parcel of land is 19-2-08-27-10-101-002. BP is retaining ownership of that portion of the 7.5-acre parcel which extends below a horizontal plane at an elevation of 428 ft above MSL. The Parcel Index No. assigned to this latter parcel of land is 19-2-08-27-10-101-003.

(1) As a result of this action, BP established two new ELUCs to supersede the one filed for Area 2 on December 7, 2011, one for the parcel being donated to the City and one for that portion of Area 2 being retained by BP.

(2) The Illinois EPA approved a draft ELUC for the 7.5-acre donation parcel on May 4, 2017 (Log No. B-147R-CA-78) and this document was filed with the Madison County Recorder's office on June 5, 2017 as Document No. 2017R18528. This ELUC contained the same restrictions on this parcel as was in the revised ELUC for Area 2 as identified in Condition II.C.5.a (3) above.

(3) The Illinois EPA approved a draft ELUC for the remainder of Area 2 being retained by BP on May 4, 2017 (Log No. B-147R-CA-77) and this document was filed with the Madison County Recorder's office on June 5, 2017 as Document No. 2017R18529. This ELUC contained the same restrictions on this parcel as was in the revised ELUC for Area 2 as identified in Condition II.C.5.a (3) above and also superseded this latter ELUC.

(4) This modified permit (Log No. B-147R-M-16 and any future modifications) allows the subject 7.5-acre donation parcel (Parcel Index No. 19-2-08-27-104-101-002) to be removed from the defined facility covered by this RCRA permit. The basis for this modification is that: (1) NFA Letters were issued for soils in this parcel by Illinois EPA on August 13, 2002 and August 22, 2016, subject to certain restrictions being in place on future activities in the parcel; and (2) an ELUC specific to this parcel is in place

which restricted future activities in the donation parcel as required by these NFA letters.

c. An approximate 118.25-acre three-dimensional parcel at elevation of 408 ft above MSL is not part of the facility. This parcel has already been issued a RCRA Corrective Action Permit (Log No. B-214) to KM Phoenix Holdings LLC (KMPH). The area below elevation of 408 ft above MSL remains part of the facility and is subject to BP Main Plant's RCRA permit.

(1) KMPH is responsible for RCRA Corrective action activities at and above elevation of 408 ft above MSL at the former BP Wood River Terminal (South Tank Farm), Land Reuse Area 12, and those portions of the following areas that were included in the purchase: 4, 5, 10, 11, 13, 17 and 19.

(2) The Permittee retains ownership and responsibility for RCRA Corrective Action activities below elevation of 408 ft-MSL.

(3) The Permittee and KMPH recognize that the post-closure conditions, operations or other activities at the property acquired by KMPH or its successor could impact property owned and/or operated by BP or its successors. The parties also acknowledge that post-closure conditions, operations, and activities at the property retained by BP, or its successors could impact property owned and/or operated by KMPH or its successors.

(4) In the event that post-closure activities at the property acquired by KMPH impact (if determined to be the result of KMPH's activities) the underlying and/or adjacent property owned by the Permittee, KMPH will be responsible for the environmental impacts and corrective action activities that result.

(5) In the event that post-closure activities at the property retained by the Permittee impact the overlying and/or adjacent property owned by KMPH, the Permittee will be responsible (if determined to be the result of the Permittee's activities) for the environmental impacts and corrective action activities that result.

6. In general, the ELUCs identified place the following restriction on Land Reuse Areas 1, 2 (the Permittee retained parcel only), 4 and 15:

a. No groundwater beneath the areas, including perched groundwater, may be used as a potable supply of water.

b. Contaminated groundwater and/or soil that is removed, excavated, or disturbed from the areas must be handled in accordance with all applicable laws and regulations.

c. The areas may not be used for residential purposes and may only be used solely and exclusively as "industrial/commercial property" as that term is defined in 35 IAC Part 742.

d. Excavation and subsurface construction work in the Land Reuse Areas must be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soil and impacted perched groundwater in the area. All construction workers shall be equipped with appropriate personal protective equipment as required and specified in the site health and safety plan.

e. The soil within each area is to remain in place, except where necessary to remove it for construction purposes.

f. A detailed process must be followed in the management on any soil excavated during construction/demolition/excavation efforts in the areas. This process allows the excavated soil to be placed elsewhere at the BP facility provided certain requirements are met.

g. Requires maintenance of engineered barriers over certain portions of each area as follows:

Land Reuse Areas	Number of Subareas Requiring an Engineered Barrier
Area 1	2
Area 2	2
Area 4	3
Area 15	4

h. Prior to commencement of any future excavation and/or construction in or near the sub-areas covered by an engineered barrier, a safety plan for that sub-area is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations, and other USEPA guidance as available. At a minimum, the plan should address possible worker exposure to contaminated soil which may be present in the sub-area. Any contaminated soil removed, or excavated from, or disturbed in the sub-areas where any engineered barrier is present must be handled in accordance with all applicable laws and regulations.

i. Failure to comply with the limitations or requirements of an ELUC may result in voidance of an Illinois EPA's NFA determination in accordance with the program under which the determination was made. The failure to

comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Act.

j. The limitations or requirements of an ELUC apply in perpetuity or until:

(1) The Illinois EPA issues a new NFA determination approving modification or removal of the limitation/requirement; and

(2) A release or modification of the land use limitation is filed on the chain of title for the property that is the subject of the ELUC.

k. At no time shall this site be used in a manner inconsistent with the land use limitations established in an approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved; and (2) a new NFA determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 IAC Part 742.

(1) Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a: (1) request to amend the certification of closure; or (2) a permit modification request. Sufficient information must be provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC Part 742.

(2) Any final approval by Illinois EPA of a request to release or modify an ELUC must be filed with the chain of title for the subject facility.

D. SUMMARY OF CORRECTIVE ACTION EFFORTS STILL TO BE COMPLETED

1. The Permittee must meet the applicable indoor inhalation remediation objectives both on-site and the impacted off-site properties in accordance with 35 IAC Part 742.

a. The Permittee must continue to address the primary objectives set forth in these documents entitled, "Revised Indoor Inhalation Exposure Route Evaluation and Work Plan" dated August 28, 2019 (Log No. B-147R-CA-96) and received by Illinois EPA on August 29, 2019; "Action Plan For Potential Man-Made Pathway Evaluation" dated November 25, 2019 (Log No. B-147R-CA-98) and received by Illinois EPA on November 26, 2019; "Soil Gas Pathway Evaluation Report" dated June 7, 2021 (Log No. B-147R-CA-111) and received by Illinois EPA on June 8, 2021; "Additional Info to the Revised Indoor Inhalation Exposure Route Eval And Work Plan Dated August 29, 2019 To Provide An Update on Changed Site Conditions" dated April 12,2024 (Log No. B-147R-CA-126) and received by Illinois EPA on April 16, 2024. Note, these documents are currently under review by the Illinois EPA.

b. Additional evaluation for the indoor inhalation exposure route requirements must be met for all SWMUs and PRSs listed in Condition II.B.

2. The Permittee is required to continue addressing the key objectives in these documents entitled, "Main Plant Area 10 Comprehensive Land Reuse Investigation Report" dated December 20, 2019 (Log No. B-147R-CA-99) and received by Illinois EPA on December 30, 2019; "Main Plant Land Reuse Investigation Data Submittal of General Background, Sampling Methods, Analytical Procedures, and Analytical Results for Areas" dated March 8, 2024 (Log No. B-147R-CA-125) and received by March 12, 2024. Note, these documents are currently under review by the Illinois EPA.

3. Additional corrective action activities must be carried out and additional information must be submitted to Illinois EPA, as necessary, to ensure all SWMUs and PRSs are properly remediated.

4. The requirements in Condition II.E and Section III of this permit must be met to address remediation of groundwater and hydrocarbon and refinery products.

E. REMEDIATION OF HYDROCARBON AND REFINERY PRODUCTS

Implementation of the bioremediation systems for impacted groundwater, treatment and reduction of free phase and residual product, and interim removal actions for recoverable product must be completed as set forth in Condition II.E of the permit.

1. Prior to the issuance of the permit issued May 29, 2018 (Log No. B-147R-M-17 and M-18), the Permittee had operated a Hydrocarbon Recovery System (HRS) to remove refinery product from above the water table. The HRS at the Former Wood River Main Plant was commissioned as an interim remedial measure (IRM) in 1993 to hydraulically recover subsurface mobile light non-aqueous phase liquids (LNAPL) from above the water table. The original system included twenty-one (21) HRS extraction wells. Following seventeen (17) years of operation, sixteen (16) HRS wells were deactivated in 2010 based on declining LNAPL recovery. After seven (7) additional years of operation, the remaining five (5) HRS extraction wells were deactivated in 2017 due to the system reaching its limit of performance effectiveness.

2. During 2016 and 2017, in an effort to provide an interim measure and to conduct an evaluation of bioremediation technologies, the Permittee proposed to replace the above-mentioned original HRS with alternative remedial system(s). The Permittee installed and started to operate the following three different hydrocarbon bioremediation systems in the northern and central part of the BP Main Plant on a pilot scale:

a. Biovent System (in the mid-section of Area 3); the Biovent System is designed to inject air into the vadose zone to provide oxygen and enhance in-situ aerobic bioremediation of hydrocarbons and refinery product at and above the water table as detailed in Attachment E;

b. Biosparge System (mainly in the eastern portion of Land Reuse Area 5 extending to portions of Land Reuse Areas 6 and 10); the Biosparge System is designed to inject air below the water table to provide oxygen for enhancing aerobic bioremediation of hydrocarbons and refinery product in groundwater and the smear zone, as well as allow for biodegradation of volatilized hydrocarbons and residual product as it contributes to dissolved phase impacts in the vadose zone as detailed in Attachment E;

c. Air Sparge/Soil Vapor Extraction (AS/SVE) (in the northeastern corner of Area 8); Air Sparging is designed to inject air below the water table to volatilize hydrocarbons from groundwater and the smear zone and provide oxygen for enhancing aerobic bioremediation of hydrocarbons and refinery product in the saturated zone. Soil Vapor Extraction is designed to recover volatilized hydrocarbons as necessary for ex-situ treatment, and to promote the flow of atmospheric air into the vadose zone to enhance aerobic bioremediation above the water table. This system is detailed in Attachment E;

The locations of the three pilot remediation systems within the facility are shown in Figure E-1 of Attachment E. Since installation of the pilot-scale remediation systems, they have undergone upgrades and optimizations in response to performance monitoring. BP completed significant modifications to the pilot-scale bioremediation systems and technologies in 2019-2021 to maintain and enhance hydrocarbon remediation through treatment of expanded site areas at the Main Plant. In addition, passive bioventing was implemented in two of the initial pilot areas in 2021 and 2022, as previous remedial efforts progressed remediation in those areas to the point where passive bioventing is able to deliver sufficient oxygen to maintain an aerobic vadose zone for enhanced bioremediation. A mobile solar-powered biovent system was also put into service to address refinery product in 2024. Excluding the mobile solar-powered biovent system, the configuration and operation of the pilot-scale bioremediation systems is detailed in Attachment E, including a timeline of operations, enhancements, and modifications for each system.

3. The facility shut down the above-mentioned HRS in Condition II.E.1 above under the Temporary Authorization issued by Illinois EPA (effective date of December 5, 2017) provided the facility collected data as required, and submitted: (1) a Pilot-Scale Bioremediation System Performance Report for the pilot-scale tests identified in Condition II.E.2 above; and (2) a workplan for developing a site-wide hydrocarbon recovery/remediation system to address the hydrocarbon contamination in the groundwater and the smear zone above the facility's remedial objectives as defined in the workplan and applicable regulations, as approved by Illinois EPA. The workplan was required to provide a conceptual

plan to implement the hydrocarbon recovery/remediation systems for the entire facility in the groundwater and smear zone as well as an outline of the next steps in full-scale implementation of the hydrocarbon remedial systems. A report entitled, "Remedial Action Selection Report and Main Plant Remedy Roadmap" was received January 31, 2022, to meet this requirement. The document is currently under review by the Illinois EPA.

4. The Permittee shall operate, expand and use the pilot-scale Bioremediation Systems and technologies in order to remediate hydrocarbons and refinery product from the smear zone and vadose zone as it contributes to dissolved phase impacts. The number and location of Bioremediation Systems and Bioremediation wells, as detailed in Attachment E, can be modified to maintain or enhance remediation of hydrocarbons and refinery product. As the Permittee has continued to successfully operate these systems, activities associated with these systems shall be summarized in the Corrective Action Progress Reports required by Condition II.L.1.

5. As an interim remedial measure to address recoverable refinery product prior to the implementation of the Main Plant Remediation Plan, the Permittee shall perform interim removal action(s);

   a. Interim Removal Actions Shall occur when the 30-Day Average Mississippi River Stage as Calculated based on the Alton Dam Tailwater River stage is below 410 ft above MSL.

   b. Recoverable refinery product requiring interim removal shall be considered the product from those wells where most recent recoverability testing results indicate a product transmissivity of 2.0 ft^2/day or greater:

      (1) The refinery product recoverability shall be determined through product baildown testing or product skimming testing in accordance with applicable ASTM standards, and the data utilized to calculate product transmissivity using the Bouwer and Rice method (calculation method described in ASTM E2856-13 or most current method);

      (2) Re-evaluation of wells exhibiting most recent transmissivity testing results above 2.0 ft^2/day and thicknesses equal to or greater than 0.5 feet will be conducted a minimum of once per year during seasonal low water table conditions;

      (3) Refinery product exhibiting transmissivity values below 2.0 ft^2/day will be addressed as part of the final remedy;

   c. Interim removal actions must include one of the following (for wells above 2.0 ft^2/day):

(1) Mobile LNAPL recovery system;

(2) Manual bailing and pumping; or

(3) Expansion of a pilot-scale bioremediation technology (i.e., AS/SVE, bioventing, or biosparging) into the area.

d. Interim remedial performance data will be used to re-evaluate LNAPL transmissivity over time.

F. SUMMARY OF RCRA CLOSURE, RCRA POST-CLOSURE AND RCRA CORRECTIVE ACTION COMPLETED AT THE NORTH CELL SPRAY POND 1 AND THE SOUTH FLARE PIT

1. The North Cell Spray Pond 1 (NC-SP1) and South Flare Pit (SFP) were regulated HWMUs in the permit issued to this facility on September 30, 1993. Since that time, BP has been providing post-closure care of these two HWMUs in accordance with the requirements of that permit. BP began pursuing a closure-by-removal demonstration for the NC-SP1 in 2002 and the SFP in 2005.

   a. With regard to the NC-SP1, on January 7, 2008, Illinois EPA approved a closure-by-removal demonstration. Based upon this approval, no further action is necessary at NC-SP1 in regards to RCRA closure, RCRA post-closure or RCRA corrective action.

   b. With regard to the SFP:

      (1) The Illinois EPA has determined that the facility has satisfied the groundwater requirements of Illinois EPA's May 29, 2007 (Log Nos. B-147-M-7 and M-13) and September 9, 2008 (Log No. PS08-030) letters. Based upon 35 IAC 742.925, the groundwater ingestion route for perched groundwater can be excluded at the SFP area. The facility must continue to address groundwater of the uppermost aquifer in accordance with Section III of this permit.

      (2) A closure-by-removal demonstration for the soils at the SFP, was approved by the Illinois EPA on January 7, 2008 subject to the establishment of an ELUC meeting the requirements of 35 IAC Part 742 which places certain restriction on future activities at the HWMU. *A* certified ELUC for the SFP was submitted to Illinois EPA on December 31, 2015 and approved by Illinois EPA in a letter dated July 18, 2016 (Log No. B-147R-CA-58). Therefore, no further action is necessary for soil at the SFP.

2. The ELUC was established for the SFP, which placed the following restrictions, at a minimum, on the future activities of the subject property:

a. All groundwater, including the perched groundwater, under the property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the property shall be handled in accordance with all applicable laws and regulations;

b. The property shall not be used for residential use. The property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IAC Part 742;

c. Any excavation and subsurface construction work on the property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils and impacted perched groundwater on the property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

d. The soil within the property shall remain in place, except where necessary to remove it for construction activities;

e. Soil excavated during construction/demolition/excavation activities within the Property shall be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to field screening tests for volatile organic compounds (VOCs). The soil evaluation and management procedures shall be as follows:

(1) Field Screening. Soil shall be considered "potentially contaminated" if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings >100 units) of VOCs in soil;

(2) Laboratory Analysis. Soils exhibiting potential contamination based on visual discoloring or a field screening test for VOCs will must be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

(3) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if: (1) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site-specific industrial/commercial remediation objectives (ROs) developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in II.F.2.e.1 above.

(4) Management of Non-Contaminated Soils. Soils that are considered not contaminated, as determined by field screening or laboratory

results, may be reused as clean fill in other areas of the former BP Main Plant Facility. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(5) Management of Contaminated Soils. If soils are found to be contaminated, they shall be sent off-site for disposal in accordance with 35 IAC Subtitle G: Waste Disposal.

(6) Documentation. All of these activities must be documented in the facility's operating records.

G. LAND REUSE PROCESS FOR AREAS 1 THROUGH 19

The purpose of the Land Reuse process is to allow for a potential redevelopment for each Land Reuse Area when proposed by the Permittee and approved by the Illinois EPA at the facility.

1. A NFA determination may be made for a Land Reuse Area and approved by the Illinois EPA in order to remove the Land Reuse Area from the definition of the facility subject to this permit for redevelopment by following the process described below:

   a. Assess and document the current conditions of the Land Reuse Area in the Current Conditions Report (CCR);

   b. Develop a Land Reuse Work Plan to investigate and address any data gaps necessary for a proper characterization of the Land Reuse Area;

   c. Conduct an investigation to collect soil and perched groundwater data for the Land Reuse Area;

   d. Analyze the collected data and perform a comprehensive risk assessment, as necessary;

   e. Identify the necessary remedial actions and institutional controls and incorporate them into the Land Reuse Investigation Report;

   f. Obtain a conditional NFA determination from the Illinois EPA for soil, perched groundwater and groundwater upon the Illinois EPA review and approval of the Land Reuse Investigation Report;

   g. Submit a draft ELUC for the Illinois EPA's review and approval;

   h. Upon the Illinois EPA's approval of a draft ELUC, record the ELUC on the property deed for the Land Reuse Area and submit a certified copy of the recorded ELUC to the Illinois EPA's review and approval;

i. Upon the Illinois EPA's approval of a certified ELUC, proceed with the development of the Land Reuse Area, which fully complies with the conditions of the Illinois EPA's approval letters regarding such activities; and

j. As necessary and applicable, submit final reports and required documentation of construction and any other required information to the Illinois EPA that satisfies conditions of the Illinois EPA approval letters, which may include an addendum to the ELUC and/or NFA letter.

2. The eventual removal of a Land Reuse Area from the terms and conditions of the facility's permit (so that its ownership can be transferred to another entity) will require that:

a. The Permittee must eventually receive a NFA determination for all Land Reuse Areas from the Illinois EPA for the soils, groundwater, and, as appropriate, perched groundwater and/or surface water within the Area by following the Land Reuse process and at the completion of the corrective action process;

b. The Permittee either receives a NFA determination for the groundwater in the vicinity of the Land Reuse Area from the Illinois EPA or demonstrates through the Land Reuse process that the contamination remaining at the site will not pose threat to human health and the environment under the appropriate intended use for the area during the Land Reuse Process for the purpose of redevelopment as described in Condition II.G.1 above.

c. The boundaries of any parcels established in accordance with the process approved by this permit must be defined by a professional land surveyor licensed to practice in the State of Illinois and meet the requirements of all statutes and regulations applicable to such efforts. The boundaries of any new parcel must first be approved by the Illinois EPA before a new PIN is obtained for the parcel. It must be noted that Illinois EPA has already approved the boundaries of nineteen (19) horizontal parcels within the facility.

d. Each parcel established in accordance with the Land Reuse process approved by this permit must obtain an individual and unique Real Estate Tax Index/PIN from Madison County.

e. At a minimum, as part of obtaining a NFA determination, an ELUC must be established which allows full access of the property for the Permittee in the future for any refinery product and/or groundwater monitoring or remediation efforts to complete any remaining corrective actions required under this permit within the timeline approved by the Illinois EPA.

3. To modify the definition of the facility covered by the permit, the Permittee will be required to submit a request to modify the permit in accordance with 35 IAC

703, Subpart G. Such a request must be a Class 3 modification request, unless demonstrated otherwise, in accordance with the procedures set forth in 35 IAC 703.283.

4. The Illinois EPA must be able to enforce any efforts necessary to complete corrective action and achieve approved remediation objectives at the subject facility. This may be achieved through institutional controls, ordinances and the facility's permit.

5. As property (or parcels) with new PINs are established, it may be necessary to re-file ELUCs which have already been filed with the Madison County Recorder.

   a. This effort is necessary if the new parcel was created from a parcel for which an ELUC was already established.

   b. In addition to re-filing the required ELUC on the new parcel, it will be necessary to file documentation on the original parcel indicating that the original ELUC no longer applies to that parcel (it may also be necessary to file a revised ELUC on the original parcel) identifying any restrictions that still apply to that parcel of land.

H. 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 D. 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 Part 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); and

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 CMP described in Attachment D consists of five (5) 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 the Illinois EPA 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. 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.

I. REQUIREMENTS FOR ADDRESSING NEWLY IDENTIFIED SWMU(s)

1. The Permittee shall notify the Illinois EPA in writing of any newly identified SWMU and/or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than thirty (30)

days after discovery. The notification shall provide the following information, as available:

a. The location of the newly identified SWMU and/or AOC in relation to other SWMUs on a scaled map or drawing;

b. The type 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 identified SWMU/AOC to the environment.

3. Within ninety (90) 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) days of receiving such written notification or 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. Additional investigation plans and reports must be submitted to and approved by the Illinois EPA, as necessary, to ensure the nature and extent of contamination at the SWMU/AOC is adequately characterized. Once the contamination is characterized, the Permittee shall develop remedial objectives for the SMWU/AOC in accordance with 35 IAC Part 742; such objectives are subject to the Illinois EPA review and approval.

7. The Permittee must implement a CMP, as necessary, to properly address any contamination encountered during the assessment. Guidance regarding the implementation of this program will be provided at the time the Illinois EPA notifies the Permittee of the need for such a program.

8. All efforts carried out at newly identified SWMU/AOCs must meet the requirements of 35 IAC 724.201.

J. FUTURE RELEASES FROM SWMUs

There exists a potential that a release may occur in the future from SWMUs identified in the RCRA Facility Assessment (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 II.I.1. Additional investigation and, as necessary, corrective measures efforts at this SWMU must be carried out in accordance with the procedure set forth in condition II.H. The results of all corrective action efforts required by this condition must meet the requirements of 35 IAC 724.201.

K. INTERIM MEASURES/STABILIZATION

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

2. Prior to implementing any interim measures, the Permittee must submit detailed information regarding the proposed interim measure to the Illinois EPA 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 the Illinois EPA review and approval of the RFI reports and the CMP, 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.

L. REPORTING REQUIREMENTS

1. A Corrective Action Progress Report must be submitted summarizing the corrective action efforts completed 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:

Reporting Period	**Report to be Submitted by the following**
January-March	May 1
April-June	August 1
July-September	November 1
October-December	March 1*

*Included in Annual Report required in Condition II.L.2 below.

   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;

(3) A summary of the activities anticipated to be carried out during the next quarter.

2. A 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). 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.

3. 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 an independent licensed 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.

M. COST ESTIMATES/FINANCIAL ASSURANCE FOR CORRECTIVE ACTION

1. The current cost-estimate for completing corrective action and groundwater remediation at the BP Main Plant by the facility is $87,922,423 in 2020 dollars. 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 IV.C.2. The cost-estimate for completing corrective action required in this permit must include 10% contingency.

2. The Permittee shall prepare a cost estimate for the completion of any corrective action required under this permit, in order to provide financial assurance for completion of corrective action, in order to provide financial assurance for the approved amount of that cost estimate within ninety (90) days of the date of the effective date of this permit, as required under 35 IAC 724.201(b). Such a cost estimate must be based upon the cost of contamination investigations and assessments for the SWMU(s), and design, construction, operation, inspection, monitoring, and maintenance of the corrective measure(s) to meet the requirements of 35 IAC 724.201 and this permit. These estimates must be based upon third party costs. The revised cost estimate for corrective action must be submitted to the Illinois EPA as necessary or requested by Illinois EPA.

3. 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 II.M.1 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 documentation shall be submitted to the Illinois EPA within sixty (60) days after the submittal of the initial or revised cost estimates required under Condition II.M.1. 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 at its discretion.

4. It must be noted that cost estimates and financial assurance must be provided for the operation of the groundwater remediation system required by Section III of this permit as such a system is necessary to meet the requirements of 35 IAC 724.201.

5. All cost estimates prepared under the requirements of Conditions II.M.1 through II.M.4 must be submitted as a Class 1* permit modification request in accordance with 35 IAC 703.281.

6. Financial assurance for corrective action must be updated, as necessary, to reflect the current status of the RCRA corrective action program at this facility. In addition, this financial assurance must be adjusted annually for inflation.

SECTION III: GROUNDWATER CORRECTIVE ACTION PROGRAM

A. SUMMARY

Hazardous constituents associated with historical activities at the BP Main Plant have been detected in the groundwater across the site which exceed the groundwater quality standards established in 35 IAC Part 620. Therefore, a corrective action program for groundwater meeting the requirements of 35 IAC 724.201 must be implemented at the facility. In addition to the corrective action necessary to treat or remove hazardous constituents released to groundwater, this permit also requires the Permittee to implement a corrective action program for the groundwater present in the uppermost aquifer beneath the facility, and off-site as necessary.

The groundwater corrective action program required by this permit includes:

1. Control of the horizontal and vertical flow of the vertical column of groundwater in the uppermost aquifer such that groundwater flow is towards the interior of the BP Main Plant. This control of groundwater flow will be accomplished by withdrawing sufficient quantities of groundwater from the uppermost aquifer. Such flow control is necessary as a corrective measure to prevent further contaminant migration of on-site releases of product or waste, beyond the boundaries of the BP Main Plant and is the basis for the establishment of a Groundwater Management Zone (GMZ), except as provided in Condition III.A.5 below.

2. Verification that the flow of groundwater is adequately controlled as required by Condition III.A.1 above.

3. Monitoring the quality and movement of the groundwater in the uppermost aquifer beneath the BP Main Plant to determine the effectiveness of the groundwater corrective action program, as well as, verify compliance with the GMZ.

4. Remediating and/or removing refinery hydrocarbon sources to groundwater impacts, including hydrocarbon sources to groundwater at the water table and within the smear zone of the uppermost aquifer. The smear zone will be considered the minimum and maximum range of water table fluctuations observed at the BP Main Plant.

5. In the event that the Permittee is unable to demonstrate an inward gradient in the southeast corner of the facility, or in the vicinity of Land Reuse Area 9, compliance will be satisfied by demonstration that the groundwater quality at designated Sentry Observation Monitoring Wells in the southeast corner and/or Demonstration Wells in the vicinity of Land Reuse Area 9 meet applicable groundwater quality standards. The Permittee shall comply with the requirements of III.E.11 in the event that groundwater quality in these portions of the facility do not meet groundwater quality standards. Contingent actions could include

increased monitoring to demonstrate that contaminants do not migrate beyond the GMZ boundary and/or sentry well installation and monitoring, increased groundwater extraction, or other alternate measures.

6. Implementation of the bioremediation systems for impacted groundwater and refinery hydrocarbon zones impacting groundwater, and interim removal actions for recoverable product must be completed as set forth in Condition II.E of the permit.

B. IMPLEMENTATION

1. The Permittee shall implement the Groundwater 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 Main Plant. The "uppermost aquifer" refers to the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically connected with this aquifer in the vicinity of the facility. The uppermost aquifer at this facility is a sand and gravel aquifer located approximately 30 feet below the ground surface (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 III.D.1 or to established background values or other applicable standards as appropriate.

4. The Permittee must continue corrective action measures to the extent necessary to ensure that the groundwater protection standard is not exceeded to meet the requirements of 35 IAC 724.201.

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. Northing and Easting coordinates for wells are provided in Attachment F.

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)	Well Designation[1]
GMZ Boundary Wells					
G005[(8)]	B-5D	44.00	386.10	406.10-386.10	UMA H
G006	B-6	44.00	384.01	404.01-384.01	UMA H
G008*	B-8D	50.00	378.21	408.21-378.21	UMA H
G021	C-11	49.50	382.27	417.27-382.27	UMA C
G023	C-13	49.50	381.74	416.74-381.74	UMA C
G04R	B-4R	59.50	382.54	402.54-382.54	UMA H
G045	G-5	40.87	402.67	412.67-402.67	UMA H
G055	G-15	52.19	393.02	413.02-393.02	UMA H
G059	G-19	45.00	384.33	404.33-384.33	UMA C
G062	G-22	45.00	388.01	408.01-388.01	UMA H
R063	G-23R	46.24	385.58	405.82-385.82	UMA H
G067#	G-27	49.00	386.28	406.28-386.28	UMA H
G068@	G-28	50.00	392.24	414.24-392.24	UMA H
G073	G-33	44.00	387.15	407.15-387.15	UMA H
G079	G-39	40.00	383.12	404.12-384.12	UMA C
G084	G32R	45.00	389.13	409.13-389.33	UMA H
G085	G-26R	54.15	388.59	408.94-388.94	UMA H
G111	SWMU12-MW02	38.17	393.89	404.06-394.06	UMA H
G112	SWMU12-GH1	43.22	388.87	408.87-388.87	UMA C
G32R	H32R	44.50	384.64	405.34-385.34	UMA C
G35A	G35A	32.20	397.95	408.15-398.15	UMA H
G35B	G35B	40.20	390.26	400.46-390.46	UMA H
G37	H-37	46.00	386.47	401.47-386.47	UMA C
G5B	G-5B	75.85	367.73	377.73-367.73	UMA H
G500[(7)]	G500	29.39	401.06	411.06-401.06	UMA C
G69R	G-29R	59.96	385.87	405.87-385.87	UMA H
G74L	G-34	60.00	386.69	406.69-386.69	UMA H
G75L	G-35	60.00	386.51	406.51-386.51	UMA H
G76L	G-36	60.00	385.81	405.81-385.81	UMA H
G91	M-1D	39.70	388.13	398.13-388.13	UMA H
G92	M-2D	40.40	386.08	401.08-386.08	UMA H
G93L	M-3D	40.80	386.18	401.18-386.18	UMA H
H31B	H-31B	75.02	357.32	367.32-357.32	UMA H
RG36	H36R	60.43	384.94	404.27-389.57	UMA H
R302&	R302	33.20	399.84	410.04-400.04	Cahokia Clay
G303	RP-3D	39.85	393.24	398.74-393.74	UMA C
G503[(8)]	G08A	32.00	396.20	406.20-396.20	UMA H
G504[(8)]	R067	32.12	404.38	409.68-404.68	UMA H
G505[(8)]	R068	37.70	403.90	414.20-404.20	UMA H

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)	Well Designation[1]
Observation Monitoring Wells					
G002	G-01R	37.32	391.34	411.16-391.56	UMA C
G009	B-9	49.00	382.66	407.66-382.66	UMA H
G020	C-10	49.50	382.50	417.50-382.50	UMA C
R042[3A]	R042	37.20	393.48	403.48-394.02	UMA H
G048	G-8	48.00	381.68	401.68-381.68	UMA H
G057[4]	G-17	35.02	391.90	411.90-391.90	UMA C
G058[4]	G18	36.00	391.27	411.27-391.27	UMA C
R083[3A]	R083	38.79	393.44	403.98-394.52	UMA H
G10L	H-20	58.43	371.82	396.82-376.82	UMA H
G14L	H-24	57.00	372.85	397.85-377.85	UMA H
G16L	H-26A	55.00	378.24	408.24-378.24	UMA H
G22R	C-12R	54.70	378.10	398.10-378.10	UMA C
G30R	H-30R	43.04	387.98	408.63-388.63	UMA H
G31D	C-21C	70.00	357.98	362.98-357.98	UMA H
G39[+]	H-39	42.10	385.74	400.74-385.74	UMA H
G84L	H-4	59.00	374.19	399.19-379.19	UMA H
G87L	H-7	51.50	377.68	402.68-382.68	UMA C
G92L	H-12	69.00	373.82	410.82-378.82	UMA H
G98L	H-18	52.50	378.22	403.22-383.22	UMA C
G301	RP-1	49.00	378.38	388.38-378.38	UMA H
G305	RP-5	49.00	381.06	391.06-381.06	UMA C
G307	RP-7D	49.00	383.13	393.13-383.13	UMA H
G501[3A]	G501	40.89	392.55	403.09-393.63	UMA H
G502[3A][8]	G502	35.55	393.75	404.29-394.83	UMA H
Sampling Only Network[5]					
G031	C-21A	35.00	393.18	403.18-393.18	Cahokia Clay
G065	G-25	55.00	389.58	409.58-389.58	UMA H
G082	G-42	40.00	388.81	409.81-388.81	UMA C
R11L	H-21R	57.47	371.85	391.85-371.85	UMA C
G19	H-29	47.24	386.42	401.42-386.42	UMA H
R31L[8]	R31L	55.00	373.10	378.10-373.10	UMA H
G33	H-33	44.00	387.37	407.37-387.37	UMA C
G71L	G-31	58.70	387.25	407.25-387.25	UMA H
G97L	H-17	58.00	377.09	402.09-382.09	UMA H
G306	RP-6	49.00	381.34	391.34-381.34	UMA H
Gauging Only Network					
G016	C-6	49.50	381.00	416.00-381.00	UMA C

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)	Well Designation[1]
G046	G-6	50.00	391.37	411.37-391.37	UMA H
G050	G-10	44.00	386.65	406.65-386.65	UMA C
G31R[8]	H-31R	42.22	389.88	410.08-390.08	UMA H
G83L	H-3	52.50	375.09	400.09-380.09	UMA H
G86L	H-6	64.30	376.92	401.92-381.92	UMA H
G89L	H-9	53.50	375.96	400.96-380.96	UMA H
G99L[8]	H-19	53.50	376.60	402.10-382.10	UMA H
G128[2]	G128	33.65	395.86	406.04-396.26	UMA H
G506	A8MW04	50.00	383.34	418.34-383.34	UMA H
G507	A8MW05	48.00	383.74	413.74-383.74	UMA H
G508	A8MW06	48.00	381.97	416.97-381.97	UMA H
LNAPL Monitoring network [6]					
G011	C-1	49.50	380.30	415.30-380.30	UMA C
G027	C-17	40.00	390.32	400.32-390.32	UMA C
G049	G-9	47.00	382.75	402.75-382.75	UMA H
G13L	H-23	51.50	380.14	408.64-388.64	UMA H
G34	H-34	38.47	393.11	403.11-393.11	UMA C
G96L	H-16	58.50	373.28	393.28-378.28	UMA H
G417	B-17	51.00	380.48	400.48-380.48	UMA H
G603	RC-3	54.00	377.3	397.30-377.30	UMA H
G604	RC-4	51.46	379.92	399.92-379.92	UMA H
G605	RC-5	51.19	378.91	398.91-378.91	UMA H
G613	RC-13	63.12	368.38	403.38-373.38	UMA H
G614	RC-14	61.81	369.99	404.99-374.99	UMA H
G615	RC-15	59.66	370.48	405.48-375.48	UMA H
G617	RC-17	58.00	370.91	403.91-386.91	UMA H
G618	RC-18	57.50	371.78	411.78-376.78	UMA H
G619	RC-19	58.00	369.3	407.30-372.30	UMA H
G620	RC-20	85.36	344.51	406.28-349.64	UMA H
G509[9]	B-14	54.83	376.37	396.37-376.37	UMA H
G510+[8]	C-9	+	+	+	unknown
G511	G-11	43.08	388.38	408.21-388.21	UMA H
G512[9]	G-12	45.37	386.12	406.25-386.25	UMA H
G513	G-40	40.00	388.26	409.26-389.26	UMA C
G514[9]	G-47	38.67	389.33	407.66-389.66	UMA C
G515+[9]	Q-14	+	+	+	unknown
G516	A3MW01	45.00	384.8	414.80-384.80	UMA H
G517	A3MW02	50.00	380.5	415.50-380.50	UMA H
G518	A6MW01	50.00	380.01	415.01-380.01	UMA H
G519	A6MW02	50.00	382.17	417.17-382.17	UMA C
G520	A6MW03	55.00	376.26	416.26-376.26	UMA H

G521	A8MW02	50.00	379.67	414.67-379.67	UMA H
G522	A9BH05	37.00	391.29	405.29-391.29	UMA C
G523	LS-1	33.87	394.71	414.71-394.71	UMA C
G524(9)	SVE-2	36.62	395.97	416.50-396.50	UMA C
Demonstration Wells					
R032(3B)	R032	39.27	388.99	399.47-389.71	UMA C
R034(3B)	C-24R	35.24	393.64	403.88-393.88	UMA C
R035(3B)	C-25AR	35.57	392.04	402.50-392.72	UMA C
G304(3B)	RP-4D	45.75	385.51	396.34-386.34	UMA C

Notes: * = Groundwater sampling only required at G008 when G503 is dry.
+ = Well construction information is incomplete.
# = Groundwater sampling only required at G067 when G504 is dry.
@ = Groundwater sampling only required at G068 when G505 is dry.
& = R302 was installed as a water table well and G302 was abandoned (G302 had screened interval 393.63-383.63). It appears a benzene pipeline release from the neighboring site (ID No. 1191150025) may be the source of contamination previously measured at G302. IEPA will require the neighboring site to delineate onto BP property. The contamination detected at the screened interval for former G302/RP-2D must continue to be monitored due to contaminant levels previously detected. As the Illinois EPA is working with Shell Oil Products US to delineate benzene contamination associated with a benzene pipeline release at BOL site ID No. 1191150025, BP will not be required to install a well at the screened interval of approximately 393.63-383.63 at this time.
1 = Top of casing and ground surface elevation measurements are from the 2020 Monitoring Well Survey unless otherwise noted.
2 = Groundwater gauging only at G128 due to known benzene release from Shell Oil pipeline in 1986 and the requirement for the permittee associated with site 1191150002 sampling G128.
3A = Sentry Well used to demonstrate contaminant control in the southeast portion of the GMZ.
3B = Sentry Well used to demonstrate contaminant control in the vicinity of Land Reuse Area 9.
4 = Also a designated Sentinel Well under the Riverfront RCRA Permit.
5 = Groundwater sampling only, well will still be gauged when sampled in accordance with Condition III.F.1; however, water level data will not be utilized for developing potentiometric surface maps or evaluation of hydraulic gradients as required under Condition III.E.6.
6 = LNAPL monitoring only, groundwater sampling not required (32 wells).
7 = G500 installed on November 20, 2017 as the well listed in the May 29, 2018 RCRA Permit as IEPA Well No. Gl13 "to be installed." The designation G500 was used because there is a different well designated as G113 under the Riverfront RCRA Permit.
8 = Top of casing and ground surface elevation measurements measured on the following dates: June 17, 2021 (G31R, GOSA, C-9); March 7, 2022 (G005, G99L, G502); and September 19, 2023 (R31L, R067, R068).

9 = Top of casing and ground surface elevation measurements are from 2015 Monitoring Well Survey.
10 = Well designations are identified based on zones within the uppermost aquifer being monitored: wells behaving as perched wells (Cahokia Perched); within the silty sandy layer of the Cahokia Sand facies (UMA C); within the coarse sand and gravel of the Henry formation (UMA H).
11 = Per Condition IV.C.1.a, G078, G030, G97L, and G87L require a new or replacement well or well pairs be installed within ninety (90) days to monitor the previously screened interval. Of those wells, G078 and G030 no longer exist because the wells were damaged or plugged.

Additional Notes:
"Ft-bgs" = refers to the number of feet below the ground surface.
"Ft-MSL" = refers to the number of feet referenced to mean sea level.
"Stick-up" = refers to the height of the reference survey datum. This point is determined with + 0.01 foot in relation to mean sea level, which in turn is established by reference to an established National Geodetic Vertical Datum.

2. The Permittee shall maintain the Gradient Control Wells (Cone of Depression (COD) 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 III.A.1 above.

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Elevation (ft. MSL)	Well Screen Length (ft.)
Gradient Control Wells				
HW1B	HW01-B	75.00	356.12	300
HW2A	HW02-A	75.00	355.71	300
HW2B	HW02-B	75.00	356.37	300

Note: The Gradient Control Wells are horizontal wells.

3. Construction of each monitoring well/piezometer must be in accordance with the "Monitoring Well Diagram" and "Well Completion Report" forms located on the Illinois EPA website, 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 contained in the "Field Boring Log" form on the Illinois EPA website, 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 Condition III.C.1 and III.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 the 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 monitoring well construction standards at the time that the well is replaced. A well which is more than ten (10) feet from the existing well or 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 Agency
   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 Part 920 regulations. Monitoring wells and piezometers that are improperly constructed must be abandoned in accordance with Condition III.C.4.

D. GROUNDWATER PROTECTION STANDARD

1. The following hazardous constituents and their concentration limits comprise the groundwater protection standard for the groundwater monitoring wells found in Conditions III.C.1.

Field Parameters	Storet	Units
pH	00400	Standard Units
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	Feet
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 III.I.9.a.

Hazardous Constituents	**Storet No.**	**Concentration Limits (mg/L)**
Metals		
Antimony	01097	0.006
Arsenic	01002	0.01**
Barium	01007	2.0
Chromium	01034	0.1
Lead	01051	0.0075
Nickel	01067	0.1
Selenium	01147	0.05
VOCs		
1,2-Dichloroethane	34531	0.005
1,3-Dichlorobenzene	34561	0.0002
Benzene	34030	0.005
Chloroform	32106	0.0002
Ethylbenzene	78113	0.7
Toluene	34010	1.0
Total Xylenes	34020	10.0
Methyl Tertiary-Butyl Ether	46491	0.07
Styrene	77128	0.1
SVOCs		
2,4-Dimethylphenol	34606	0.14
4-Methylphenol (p-cresol)	77146	0.035
Benzo(a)anthracene	34526	0.00013
Benzo(a)pyrene	34247	0.0002
Benzo(b)fluoranthene	34230	0.00018
Benzo(k)fluoranthene	34242	0.00017
Bis(2-ethylhexyl)phthalate	39100	0.006

Chrysene	34320	0.0015
Dibenzo(a,h)anthracene	34556	0.0003
Naphthalene	34696	0.14
Phenol	34466	0.035
Biogeochemical[1]		
Analytes		
Dissolved iron	N/A	--
Dissolved sulfate	N/A	--
Dissolved manganese	N/A	--

-- Not available
N/A = Not Applicable
1 = To monitor natural attenuation conditions
** = Site-specific concentration limit may be used if approved by the Illinois EPA.

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.

   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 (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.

E. GROUNDWATER CORRECTIVE ACTION PROGRAM

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

1. The Permittee shall determine the groundwater quality for the Observation wells and the GMZ Boundary Wells designated in Condition III.C.1 for the hazardous constituents listed in Condition III.D.1 above.

2. In accordance with 35 IAC 620.250, a GMZ is a three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contaminants from the facility. The GMZ must be monitored and maintained as follows:

   a. The GMZ horizontal and vertical extent is monitored with program monitoring wells measuring concentrations of hazardous constituents in Condition III.D.1 in groundwater.

i. The following groundwater monitoring wells shall define the outermost horizontal extent of the approved GMZ: G005, G006, G008, G021, G023, G04R, G045, G055, G059, G062, R063, G067, G068, G073, G079, G084, G085, G111, G112, G32R, G37, G5B, G35A, G35B, G500, G69R, G74L, G75L, G76L, G91, G92, G93L, H31B, RG36, R302, G303, G503, G504, G505.

ii. The vertical boundaries of the GMZ shall range from the approximate top of the uppermost aquifer (30 feet bgs) to the top of the bedrock surface at the BP Main Plant facility. As required by Condition IV.C.1.b, wells must be proposed to better define the vertical extent.

b. The results of monitoring the GMZ shall be submitted to the Illinois EPA semi-annually in accordance with the schedule found in Condition III.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 III.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. A Mann-Kendall trend analysis based on eight (8) quarters of data shall be submitted for Illinois EPA review and approval unless otherwise approved.

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 III.H must also be included.

3. The Groundwater 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 hazardous constituents released to groundwater as follows:

a. The pumping from the Gradient Control Wells (also referred to as Cone of Depression (COD) wells) shall maintain the cone of depression to ensure groundwater flow is adequately controlled in the uppermost aquifer, except as provided in Condition III.A.

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 III.I.2.

   a. A record of the amount of groundwater withdrawn each day by the Gradient Control Wells (COD wells).

   b. Quarterly monitoring of the piezometric head at wells identified in Condition III.C.1 and III.C.2 above to demonstrate that groundwater flow is properly controlled throughout the contaminated area requiring corrective action.

   c. The measured thickness of hydrocarbon product encountered at each well identified in Condition III.C.1 and III.C.2.

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 III.C.1.

7. The groundwater quality in the uppermost aquifer shall be monitored on a quarterly or semi-annual basis at each of the wells identified in Condition III.C.1, and submitted to the Illinois EPA semi-annually, as identified in Condition III.I.2.

8. If the groundwater gradient is not maintained, as required by Condition III.E.3, or contamination is migrating beyond the GMZ Boundary Wells, the Permittee shall submit an application for a permit modification, as required by Condition III.J.

9. Prior to making any changes on-site which might affect the overall program associated with controlling the groundwater flow as required by Condition III.E.3 of the permit (i.e., maintain and verify an inward gradient), the Permittee must obtain written permission from the Illinois EPA. Detailed information regarding the changes shall be submitted to the Illinois EPA at least 120 days prior to the date that the change is to be made. Disapproval or approval with modifications of any written requests for changes shall be subject to the appeal provisions of Section 40 of the Act.

10. The Permittee shall maintain all equipment associated with withdrawal and treatment of water withdrawn from the uppermost aquifer to adequately control groundwater flow. This includes maintenance of any pollution control equipment (i.e., air pollution and water pollution control equipment) necessary for these activities.

11. In the event that the Permittee is unable to demonstrate an inward groundwater gradient based upon groundwater elevation data in the Southeast portion of the

GMZ, and/or in the vicinity of Land Reuse Area 9 for the GMZ (western portion of the GMZ), during a monitoring event, the Permittee will take the following actions:

a. The Permittee will review the groundwater quality data for the most recent sampling event for the Sentry Observation Monitoring Wells (G042R, G083R, G501, and G502) for the southeast corner of the GMZ, and/or Demonstration Wells (R032, R034, R035, and G304) for the vicinity of Land Reuse Area 9.

b. If the groundwater quality data from the most recent sampling event for the Sentry Observation Monitoring Wells and/or Demonstration Wells meets the permit-defined requirements for VOCs, the Permittee shall include a summary of the results in the semi-annual report required by Condition III.I.2.

c. If the groundwater quality data from the most recent sampling event for the Sentry Observation Monitoring Wells or Demonstration Wells, does not meet permit-defined requirements for VOCs, the Permittee shall:

    i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.

    ii. Perform a "Resampling Event" for the Sentry Observation Monitoring Wells and/or Demonstration Wells within thirty (30) days of the date the determination is made.

d. If the groundwater quality data from the Resampling Event for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.c meets permit-defined requirements for VOCs, the Permittee shall include a summary of the results in the semi-annual report required by Condition III.I.2.

e. If the groundwater quality data from the Resampling Event for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.c does not meet the permit-defined requirements for VOCs, the Permittee shall:

    i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.

    ii. Initiate "Contingency Monitoring" consisting of monthly groundwater gauging and monitoring for a period of three (3) months for the Southeast portion of the GMZ, and/or in the vicinity of Land Reuse Area 9, as follows:

1. For the Southeast portion of the GMZ, the groundwater gauging performed for Contingency Monitoring shall use at a minimum the following nine (9) monitoring wells in order to develop a groundwater flow gradient for the southeast portion of the GMZ: wells G301, G305, R042, R083, G501, G502, G005, G92, and G112.

2. For the vicinity of Land Reuse Area 9, the groundwater gauging performed for Contingency Monitoring shall use at a minimum the following four (4) monitoring wells in order to develop a groundwater flow gradient for the vicinity of Land Reuse Area 9 of the GMZ: R032, R034, R035, and G304.

3. The Contingency Monitoring shall include monthly groundwater sampling for a period of three (3) months for the Sentry Observation Monitoring Wells R042, R083, G501, and G502 for the southeast area, and/or the Demonstration Wells R032, R034, R035and G304 for Land Reuse Area 9.

f. If the three (3) monthly groundwater gauging potentiometric maps from Contingency Monitoring demonstrate an inward gradient, and the groundwater quality data from the three (3) monthly sampling events for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.e.ii meets the permit-defined requirements for VOCs, the Permittee shall include a summary of the results in the semi-annual report required by Condition III.I.2.

g. If the monthly groundwater gauging potentiometric maps for Contingency Monitoring do not demonstrate an inward gradient, and the groundwater quality data from the sampling event for the Sentry Observation Monitoring Wells and/or Demonstration Wells required by Condition III.E.12.e.ii does not meet the permit-defined requirements for VOCs, the Permittee shall submit a written report to the Illinois EPA:

i. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made.

ii. Submit a written report to the Illinois EPA within thirty (30) days of the date the determination is made describing the actions to be taken.

iii. Install additional well(s) at locations approved by the Illinois EPA.

iv. Implement an Illinois EPA-approved groundwater monitoring program for the new wells on a monthly basis for three (3) months.

v. Evaluate Contingent Corrective Measures to address the potential for off-site contaminant migration from the southeast corner or in the vicinity of Land Reuse Area 9, including but not limited to, modification of pumping rates at the Gradient Control Wells, rehabilitation of one or more Gradient Control Wells to address loss of hydraulic capacity, supplemental groundwater investigation, and/or in-situ technologies.

h. Design and implement Contingent Corrective Measures approved by the Illinois EPA.

12. The Permittee shall operate, expand and use the Bioremediation Systems and/or other technologies approved by the Illinois EPA in order to remediate hydrocarbons and refinery product in accordance with Condition II.E of the Corrective Action Section of the Permit and 35 IAC Parts 620, 724, and 742. Historical information related to the development of these remediation systems is summarized in Attachment E. Current information related to the remediation activities of hydrocarbons and refinery product must be submitted within reports required by Condition II.L.1. A discussion must also be provided in reports required by Condition III.I.6.

a. Within 90 days submit a Class 1* modification request to propose a procedure for evaluating the indoor inhalation pathway for dissolved groundwater concentrations measured at all groundwater monitoring wells located at the property boundary and off-site locations each time groundwater is sampled. The proposal may include a procedure using the Johnson & Ettinger Calculation (per 35 IAC Part 742) modified for a dirt floor evaluation (using the Little, Daisy, Nazaroff attenuation factor).

F. GROUNDWATER ELEVATIONS

1. The Permittee shall determine the groundwater surface elevation referenced to mean sea level (MSL) at each well at least quarterly and each time groundwater is sampled in accordance with Condition III.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 III.I.9.

3. Elevation, as referenced to MSL, of the bottom of each monitoring well (STORET 72020), is to be reported at least annually in accordance with Condition III.I.10. The mandatory measurement shall be taken during the second quarter sampling event each year.

G. SAMPLING AND ANALYSIS PROCEDURES

The Permittee shall follow the techniques and procedures described in Exhibit C-1 of the approved permit application, except as modified below, when obtaining and analyzing samples from the groundwater monitoring wells described in Condition III.C.1:

1. Samples shall be collected by the techniques described for low-flow sample collection in Section 2.2 of Exhibit C-1.

2. Samples shall be preserved, shipped and handled in accordance with the procedures specified in Section 2.2 of Exhibit C-1.

3. Samples shall be analyzed according to the procedures specified in Section 7 of Appendix B. Groundwater analysis must be in accordance with the most current version of the applicable methods found in USEPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," Third Edition (SW-846) and finalized updates.

4. Samples shall be tracked and controlled using the chain-of-custody procedures specified in Section 2.2 of Exhibit C-1.

H. STATISTICAL METHODS

The Permittee shall evaluate the quality of groundwater samples collected during semi-annual sampling events identified in Condition III.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 III.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 III.D.1, in accordance with Exhibit C-3 of the approved permit application.

   b. The results of the statistical evaluations shall be discussed and included within the required 5-year GMZ Evaluation reports required by Condition III.I.11.

I. REPORTING AND RECORDKEEPING

1. The Permittee shall enter all monitoring, testing and analytical data obtained in accordance with Conditions III.D, III.E, and III.F into the operating record.

2. Samples collected to meet the requirements of the groundwater monitoring program described in Conditions III.D. and III.E shall be collected and reported as identified in the table below. The results of the analyses conducted on the

groundwater quality samples shall be submitted in accordance with this schedule. All additional data collected for the groundwater monitoring program as specified in Conditions III.D, III.E and III.F shall also be submitted to the Illinois EPA in accordance with this schedule.

Sampling Event of Calendar Year	Samples to be Collected During the Months of	Results Submitted to the Illinois EPA by the Following
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 III.F.1, shall be collected at least quarterly and submitted to the Illinois EPA as identified in Condition III.I.2.

4. Groundwater withdrawal rates collected and calculated pursuant to Condition III.E.5.a shall be submitted semi-annually in accordance with the schedule identified in Condition III.I.2.

5. Gradient control measurements collected pursuant to Condition III.E.5.b shall be collected at least quarterly and submitted to the Illinois EPA semi-annually as identified in Condition III.I.2.

6. Free product thickness data measured pursuant to Condition III.E.5.c, and reduction of hydrocarbons and refinery product data collected in accordance with Condition II.E of the Corrective Action Section, shall be collected at least quarterly and submitted to the Illinois EPA as identified in Condition III.I.2. Reporting information must also be included in Corrective Action Progress Reports required by Condition II.L.1.

7. The groundwater flow rate and direction, determined pursuant to Condition III.E.6, shall be submitted as a part of the first and second semi-annual reports as identified in Condition III.I.2.

8. Groundwater quality samples collected to meet the requirements of Condition III.E.1 shall be collected semi-annually and submitted to the Illinois EPA as identified in Condition III.I.2. The extent of dissolved contamination must be depicted on figures as needed to define the extent of contamination.

9. The Permittee shall report the surveyed elevation, as required by Condition III.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 III.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 III.C.1, referenced to MSL, is to be reported annually. This measurement shall be taken during the second quarter sampling event (Storet 72020).

11. Statistical evaluations, as required by Condition III.H, shall be submitted to the Illinois EPA as a part of the required 5-year GMZ Evaluation reports required by Condition III.E.2.e.

12. Information required by Conditions III.I.2, III.I.3, III.I.9 and III.I.10 must be submitted in an electronic format. The information is to be submitted as fixed-width text files formatted as found in the form, "Formatting Requirements for the 01 (and 02) Record of the Electronically Submitted Groundwater and Leachate Data" (LPC 160) located on the Illinois EPA website and in accordance with the schedule found in Condition III.I.2. Additional guidance regarding the submittal of the information in an electronic format can be found at the Illinois EPA website.

13. 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 the submittal. However, the Permittee must submit one (1) original paper submittal of each notice or report submitted to the Illinois EPA, and a minimum of two (2) electronic copies for all additional Illinois EPA copies (i.e. Permit Section and regional Field Operation Section). Additional paper copies must be provided upon Illinois EPA request. The form is not to be used for permit modification requests.

14. 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.

15. The Permittee shall submit a written report to the Illinois EPA, in accordance with the schedule found in Condition III.I.2, which discusses the effectiveness of the Groundwater Corrective Action Program. At a minimum, the report must:

a. Address the information requirements in Conditions III.C, III.D, III.E and III.F.

b. Evaluate the effectiveness of the hydraulic control and contaminant removal from the GMZ including the information required by Condition III.D.

c. Provide a discussion of any change in the quality of groundwater beneath the facility which has resulted from the corrective action.

16. If the Permittee evaluation, when required by Condition III.E.11, determines verification of contaminant control is necessary due to a lack of inward gradient, the Permittee will complete the following reporting and notification requirements in III.E.11:

a. Notify the Illinois EPA in writing within seven (7) days of the date the determination resampling is required.

b. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made Contingency Monitoring is required.

c. Notify the Illinois EPA in writing within seven (7) days of the date the determination is made Contingency Monitoring does not meet the requirements for inward gradient and the permit-defined requirements for VOCs, the Permittee shall take steps to implement additional corrective measures as outlined in Condition III.E.12.g, and:

i. Submit a written report to the Illinois EPA within thirty (30) days describing the actions to be taken.

ii. Take necessary actions to meet applicable groundwater standards at GMZ Boundary wells.

17. Upon approval of the proposal required by Condition III.E.12, if the indoor inhalation exposure route evaluation required by Condition III.E.12 demonstrates that the indoor inhalation pathway is complete, the Permittee must submit the evaluation and propose additional corrective action within thirty (30) days of the discovery of the exceedance for the Illinois EPA review and approval.

18. If the Permittee determines that groundwater flow is not being adequately controlled, except as required by Conditions III.E.11 and III.I.16 regarding contaminant control in the Southeast portion of the GMZ and/or in the vicinity of Land Reuse Area 9 (western portion of the GMZ), or the contaminant control evaluations indicate contaminants are migrating beyond the GMZ boundaries, 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 III.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 Groundwater Corrective Action Program required by this permit no longer satisfies the requirements of 35 IAC 724.201, the Permittee must, within ninety (90) days, submit an application for permit modification to the Illinois EPA, Bureau of Land, Permit Section, 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 IV: SPECIAL CONDITIONS

A. REQUIRED FORMS

1. 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.

2. The Permittee shall submit a current 39(i) certification and supporting documentation with all applications for a permit.

Note: If the Permittee desires to add additional staff as delegated signatories for future modifications, certifications, etc., the Permittee must meet the requirements of 35 IAC 702.126 and the delegated signatory individuals should also send in an individual 39(i) 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 renewed RCRA corrective action permit.
   b. All permit applications and permit modification requests.
   c. All Illinois EPA responses to modification requests made to the RCRA corrective action permit (Log No. B-147R2).

C. COMPLIANCE SCHEDULE

1. The following revisions must be met with regards to groundwater:

   a. Within ninety (90) days of the effective date of this permit, install a new or replacement well or well pairs for G078, G030, G97L, and G87L to monitor the previously screened interval. It is noted only G078 no longer exists because the well was damaged.

   b. Within ninety (90) days of the effective date of this permit, propose monitoring wells with screens positioned to adequately define the vertical boundary of the GMZ in Condition III.E.2.a.

   c. A Water Well Survey (WWS) must be provided within ninety (90) days of the effective date of this permit to include a WWS as described in 35 IAC 1600.210 and the guidance document entitled, "Well Survey Procedures at Bureau of Land Permitted Facilities" provided as Attachment G to the permit.

2. The Permittee must prepare and submit 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 ninety (90) days of the date of the effective date of this permit, as required in accordance with 35 IAC 724.201. This cost estimate must include a minimum of 10% contingency for all items necessary to complete corrective action.

SECTION V: 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 (Act) or Subtitle G, except for prohibitions against 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. (35 Illinois Administrative Code (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 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 Act and is grounds for enforcement action; permit revocation or modification; or for denial of a permit renewal application. (35 IAC Code 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 include 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 35 IAC

721, Appendix A. 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 three (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 IAC 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. 1. The Illinois EPA has inspected the modified or newly constructed facility and finds it is in compliance with the condition of the permit; or

2. If, within fifteen (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 ninety (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 human health or the environment. Any such information shall be reported orally within twenty-four (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 HWM 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 five (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 (5) day written notice requirement in favor of a written report within fifteen (15) days. (35 IAC .152(f) and 703.245(b)).

21. OTHER NONCOMPLIANCE. The Permittee shall report all instances of noncompliance not 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. 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 Agency
Bureau of Land
Permit Section - #33
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

24. 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 .151)

25. CONFIDENTIAL INFORMATION. Any claim of confidentiality must be asserted in accordance with 35 IAC 702.103 and 35 IAC Part 161.

26. 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. Post-closure plan as required by 35 IAC 724.218(a) and this permit.

    b. Cost estimate for facility closure as required by 35 IAC 724.242(d) and this permit.

    c. Operating record as required by 35 IAC 724.173 and this permit.

    d. Inspection schedules as required by 35 IAC 724.115(b) and this permit.

GENERAL FACILITY STANDARDS

27. GENERATOR REQUIREMENTS. Any hazardous waste generated at this facility shall be managed in accordance with the generator requirements at 35 IAC Part 722.

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

29. 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).

30. 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

31. 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)

32. 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.

33. 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)

34. ACCESS TO COMMUNICATIONS OR ALARM SYSTEM. The Permittee shall maintain access to the communications or alarm system as required by 35 IAC 724.134.

35. REQUIRED AISLE SPACE. The Permittee shall maintain aisle space as required by 35 IAC 724.135 and National Fire Protection Association (NFPA) requirements.

36. 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.

RECORD KEEPING

37. OPERATING RECORD. The Permittee shall maintain a written operating record at the facility in accordance with 35 IAC 724.173.

POST-CLOSURE

38. 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.

39. 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).

40. 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 sixty (60) days prior to each anniversary of the date on which the first closure cost estimate was prepared or if using the financial test or corporate guarantee, within thirty (30) days after close of the firm's fiscal year.

b. Revised whenever there is a change in the facility's post-closure plan increasing the cost of closure.

c. Kept on record at the facility and updated. (35 IAC 724.244).

d. Maintained at the value approved by the Illinois EPA with annual adjustment for inflation and cannot be decreased unless approved by the Illinois EPA in a permit modification.

41. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE. The Permittee shall demonstrate compliance with 35 IAC 724.245 by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by Standard Condition 35. Changes in financial assurance mechanisms must be approved by the Illinois EPA pursuant to 35 IAC 724.245.
Financial assurance documents submitted to the Illinois EPA should be directed to the following address:

Illinois Environmental Protection Agency
Bureau of Land #24
Financial Assurance Program
2520 West Iles Avenue
P.O. Box 19276
Springfield, IL 62794-9276

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

SECTION VI: REPORTING AND NOTIFICATION REQUIREMENTS

The reporting and notification requirements of each section of the 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.

Condition	Action	Due Date
Section II: Corrective Action		
H.4	Submit Phase I CMP Workplan.	Within 90 days of notification from Illinois EPA
I.1	Notification of Newly Identified SWMU/AOCs.	Within 30 days of discovery
I.3	Submittal of Assessment Plan for Newly Identified SWMU.	Within 90 days of request for plan from Illinois EPA
I.5	Submittal of SWMU Assessment Report for Newly Identified SWMU.	In accordance with schedule in assessment plan
J	Notification of Release from Existing SWMU.	Within 30 days of discovery
II.M.2	Annual Cost Estimate for Corrective Action (excluding cost estimates adjusted for annual inflation only)	As necessary or requested by Illinois EPA
II.L.1	Quarterly Corrective Action Progress Report: January – March April – June July-September October – December	 May 1 August 1 November 1 March 1
II.L.2	Annual Report of Corrective Action Program Activities with Quarterly Report for October-December	March 1 of each year
II.L.3	Final Report for each parcel/area	As corrective action is completed
Section III: Groundwater Corrective Action Program		
C.4	Notification that well has been damaged or its structural integrity compromised.	Within 30 days of identification
C.6	Boring logs, construction diagrams and datasheets from installation and development of new/replaced well.	Within 30 days after well installed

C.1 General schedule for collection and reporting of groundwater data:

Sampling Event of Calendar year	Collected During the Months of	Results Submitted to the Illinois EPA by the Following
First Quarter	January-February	August 1
Second Quarter	April-May	August 1
Third Quarter	July-August	February 1
Fourth Quarter	October-November	February 1

I.3	Groundwater surface elevation data.	Quarterly as set forth in Condition III.I.2
I.4	Groundwater withdrawal rates.	Quarterly as set forth in Condition III.I.2
I.5	Gradient control measurements.	Semi-annually as set forth in Condition III.I.2
I.6	Free product thickness.	Semi-annually as set forth in Condition III.I.2 and quarterly per Condition II.M.1.
I.7	Groundwater flow rate and direction.	Annually as set forth in Condition III.I.2
I.8	Groundwater quality results.	Semi-annually as set forth in Condition III.I.2
I.9	The surveyed elevation of the top of well casing.	Every 5 years
I.10	Elevation of the bottom of each monitoring well.	Second quarter as set forth in Condition III.I.2
I.11	Report every 5 years the summary of annual statistical calculations	Every 5 years within GMZ evaluations
I.12	Electronic reporting of groundwater data	Semi-annually as set forth in Condition III.I.2
I.15	Report to Illinois EPA on effectiveness of corrective action program.	Semi-annually
I.16.a	Contaminants in Sentry Observation Wells or Demonstration Wells require resampling	Within 7 days of the determination
I.16.b	Contingency Monitoring is required	Within 7 days of the determination
I.16.c.i	Gradient is not maintained and VOCs are not met	Within 7 days of the date the determination is made
I.16.c.ii	Notify the Illinois EPA in writing describing the actions to be taken	Within 30 days
I.18.a	Notify the Illinois EPA in writing that groundwater flow is not being adequately controlled	Within 7 days of the date the determination is made

I.18.b	Submit a report to Illinois EPA describing the actions taken to regain control of groundwater flow.	Within 30 days
I.18.c	Submit a request for permit modification to Illinois EPA describing any changes to the corrective action program to regain control of groundwater flow.	Within 60 days
J.1	Modification of groundwater corrective action program.	Within 90 days of determination existing program does not meet the requirements of 35 IAC 724.201
Section IV: Special Conditions		
A.1	Submit LPC-PA23 form.	With all additional information, permit modifications, and permit applications
A.2	Submit 39i certification form.	With all permit applications
Section V: Standard Conditions		
6	Submit complete application for new permit	At least 180 days prior to permit expiration
11	Information requested by Illinois EPA and copies of records required to be kept by this permit.	Reasonable time
14	Notify Illinois EPA of planned physical alterations or additions.	As soon as possible
16	Notify Illinois EPA of changes which may result in permit noncompliance.	Advanced written notice to the Illinois EPA
17	Application for permit modification indicating permit is to be transferred.	90 days prior to change in ownership
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
21	Report all other instances of noncompliance.	At the time monitoring reports are submitted

34	Application for permit modification amending post-closure plan.	60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred
40.a	Adjust post-closure cost estimates for inflation.	Within 60 days before anniversary date, or within 30 days after close of the firm's fiscal year.
40.b	Revision post-closure cost estimates.	As needed, within 90 days of discovery of revision
41	Change in financial assurance mechanism for post-closure.	As needed
42	Notify Illinois EPA of commencement of voluntary or involuntary bankruptcy proceedings.	Within 10 days after commencement of proceeding

ATTACHMENTS

ATTACHMENT A

IDENTIFICATION OF APPROVED PERMIT APPLICATION

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT A

IDENTIFICATION OF APPROVED PERMIT APPLICATION

1. RCRA Post-Closure Renewal Application (Log No. B-147R2) dated October 8, 2020.

2. Additional Information for B-147R2- Replacement Pages submitted 1) Condition C.8.1.5 – Page 13 and 2) Exhibit C-1, Table 1- Page 4, dated May 10, 2022.

3. Time extension request for submittal of a response to the IEPA RCRA Permit Renewal Application NOD letter, dated July 3, 2024.

4. "Response to Illinois EPA Comments dated July 18, 2024" dated August 1, 2024.

5. Additional Information for B-147R2. Replacement pages, for Section C, dated August 29, 2024.

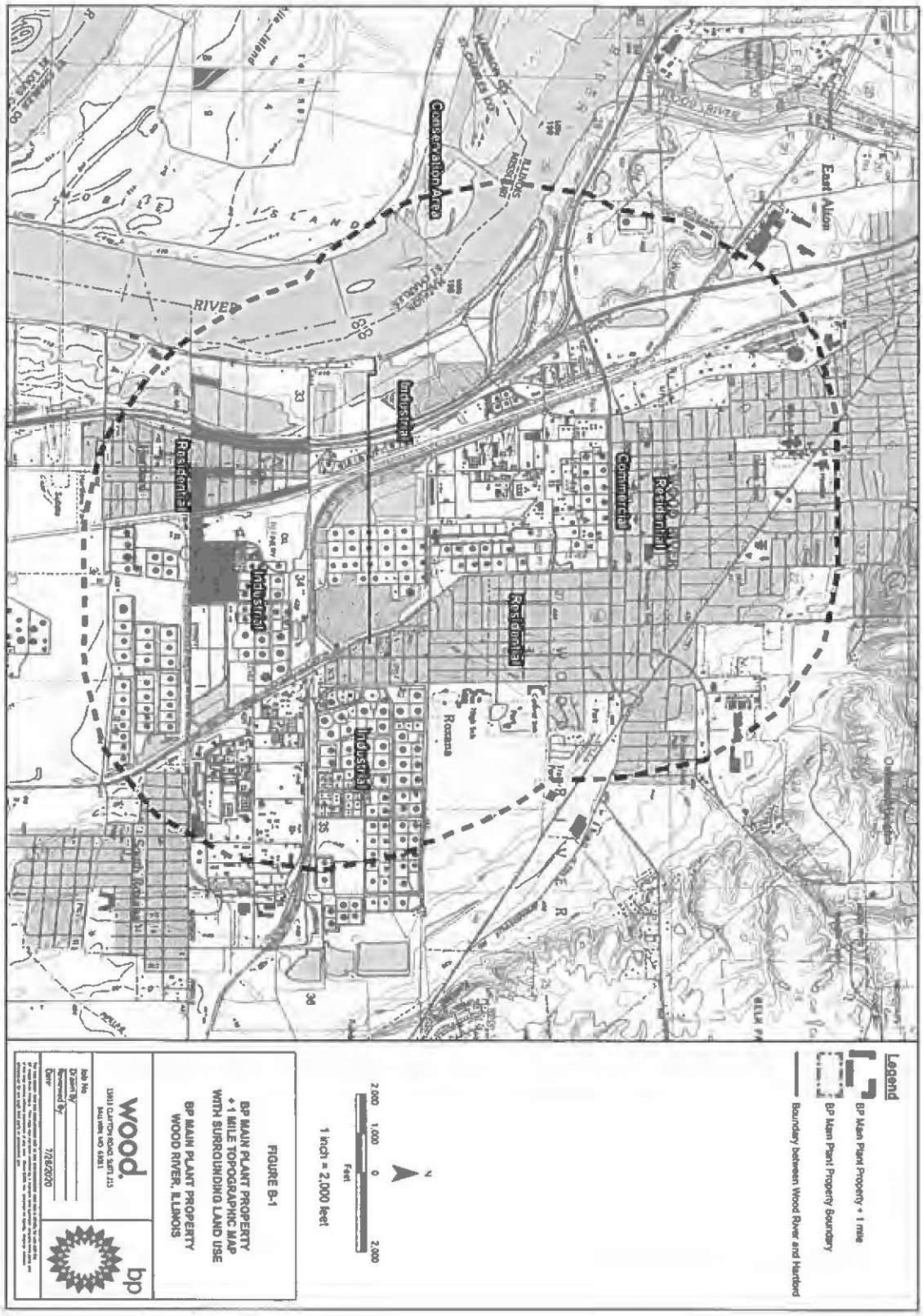
ATTACHMENT B

LOCATION MAP & DRAWING OF PERMITTED UNITS

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2


Legend
BP Main Plant Property + 1 mile
BP Main Plant Property Boundary
Boundary between Wood River and Hartford
2,000 1,000 0 2,000
Feet
1 inch = 2,000 feet
FIGURE B-1
BP MAIN PLANT PROPERTY
+ 1 MILE TOPOGRAPHIC MAP
WITH SURROUNDING LAND USE
BP MAIN PLANT PROPERTY
WOOD RIVER, ILLINOIS
wood.
bp
Job No
Drawn By
Reviewed By
Date
7/28/2020
Conservation Area
Industrial
Residential
Commercial
Residential
Industrial
Residential
Industrial
Industrial
East Alton
Roxana
RIVER
ISLAND

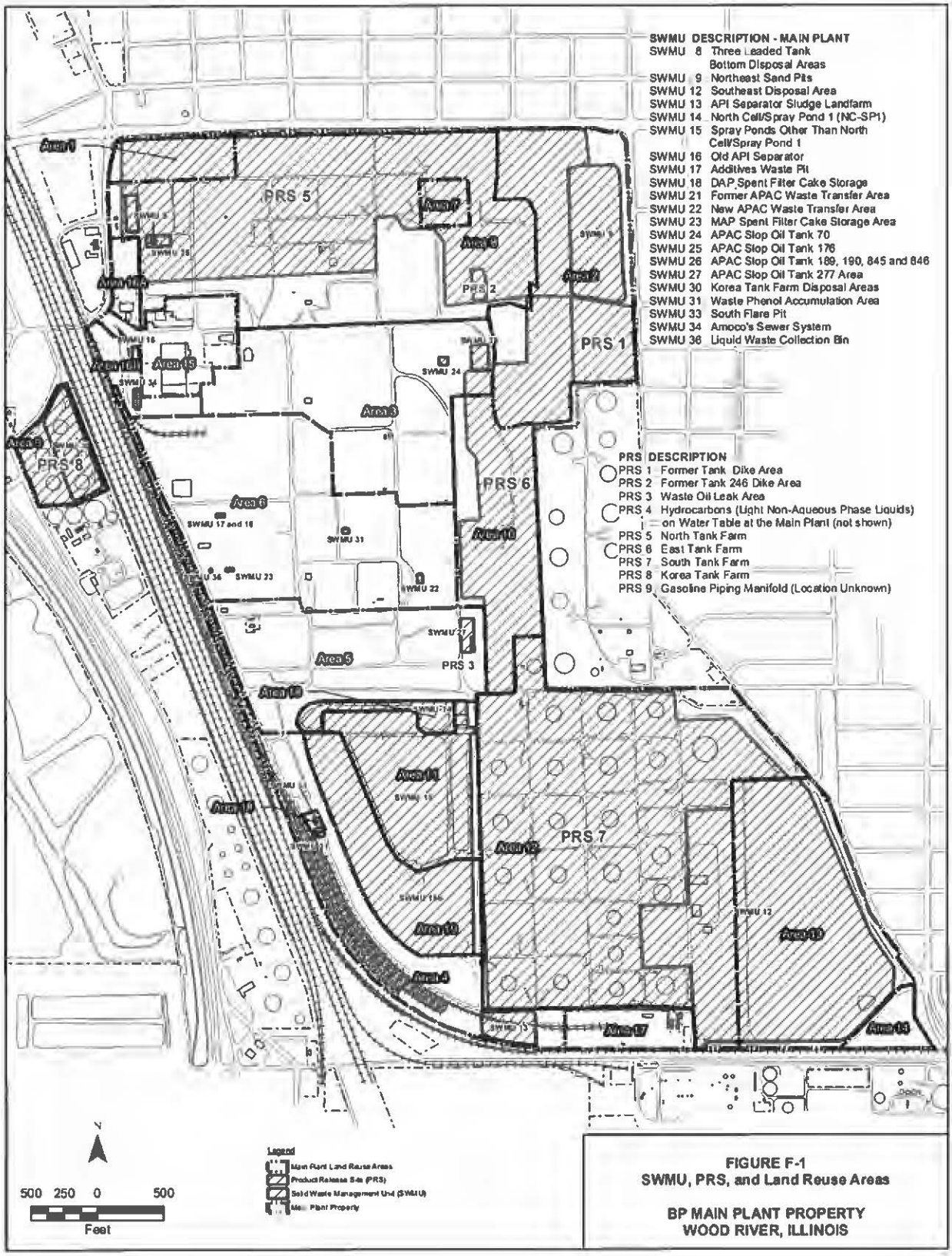
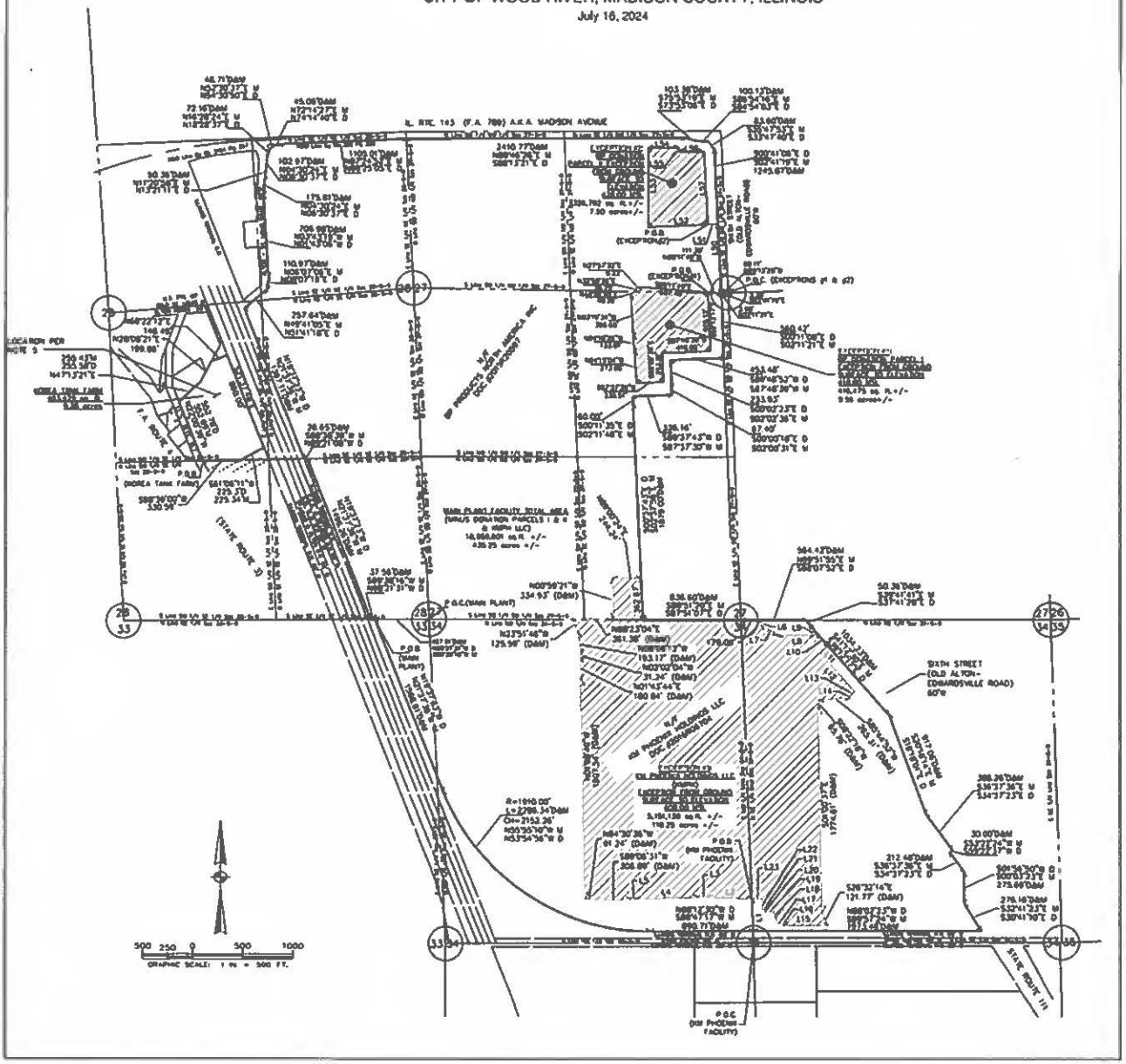


FIGURE F-1
SWMU, PRS, and Land Reuse Areas

BP MAIN PLANT PROPERTY
WOOD RIVER, ILLINOIS

EXHIBIT: B.P. AMOCO MAIN PLANT A[illegible]EA TANK FARM WITH
DONATION PARCEL EXCEPTIONS PARCEL I & PARCEL II AND KI[illegible] MORGAN PHOENIX HOLDINGS, LLC EXCEPTION
BEING PART OF SECTIONS 27, 28, 33 AND 34, ALL IN TOWNSHIP 5 NORTH, RANGE 9 WEST OF THE THIRD PRINCIPAL MERIDIAN
CITY OF WOOD RIVER, MADISON COUNTY, ILLINOIS
July 16, 2024



ATTACHMENT C

SUMMARY OF CORRECTIVE ACTION SUBMITTALS

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT C

SUMMARY OF CORRECTIVE ACTION SUBMITTALS

The table below summarizes the plans/reports/documents submitted to Illinois EPA regarding the corrective action efforts at the BP/Main Plant facility in Wood River, Illinois.

Note:

CCR = Current Conditions Report
GMZ = Groundwater Management Zone
NC-SP1 = North Cell of Spray Pond 1
RFI = RCRA Facility Investigation
SFP = South Flare Pit
SSI = Statistically Significant Increase

Log No.	Submittal	Status
B-147	RCRA Permit issued to facility, Section IV contains corrective action requirements.	Approved September 30, 1993
B-147	Proposed GMZ	Approved April 6, 1994
B-147-CA-1	RFI Phase I workplan	Approved September 7, 1994
B-147-CA-2	RFI Phase I report	Approved June 5, 2001
B-147-CA-3	Supplemental RFI Phase I report	Approved June 5, 2001
B-147-CA-4	Conceptual RFI Phase II/III workplan	Superseded by CA-7
B-147-CA-5	Investigation Workplan for Areas 1 and 2	Approved August 15, 2000
B-147-CA-6	Engineered Barrier Specification Report	Superseded by CA-9
B-147-CA-7	RFI Phase II/III workplan	Approved February 5, 2002
B-147-CA-8	Human Exposures Controlled (CA725) Demonstration	Superseded by CA-12
B-147-CA-9	Engineered Barrier Specification Report	Approved August 3, 2001
B-147-CA-10	"Comfort Letter" request for soils in Area 1	Approved July 9, 2001

Log No.	Submittal	Status
B-147-CA-11	No Further Action Determination for Area 1	Approved December 5, 2001
B-147-CA-12	Human Exposures Controlled (CA725) Demonstration	Approved October 9, 2001
B-147-CA-13	Request to incorporate two releases in Area 12 into corrective action program	Superseded by CA-16
B-147-CA-14	NFA for Area 2	Approved August 13, 2002
B-147-CA-15	Groundwater action Releases Under Control (CA750) Demonstration	Approved March 18, 2002
B-147-CA-16	Request to Incorporate two releases in Area 12 into corrective action program	Approved September 13, 2002
B-147-CA-17	CCR/Characterization Workplan for Area 4	Approved January 10, 2002
B-147-CA-18	GMZ Re-Evaluation	Approved March 13, 2002
B-147-CA-19	CCR/Characterization Workplan for Area 19	Approved March 20, 2002 (soils); April 9, 2002 (groundwater)
B-147-CA-20	CCR/Characterization Workplan for Area 15	Approved March 20, 2002 (soils); April 9, 2002 (groundwater)
B-147-CA-21	City of Wood River Ordinance and MOU to restrict groundwater use	Approved March 28, 2002
B-147-CA-22	CCR/Characterization workplan for Area 9	Approved September 5, 2002
B-147-CA-23	Modifications to Approved Phase II/III RFI workplan (CA-7)	Approved June 21, 2002
B-147-CA-24	CCR/Characterization Workplan for Area 6	Approved September 5, 2002

Log No.	Submittal	Status
B-147-CA-25	CCR/Characterization workplan for Area 5	Approved September 27, 2002
B-147-CA-26	Revised CCR/Characterization workplan for Area 15	Approved September 27, 2002
B-147-CA-27	CCR/Characterization Workplan for Area 3	Approved September 27, 2002
B-147-CA-28	Comments on IEPA's January 10, 2002 letter regarding Area 4 (CA-17)	Approved September 5, 2002
B-147-CA-29	Draft ELUC for Area 1	Approved January 10, 2003
B-147-CA-30	Investigation Report for Area 4	Approved August 22, 2003
B-147-CA-31	Investigation Report for Area 15	Approved November 19, 2003
B-147-CA-32	Revised Corrective Action Schedule	Approved February 7, 2003
B-147-CA-33	CCR/Characterization Workplan for Area 7/8	Approved August 7, 2003
B-147-CA-34	Revised Corrective Action Schedule	Superseded by B-147-CA-45
B-147-CA-35	Report on soil removal activities in Area 2	Approved August 11, 2003
B-147-CA-36	Area 15 Report-Addendum 1	Approved November 19, 2003
B-147-CA-37	Area 15 Report-Addendum 2	Approved November 19, 2003
B-147-CA-38	Extension request for submitting Area 12 CCR/Workplan	Approved December 30, 2004
B-147-CA-40	Draft ELUC for Area 2	Approved January 29, 2003
B-147-CA-41	CCR/Characterization Workplan for Area 10	Approved June 4, 2003

Log No.	Submittal	Status
B-147-CA-42	Soil Removal Activities Report at Area 15	Approved June 16, 2004
B-147-CA-43	Draft ELUC for Area 15	Approved August 23, 2004
B-147-CA-44	Soil Removal Activities Report at Area 4	Approved September 15, 2004
B-147-CA-45	Revised Corrective Action Schedule	Approved December 30, 2004
B-147-CA-46	Recorded ELUC for Area 15	Approved September 29, 2005
B-147-CA-47	Draft ELUC for Area 4	Approved June 1, 2005
B-147-CA-48	Recorded ELUC for Area 1	Approved March 25, 2005
B-147-CA-49	Recorded ELUC for Area 2	Approved March 29, 2005
B-147-CA-50	Updated RFI Phase II/III Project Plan Schedule	Approved September 21, 2005
B-147-CA-51	2004-05 CCR Phytoremediation/Landfarming Remedial Measures at Tank 293	Approved December 29, 2005
B-147-CA-52	Recorded ELUC for Area 4	Approved September 29, 2005
B-147-CA-53	Submittal regarding facility's GMZ	Approved January 24, 2006
B-147-CA-54	Summary of Phytoremediation/Landfarming Remedial Measures at Tank 293	Approved August 11, 2008
B-147-CA-55	Reevaluation of GMZ	Approved January 21, 2009
B-147-CA-56	Updated RFI Phase II/III Project Plan Schedule	Superseded by B-147R
B-147-CA-57	Investigation Report for Area 3	Soil comments e-mailed by IEPA February 25, 2008
B-147-CA-58	Investigation Report for Area 5	Disapproved June 22, 2007

Log No.	Submittal	Status
B-147-CA-59	Investigation Report for Area 6	Superseded by B-147R-CA-29
B-147-CA-60	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are from alternate source	Approved January 6, 2009
B-147-CA-61	Underground Piping Investigation Work Plan	Approved April 4, 2007 (eventually superseded by CA-90)
B-147-CA-62	Re-evaluation of GMZ	Approved January 21, 2009
B-147-CA-63	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are from alternate source.	Approved January 6, 2009
B-147-CA-64	Underground Piping Work Plan for 7 and 8 Areas	Superseded by CA- 90
B-147-CA-65	Investigation Report for Area 19	Approved December 6, 2007
B-147-CA-66	Draft White Paper – Property Transfer Process	Approved March 31, 2009
B-147-CA-67	Demonstration that detection monitoring SS1s at NC-SP1 and SFP are from alternate source.	Approved January 6, 2009
B-147-CA-68	Information regarding two releases in Area 8	Approved August 13, 2007
B-147-CA-69	Addendum to Area 5 Report	On January 30, 2009, IEPA required additional investigation be conducted in Area 5.
B-147-CA-70	Supplemental Report for Soil Sampling of NC-SP1 and SFP	Approved January 7, 2008 (NFA determination made for NC-SP1; additional work required for SFP).
B-147-CA-71	Area 5 Land Reuse Investigation Report	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.

Log No.	Submittal	Status
B-147-CA-72	Corrective Action Excavation in Area 5	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA-73	Area 5 Analytical Reports for Perched Groundwater	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA-74	2007 Annual Current Conditions Report – Phytoremediation at Tank 293	Approved August 11, 2008
B-147-CA-75	Area 5 Land Reuse Inventory Report and closure Plan, Revision 1	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA- 76	Area 10 Land Reuse Investigation and Closure Plan	Superseded by B-147R-CA-4
B-147-CA-77	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are from alternate source	Approved January 6, 2009
B-147-CA-78	Comments on IEPA's December 6, 2007 letter regarding the Area 19 Land Reuse Investigation Report and Closure Plan (CA-65)	Approved April 13, 2009
B-147-CA-79	Area 9 Land Reuse Report	Superseded by B-147R-CA-15
B-147-CA-80	Site-Wide Class II GW Determination	Disapproved December 17, 2012
B-147-CA-81	Area 7/8 Land Reuse Investigation Report and Closure Plan	Superseded by B-147R-CA-27
B-147-CA-82	2007 Annual Current Conditions Report, Phytoremediation/Landfarming at Tank 293	Approved August 11, 2008
B-147-CA-83	Additional information regarding two releases in Area 8 (see CA-68)	Received June 4, 2008

Log No.	Submittal	Status
B-147-CA-84	Area 16 CCR/Characterization Workplan	Approved May 5, 2009
B-147-CA-85	Demonstration that detection monitoring SS1s at NC-SP1 and SFP are from alternate source.	Approved January 6, 2009
B-147-CA-86	Area 17 CCR/Characterization Workplan	Approved May 5, 2009
B-147-CA-87	Underground Pipeline Work Plan	Superseded by B-147-CA-90
B-147-CA-88	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved January 6, 2009
B-147-CA-89	Additional information regarding Area 5 Investigation Report	On January 30, 2009, IEPA sent letter requiring additional investigation in Area 5.
B-147-CA-90	Underground Product Pipeline Investigation Workplan – Revision 1	Approved April 13, 2009
B-147-CA-91	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of renewal permit.
B-147-CA-92	Response to Comments, Area 6 Land Reuse Investigation Report	Superseded by B-147R-CA-21
B-147-CA-93	CCR for Phytoremediation/Landfarming	Approved November 20, 2009
B-147-CA-94	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-95	Requested changes to IEPA's April 13, 2009 approval of the Underground Product Pipeline Investigation Workplan	Approved July 6, 2009
B-147-CA-96	Letter Regarding Vertical Parceling	Approved March 3, 2010

Log No.	Submittal	Status
B-147-CA-97	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-98	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-99	Proposal to evaluate: (1) the hydrocarbon recovery system at facility; and (2) arsenic impacts in Well RG36	Approved February 24, 2010
B-147-CA-100	Demonstration that detection monitoring SSIs at NC-SP1 and SFP are due to alternate source.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-101	Shallow investigation of South Flare Pit.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-102	Current Condition Report for phytoremediation landforming at Tank 293.	Approved July 12, 2011
B-147-CA-103	Demonstration that detection monitoring statistical increases are not due to significant changes in groundwater quality.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-104	Response to request for improvement to hydrocarbon recovery system.	Approved August 31, 2011
B-147-CA-105	Demonstration that detection monitoring statistical increases are not due to significant changes in groundwater quality.	Approved as of the effective date of B-147R renewal permit (see B-147R below).
B-147-CA-106	Response to February 24, 2010 letter requiring improvements to hydrocarbon recovery system.	Approved August 31, 2011.
B-147-CA-107	Site-wide Geology Report and cone penetrometer logs.	Approved December 17, 2012

Log No.	Submittal	Status
B-147-CA-108	Demonstration Regarding SSIs for NCSP1/SFP (2Q10)	Approved August 31, 2011
B-147-CA-109	SSI Demonstration for SFP (3Q10)	Approved August 31, 2011
B-147R	Renewed RCRA Permit	Approved March 4, 2011
B-147R-CA-1	2010 Report for Phytoremediation/Landfarming at Tank 293	Approved July 12, 2011
B-147R-CA-2	Submittal Regarding GMZ Boundary Wells	Approved August 31, 2011
B-147R-CA-3	Area 11 CCR/Characterization Workplan	Approved January 24, 2012
B-147R-CA-4	Area 10 Comprehensive Report	Received May 5, 2011
B-147R-CA-5	Information Regarding the Arsenic Levels at Monitoring Wells RG36	Approved October 29, 2013
B-147R-CA-6	Draft ELUC for Donation Parcel in Area 2	Approved November 3, 2011 (see also B-147R-CA-12)
B-147R-CA-7	Draft ELUC for Area 2, excluding Donation Parcel	Superseded by B-147R-CA-11
R B-147-CA-8	Additional Information Regarding the Arsenic Levels at Monitoring Well RG36	Disapproved October 29, 2013
B-147R-CA-9	Draft ELUC for South Flare Pit	Superseded by B-147R-CA-18
B-147R-CA-10	Area 13 CCR/Characterization Work Plan	Approved October 26, 2012
B-147R-CA-11	Draft ELUC for Area 2, Excluding Donation Parcel	Approved November 3, 2011
B-147R-CA-12	Draft ELUC for Donation Parcel in Area 2	Approved November 3, 2011

Log No.	Submittal	Status
B-147R-CA-13	Area 14 CCR/Characterization Workplan	Approved July 12, 2012
B-147R-CA-14	Response to August 31, 2011 IEPA letter (see R-CA-2)—improvements to HRS and GMZ	Approved October 29, 2013
B-147R-CA-15	Area 9 Comprehensive Report	Received December 15, 2011
B-147R-CA-16	Recorded ELUC for Donation Parcel in Area 2	Approved March 13, 2012
B-147R-CA-17	Recorded ELUC for Area 2, excluding Donation Parcel	Approved February 27, 2012
B-147R-CA-18	Revised Draft ELUC for South Flare Pit	Approved August 11, 2014
B-147R-CA-19	Area 5 Comprehensive Report	Received February 2, 2012
B-147R-CA-20	2011 Report for Phytoremediation-Landfarming Project at Tank 293	Approved December 21, 2012
B-147R-CA-21	Area 6 Report	Received March 16, 2012
B-147R-CA-22	GMZ Re-Evaluation	Approved October 29, 2013
B-147R-CA-23	Site-Wide Class 2 Groundwater Demonstration	Approved December 17, 2012
B-147R-CA-24	Area 3 Current Conditions Report/Characterization Plan	Received May 10, 2012
B-147R-CA-25	Area 17 comprehensive land reuse investigation report and remediation plan	Received October 25, 2012
B-147R-CA-26	Extension request for submittal of response to 12/17/12 letter re: sitewide Class 2 Groundwater demonstration and cone penetration test.	Approved December 3, 2014
B-147R-CA-27	Area 7/8 comprehensive land reuse investigation report and remediation plan	Received December 17, 2012

Log No.	Submittal	Status
B-147R-CA-28	Response to comments for the sitewide class 2 groundwater demonstration	Approved December 3, 2014
B-147R-CA-29	2012 annual current condition report: phytoremediation/landfarming remedial measures at Tank 293.	Approved November 13, 2013
B-147R-CA-30	Extension Request for Information Required by IEPA's Response to B-147R-CA-22	Approved February 9, 2016
B-147R-CA-31	Area 2 donation parcel ii current conditions rpt/vapor intrusion wp	Superseded by B-147R-CA-35
B-147R-CA-33	Response to 10/29/13 letter (condition 2.3(iv))	Approved February 9, 2016
B-147R-CA-34	Tank 293 annual current conditions report	Approved December 3, 2014
B-147R-CA-35	Area 2 donation parcel ii current conditions rpt and vapor intrusion wp.	Approved October 24, 2014
B-147R-CA-36	Response/schedule to 10/29/13 letter and 12/19/13 meeting	Approved June 10, 2014
B-147R-CA-37	Updated financial assurance cost estimates	Approved August 2, 2017
B-147R-CA-38	Extension request to respond to IEPA's 12/29/13 letter	Approved June 10, 2014
B-147R-CA-39	Response to IEPA 2/14/13 email comments on the Area 9 Investigation Report (B-147R-CA-15)	Received May 5, 2014
B-147R-CA-40	Information Re: Existing HRS	Approved April 4, 2016
B-147R-CA-41	Updated Regarding HRS Evaluation	Approved April 4, 2016
B-147R-CA-42	Updated Regarding the Cone of Depression (COD) Evaluation	Approved January 19, 2016

Log No.	Submittal	Status
B-147R-CA-43	Information Regarding filing ELUC	Approved October 27, 2015
B-147R-CA-44	Extension Request (GW)	Approved July 18, 2017
B-147R-CA-45	Area 16 Investigation Report and Remediation Plan	Approved June 14, 2016
B-147R-CA-46	Response to Comments Regarding Site-Wide Class II GW Demonstration	Received December 24, 2014
B-147R-CA-47	60 day extension Request (GW)	Approved July 18, 2017
B-147R-CA-48	Annual 2014 Current Conditions Report for Tanlk293	Approved January 16, 2015
B-147R-CA-49	GMZ Well Evaluation Report	Approved July 18, 2017
B-147R-CA-50	Potential TACO Based CA for Tank 293	Received June 17, 2015
B-147R-CA-51	Area 2 Donation Parcel II CCR & Vapor Intrusion Work Plan	Superseded by B-147R-CA-57 and R-CA-59
B-147R-CA-52	COD Well Performance Evaluation Report	Approved January 19, 2016
B-147R-CA-53	ELUC Submittal	Received July 15, 2015
B-147R-CA-54	GMZ Re-evaluation Report	Approved July 18, 2017
B-147R-CA-55	Evaluation of Significant Increase	Received April 23, 2015
B-147R-CA-56	COD Well Evaluation and Status Report	Approved January 19,. 2016
B-147R-CA-57	Area 2 Donation Parcel II – Boundary Approval request	Approved August 22, 2016
B-147R-CA-58	ELUC	Approved July 18, 2016
B-147R-CA-59	Area 2 Donation Parcel II – Vapor Intrusion Report	Approved August 22, 2016
B-147R-CA-60	HRS Evaluation Update	Approved April 4, 2016
B-147R-CA-61	HRS Evaluation Update	Approved April 4, 2016

Log No.	Submittal	Status
B-147R-CA-63	2015 Annual CCR for Tank 293	Received March 1, 2016
B-147R--CA-64	Draft ELUC for Donation Parcel Area 2 (7.5-ac)	Approved February 28, 2017
B-147R--CA-65	Draft ELUC for Donation Parcel Area 2	Approved February 28, 2017
B-147R--CA-77	Revised Draft ELUC for Police Station Parcel (Area 2 7.5 acres -Top layer)	Approved May 4, 2017
B-147R--CA-78	Revised Draft ELUC for Police Station Parcel (Area 2 7.5 acres – Beneath the top layer)	Approved April 21, 2017
B-147R--CA-79	4th Quarter 2016 Demonstration Report (SSIE)	Received April 24, 2017
B-147R--CA-80	Extension Request for Information Required by IEPA's Response to B-147R-CA-22	Received June 22, 2017
B-147R--CA-81	Proposed ELUC	Received July 10, 2017
B-147R-CA-82	Response to IEPA 7/18/27 letter regarding GMZ wells	Received October 16, 2017
B-147R-CA-83	Extension request for submittal of cost estimate	Received October 30, 2017
B-147R-CA-84	GMZ monitoring wells	Received October 16, 2017
B-147R-CA-85	Plan for GMZ optimization for compliance commitment agreement	Received January2, 2018
B-147R-CA-86	Interim progress report - bioremediation pilot systems operations	Received April 2, 2018
B-147R-CA-87	Fourth Quarter 2017 GW demonstration report	Received April 12, 2018

Log No.	Submittal	Status
B-147R-CA-88	Response to IEPA's 7/18/17 GMZ wells letter	Received May 1, 2018
B-147R-CA-89	GW Monitoring Optimization Report	Approved January 19, 2023
B-147R-CA-90	Time Extension Request	Approved June 24, 2019
B-147R-CA-91	Remedial Action Selection Report and Main Plant Remedy Roadmap	Approved February 11, 2020
B-147R-CA-92	Performance Report-Pilot-Scale Bioremediation Systems	Approved February 11, 2020
B-147R-CA-93	Indoor Inhalation Exposure Route Evaluation & Work Plan	Denied May 30, 2019
B-147R-CA-94	State-wide Arsenic/Inorganic Demonstration Report	Approved June 24, 2019
B-147R-CA-95	4th Quarter 2018 Demonstration Report (Statistically Significant Increase Evaluation)	Approved February 27, 2020
B-147R-CA-96	Revised Indoor Inhalation Exposure Route Evaluation and Work plan	Received August 29, 2019
B-147R-CA-97	Site-wide inorganics and metals evaluation work plan schedule update letter	Received November 5, 2019
B-147R-CA-98	Action Plan for potential manmade pathway evaluation	Received November 26, 2019
B-147R-CA-99	Main Plant Area 10 Comprehensive land reuse Investigation Report	Received December 20, 2019
B-147R-CA-100		
B-147R-CA-101	2019 Annual Tank 293 Current Conditions Report	Received February 28, 2020
B-147R-CA-102	Documentation of monitoring well installation and abandonment	Received March 27, 2020
B-147R-CA-103	Proposed modification to 2Q 2020 GW Gauging & Monitoring in response to COVID-19 pandemic	
B-147R-CA-104	4th Quarter 2019 Demonstration Report	Received May 21, 2020

Log No.	Submittal	Status
B-147R-CA-104	4th Quarter 2019 Demonstration Report (Statistically Significant Increase Evaluation)	Received April 30, 2020
B-147R-CA-105	RCRA Land reuse investigation assessments	Received June 22, 2020
B-147R-CA-106	Notification of COD Pumping and Equipment Status	Received July 29, 2020
B-147R-CA-107	COD pumping and equipment status update	Received September 16, 2020
B-147R-CA-108	Request to update Main Plant Observation Monitoring Well Abandonment of G047	Received September 23, 2020
B-147R-CA-109	Site-wide inorganics and metals evaluation work plan	Received November 302020
B-147R-CA-110	Groundwater Management Zone Re-evaluation	Received December 21, 2020
B-147R-CA-111	Soil Gas Pathway Evaluation Report	Received June 8, 2021
B-147R-CA-112	Results in accordance with Site-Wide Inorganics and Metals Evaluation Report submitted on 12/20/18	Received January 26, 2022
B-147R-CA-113	Remedial Action Selection Report & Main Plant Remedy Roadmap. This is a follow up on IEPA correspondence dated 2-11-20	Received January 31, 2022
B-147R-CA-114	Monitoring Well Condition	Approved January 19, 2023
B-147R-CA-115	Proposed upgrades to the Cone of Depression (COD) Well System	Approved January 19, 2023
B-147R-CA-116	4th Quarter 2021 Demonstration Report	Received May 3, 2022
B-147R-CA-117	Northern GMZ Monitoring Wells G067/G068	Approved January 19, 2023
B-147R-CA-118	Well replacement extension request	Approved April 21, 2023
B-147R-CA-119	4th Quarter 2022 Demonstration Report	
B-147R-CA-120	Documentation of monitoring well installation and abandonment	Received July 21, 2023

Log No.	Submittal	Status
B-147R-CA-121	Main Plant GMZ Well G078 Well Condition Notification letter in accordance with Condition V.D.4 of the RCRA permit	Received July 13, 2023
B-147R-CA-122	Corrective Action Mod request for the Korea tank Farm (Area 9) at the Main Plant	Approved November 20, 2023
B-147R-CA-123	Gradient Control Well G668 and G669 Condition Notification	Received September 13, 2023
B-147R-CA-124	Main Plant Observation Well G97L Well Conditions Notification letter in accordance with ConditionV.D.4 of the RCRA	Received January 30, 2024
B-147R-CA-125	Main plant land reuse investigation data submittal of general background, sampling methods, analytical procedures, and analytical results for areas	Received March 12, 2024
B-147R-CA-126	Additional info to the revised indoor inhalation exposure route eval and work plan dated 8/29/19 to provide an update on changed site conditions	Received April 16, 2024
B-147R-CA-127	Response to recommendation to vent well cap in the 8/3/23 Inspection Report	Received April 24, 2024
B-147R-CA-128	Main Plant Observation well G87L well condition Notification letter in accordance with Condition V.D.4 of RCRA permit	Received July 31, 2024

ATTACHMENT D

CORRECTIVE MEASURES PROGRAM REQUIREMENTS

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT D

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 (AOC) is compared to remediation objectives developed in accordance with 35 IAC Part 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 Part 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 AOC to follow these five (5) 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 (5) 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 CMP 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 AOC. All such documents must be reviewed and approved by the 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 AOCs and provides a conceptual design for these measures. The main criteria for the Illinois EPA review are 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 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 Time 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:

   b. 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.

   c. 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 if 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.

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 a physical corrective measure (e.g., a final cover system, certain 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-inch to 12-inch 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-inch to 12-inch 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.

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 E

SUMMARY OF HISTORICAL AND CURRENT HYDROCARBON RECOVERY AND REMEDIAL SYSTEMS AT THE MAIN PLANT FACILITY

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT E

SUMMARY OF HISTORICAL AND CURRENT HYDROCARBON RECOVERY AND REMEDIAL SYSTEMS AT THE MAIN PLANT FACILITY

Updated as of September 2024

A. SUMMARY

The following subsections detail the historical and current remediation systems operated at the BP Main Plant to mitigate hydrocarbons and refinery product in accordance with Condition II.E of the facility's permit.

Historical remedial operations included a Hydrocarbon Recovery System (HRS) as an interim remedial measure (IRM), as discussed in Section C, below.

Current remedial operations include three pilot-scale Bioremediation Systems as successors to the HRS, which reached its limit of effectiveness. The Bioremediation Systems are being operated to mitigate hydrocarbons and refinery product, and to provide information on long-term performance and other essential data to evaluate the full-scale implementation of hydrocarbon and other refinery related product remediation at the BP Main Plant facility. These Bioremediation Systems include:

- Central Bioventing System (Section E)
- Sothern Biosparging/Bioventing System (Section F)
- Northern Air Sparge/Soil Vapor Extraction System (AS/SVE) (Section G)

B. DEFINITIONS

"Bioremediation systems" means systems or technologies that enhance the biodegradation of hydrocarbons, and preferentially remove compounds that are typically more toxic which results in compositional change. The biodegradation processes affect refinery product from the smear zone and vadose zone as it contributes to soil vapor and dissolved phase impacts. Systems to accomplish this include bioventing, biosparging, and AS/SVE systems or some combination of systems designed to remediate hydrocarbons. It may also include other technologies that could enhance bioremediation such as infiltration galleries or ambient air introduction that can increase oxygen to the subsurface to enhance aerobic biodegradation.

"Hydrocarbon Remediation Well" means any type of well, including Bioremediation System wells, installed to remediate hydrocarbons, from the smear zone and vadose zone.

"Remediating refinery product" means the use of physical, chemical, or biological means to remove or treat refinery product located from the smear zone or vadose zone as it contributes to dissolved phase impacts in order to reduce the mass present at the Site.

"Smear Zone" means the vertical profile of hydrocarbon impacted soil located across the area of groundwater fluctuations, between the high and low groundwater elevations.

"Vadose Zone" means the vertical profile of unsaturated soils located above the water table.

C. HISTORICAL HYDROCARBON RECOVERY SYSTEM (HRS) OPERATION

The HRS at the BP Main Plant facility was commissioned as an IRM in 1993 to hydraulically recover subsurface mobile LNAPL from above the water table. The original system included twenty-one (21) HRS extraction wells as listed below. Following seventeen (17) years of operation, sixteen (16) HRS wells were deactivated in 2010 based on declining LNAPL recovery. After seven (7) additional years of operation, the remaining five (5) HRS wells were deactivated in 2017 due to the system reaching its limit of performance effectiveness. As described in the technical memorandum by BP entitled, Hydrocarbon Recovery System (HRS) Evaluation, dated May 24, 2017, the HRS removed 6.5 million gallons of LNAPL over twenty-two (22) years of operation. However, despite this volume of mobile LNAPL having been removed, the HRS did not have a significant impact on dissolved phase concentrations in groundwater. Accordingly, installation and operation of three (3) pilot-scale bioremediation systems (as discussed below) was implemented as a replacement for the HRS, to provide information needed to design full-scale remedies to target the remaining LNAPL with the goal to reduce dissolved phase concentrations of benzene.

Identification of Historical/Inactive HRS Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
G601	RC-1	56.0	373.40	393.40 – 373.40
G602	RC-2	55.0	374.96	394.96 – 374.96
G603	RC-3	51.0	379.39	399.39 – 379.39
G604	RC-4	49.5	382.18	402.18 – 382.18
G606	RC-6	55.0	373.27	408.27 – 378.27
G607	RC-7	58.5	368.97	403.97 – 373.97
G608	RC-8	61.0	364.90	399.90 – 369.90
G609	RC-9	64.0	367.40	402.40 – 372.40
G610	RC-10	69.0	366.61	401.61 – 371.61
G611	RC-11	70.0	369.96	404.96 – 374.96
G612	RC-12	73.0	368.21	395.21 – 373.21
G615	RC-15	58.4	371.77	407.15 – 377.15
G617	RC-17	58.0	370.41	392.41 – 375.41
G618	RC-18	57.5	371.76	411.76 - 376.76
G619	RC-19	58.0	368.92	408.92 – 373.92
G629	RC-H-29	57.6	379.88	401.48 – 379.88
G605	RC-5	49.8	380.56	401.27 – 381.27
G613	RC-13	60.0	371.25	406.25 – 376.25
G614	RC-14	59.5	371.60	406.60 – 376.60
G616	RC-16	65.0	367.61	402.61 – 372.61
G620	RC-20	85.4	344.72	406.49 – 349.72

ft. MSL= feet above mean sea level

D. CURRENT HYDROCARBON REMEDIATION SYSTEMS OPERATIONS

BP is currently operating three (3) pilot-scale bioremediation systems and has implemented pilot-scale passive bioventing in two (2) additional areas for remediation of groundwater and destruction of LNAPL impacts. These remedial approaches focus on in-situ remediation of hydrocarbons by delivering increased oxygen to the subsurface via different mechanisms as opposed to hydraulic recovery. Biodegradation also has the added benefit of not only removing LNAPL mass but changing the chemical composition of LNAPL in the subsurface, through sparging and venting, to mitigate impact to dissolved phase groundwater conditions. The locations of the bioremediation systems are depicted on Figure E-1.

The primary objectives of these bioremediation systems include:

I. Progressing LNAPL remediation beyond what the HRS could achieve including dissolved phase risk reduction;

II. Identification of technology combinations that will be flexible across water table conditions and optimize vapor treatment;

III. Evaluation of alternative remedial approaches for hydrocarbon and LNAPL mitigation; and

IV. Support for selection and design of appropriate final remedies.

Performance of the initial pilot-scale systems was presented in the October 2018 Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018) and found enhanced biodegradation via all three (3) technologies (i.e., bioventing, biosparging, and AS/SVE) to be viable for remediation of groundwater and more effective at destruction of remaining LNAPL impacts than physical hydrocarbon recovery. The passive bioventing technologies implemented promote the same remedial mechanisms as active bioventing but utilize natural pressure changes between the vadose zone and surface to deliver oxygen into the vadose zone in the form of ambient air. The technologies all specifically enhance the removal rate of hydrocarbon compared to historical systems and promote compositional change to decrease concentrations of aromatic BTEX compounds at the site.

BP completed modifications to the pilot-scale bioremediation systems and technologies between 2019 to 2021 to maintain and enhance hydrocarbon remediation through treatment of expanded site areas at the BP Main Plant Property. Installation of air injection wells, piezometers, and soil vapor monitoring points (VMPs) was initiated in 2019 and completed during First Quarter 2020. Surveying of the newly installed wells was also completed in First Quarter 2020. Installation of requisite equipment and start-up activities were completed in 2020 and 2021. Passive bioventing was implemented in two of the initial pilot areas in 2021 and 2022, as previous remedial efforts progressed remediation in those area to the point where passive bioventing is able to deliver sufficient oxygen to maintain an aerobic vadose zone for enhanced bioremediation.

The three (3) expansion pilot bioremediation systems continue to operate as of 2024. Any changes to the operations or configuration of the systems is documented through an annual update to Attachment C of the permit as required by Section IV.C.8 of the permit. Information presented in the following previously submitted Class 1* Permit modification requests has been incorporated into this exhibit: i) Attachment C Annual Update (1/31/2022); ii) Attachment C Annual Update (1/31/2023); and iii) Attachment C Annual Update (1/31/2024). The configuration and operation of the three pilot-scale bioremediation systems are detailed in Sections E (Central Biovent System), F (Southern Biosparge/Biovent System) and G (Northern AS/SVE System). Each section includes a timeline of operations, enhancements, and modifications for each system.

E. PILOT-SCALE CENTRAL BIOVENTING SYSTEM

A bioventing pilot test was performed to evaluate performance of this remedial approach and to quantify the mass remediation rate (and thus remediation timeframe) in comparison to more traditional LNAPL/contaminants of concern (COCs) removal systems, such as groundwater/LNAPL physical extraction, and, in comparison with natural biodegradation rates. Performance of the pilot-scale system was presented in the October 2018 Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018). The pilot test finding is that bioventing is more effective at treating hydrocarbons through mass removal (biodegradation) and compositional change than physical removal of hydrocarbon.

The biovent system underwent an expansion in 2019-2020, including installation of additional biovent wells to treat a larger area to the west of the original biovent implementation area (Figure 3). Performance data from the initial pilot test was utilized in design of the expansion pilot system to more efficiently deliver oxygen into the subsurface. The monitoring network was also modified with the installation of additional piezometers and VMPs in 2019-2020. Active bioventing in six (6) biovent wells in the initial Central Biovent pilot system area was shut down in July 2020 and transitioned to passive bioventing in 2021 as part of the modifications to the current operating system. Full-time operation of the expanded Central Biovent System was initiated in April 2021.

The six (6) biovent wells from the initial biovent system area were converted to passive biovent wells by fitting one-way valves that allow ambient air into the vadose zone when negative pressure is present in the subsurface. In April 2023, Main Plant Observation Well G050 was also fitted for passive bioventing as an IRM to address LNAPL.

A timeline of system operations is provided below.

Time Period	Description	Wells
April 2017-June 2020	Initial pilot wells operate with active bioventing.	A3BVS-S, A3BVS-D, A3BVNW-S, A3BVNW-D, A3BVNE-S, A3BVNE-D
July 2020-March 2021	System shut down for completion of system	

	expansions and electrical system upgrades.	
April 2021-2024 (ongoing)	Expansion system wells operate with active bioventing.	A3BV-1A, A3BV-1B, A3BV-2A, A3BV2B, A3BV-3A, A3BV-3B, A3BV-4A, A3BV-4B, A3BV-5A, A3BV-5B, A3BV-6A, A3BV-6
December 2021- 2024 (ongoing)	Initial pilot wells used for passive bioventing.	A3BVS-S, A3BVS-D, A3BVNW-S, A3BVNW-D, A3BVNE-S, A3BVNE-D
April 2023-2024 (ongoing)	Main Plant Observation Well used for passive bioventing.	G050

System Description

The pilot-scale biovent system equipment is designed to deliver sufficient air into the subsurface at low pressures to allow for aerobic respiration to dominate the treatment zone. Flow from a rotary vane compressor delivers air at total flow rates up to 60 standard cubic feet per minute (scfm) @ 10 pounds per square inch (psi), split into up to 12 of the 18 total biovent wells. Air from the compressor has a throttling valve, temperature indicator, check valve, and pressure indicator. The biovent process and instrumentation diagram is presented as Figure 2, and the biovent system schematic is presented as Figure 2A.

Flow from the equipment is routed through a 6-leg manifold. Each manifold leg has a flow control valve, rotameter-style flowmeter, and pressure gauge. Each manifold leg feeds up to two (2) biovent wells via aboveground piping. Each of the biovent well lateral legs has its own flow control valve and pressure indicator. Operation of each of the six (6) manifold legs is controlled with a normally closed solenoid controlled via a human machine interface (HMI) screen on an interior control panel. The system components are plumbed in a modular/mobile enclosure with environmental controls (e.g. lighting, heating, and ventilation).

Biovent configurations and flow rates are controlled by system valves, the Programmable Logic Controller (PLC) and HMI. The system is designed to operate up to 12 of the 18 total individual biovent points at a time in any combination. Individual point flow rates are between 1 to 20 scfm, with a combined rate of up to 60 scfm. Flow rates, pressures, and operational timing are monitored and maintained by system technicians and engineers.

Biovent System Layout and Well Network

The pilot-scale biovent system layout and well network are depicted on Figure 3. The Central Biovent System remediation wells include 18 biovent wells, and performance monitoring utilizes a series of piezometers and VMPs as summarized below.

Biovent Wells: Eighteen (18) total biovent wells are present; six (6) were components of the initial system installation, and twelve (12) were installed during the system expansion. Biovent

well construction was designed to target the vadose zone directly above the water table under typical conditions.

Piezometers: Six (6) total piezometers were installed to monitor the shallow water table and identify LNAPL presence in the remediation areas. Piezometers supplement existing monitoring wells in the north (G99L) and south (G13L) of the expansion treatment area. One (1) additional deep monitoring well is present in the initial treatment area – A3AS-C.

Vapor Monitoring Points: A total of twenty (20) nested VMP locations are used to monitor the vadose zone to measure degradation. VMP depths are staggered to ensure granularity in measuring impacts and changing gradients. The twenty (20) nested VMPs are located at differing distances from the pilot test wells and throughout the treatment zones to allow for monitoring the influence of the system. Each location contains 3-4 nested VMPs for a total of 67 individual VMPs.

The wells comprising the Bioventing system are listed below:

Bioventing Hydrocarbon Remediation Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A3AS-C	A3AS-C	70	361.19	366.19 - 361.19
A3BVS-S	A3BVS-S	25	406.27	416.27 - 406.27
A3BVS-D	A3BVS-D	35	396.20	406.20 – 396.20
A3BVNW-S	A3BVNW-S	25	406.05	416.05 – 406.05
A3BVNW-D	A3BVNW-D	35	396.11	406.11 – 396.11
A3BVNE-S	A3BVNE-S	25	406.27	416.27 – 406.27
A3BVNE-D	A3BVNE-D	35	396.28	406.28 – 396.28
A3BV-1A	A3BV-1A	32	397.77	407.77-397.77
A3BV-1B	A3BV-1B	32	397.24	407.24-397.24
A3BV-2A	A3BV-2A	32	397.72	407.72-397.72
A3BV-2B	A3BV-2B	32	397.02	407.02-397.02
A3BV-3A	A3BV-3A	32	398.35	408.35-398.35
A3BV-3B	A3BV-3B	32	399.09	409.09-399.09
A3BV-4A	A3BV-4A	32	396.96	406.96-396.96
A3BV-4B	A3BV-4B	32	397.71	407.71-397.71
A3BV-5A	A3BV-5A	32	398.58	408.58-398.58
A3BV-5B	A3BV-5B	32	398.77	408.77-398.77
A3BV-6A	A3BV-6A	32	399.35	409.35-399.35
A3BV-6B	A3BV-6B	32	399.16	409.16-399.16

Bioventing System Area Piezometers

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)

A3PZ-N	A3PZ-N	35	396.11	396.11 - 411.11
A3PZ-C	A3PZ-C	35	396.22	396.22 - 411.22
A3PZ-S	A3PZ-S	35	396.14	396.14 - 411.14
A3PZ-N2	A3PZ-N2	34	394.64	404.64-394.64
A3PZ-C2	A3PZ-C2	35	394.61	404.61-394.61
A3PZ-S2	A3PZ-S2	36	394.66	404.66-394.66

Bioventing System Area Vapor Monitoring Points

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Interval (ft. BGS)	Well Diameter (inches)
A3VMPNA-10	A3VMPNA-10	10	9.5-10	0.75
A3VMPNA-20	A3VMPNA-20	20	19.5-20	0.75
A3VMPNA-24	A3VMPNA-24	24	23.5-24	0.75
A3VMPNA-28	A3VMPNA-28	28	27.5-28	0.75
A3VMPNB-15	A3VMPNB-15	15	14.5-15	0.75
A3VMPNB-22	A3VMPNB-22	22	21.5-22	0.75
A3VMPNB-26	A3VMPNB-26	26	25.5-26	0.75
A3VMPNB-30	A3VMPNB-30	30	29.5-30	0.75
A3VMPC-10	A3VMPC-10	10	9.5-10	0.75
A3VMPC-20	A3VMPC-20	20	19.5-20	0.75
A3VMPC-24	A3VMPC-24	24	23.5-24	0.75
A3VMPC-28	A3VMPC-28	28	27.5-28	0.75
A3VMPSW-10	A3VMPSW-10	10	9.5-10	0.75
A3VMPSW-20	A3VMPSW-20	20	19.5-20	0.75
A3VMPSW-24	A3VMPSW-24	24	23.5-24	0.75
A3VMPSW-28	A3VMPSW-28	28	27.5-28	0.75
A3VMPSW-15	A3VMPSW-15	15	14.5-15	0.75
A3VMPSW-22	A3VMPSW-22	22	21.5-22	0.75
A3VMPSW-26	A3VMPSW-26	26	25.5-26	0.75
A3VMPSW-30	A3VMPSW-30	30	29.5-30	0.75
A3VMPSE-10	A3VMPSE-10	10	9.5-10	0.75
A3VMPSE-20	A3VMPSE-20	20	19.5-20	0.75
A3VMPSE-24	A3VMPSE-24	24	23.5-24	0.75
A3VMPSE-28	A3VMPSE-28	28	27.5-28	0.75
A3VMPSE-15	A3VMPSE-15	15	14.5-15	0.75
A3VMPSE-22	A3VMPSE-22	22	21.5-22	0.75
A3VMPSE-26	A3VMPSE-26	26	25.5-26	0.75
A3VMPSE-30	A3VMPSE-30	30	29.5-30	0.75
A3VMP1-S	A3VMP1-S	17	16-17	0.75
A3VMP1-M	A3VMP1-M	22	21-22	0.75
A3VMP1-D	A3VMP1-D	27	26-27	0.75
A3VMP2-S	A3VMP2-S	17	16-17	0.75
A3VMP2-M	A3VMP2-M	22	21-22	0.75
A3VMP2-D	A3VMP2-D	27	26-27	0.75
A3VMP3-S	A3VMP3-S	17	16-17	0.75

A3VMP3-M	A3VMP3-M	22	21-22	0.75
A3VMP3-D	A3VMP3-D	27	26-27	0.75
A3VMP4-S	A3VMP4-S	17	16-17	0.75
A3VMP4-M	A3VMP4-M	22	21-22	0.75
A3VMP4-D	A3VMP4-D	27	26-27	0.75
A3VMP5-S	A3VMP5-S	17	16-17	0.75
A3VMP5-M	A3VMP5-M	22	21-22	0.75
A3VMP5-D	A3VMP5-D	27	26-27	0.75
A3VMP6-S	A3VMP6-S	17	16-17	0.75
A3VMP6-M	A3VMP6-M	22	21-22	0.75
A3VMP6-D	A3VMP6-D	27	26-27	0.75
A3VMP7-S	A3VMP7-S	17	16-17	0.75
A3VMP7-M	A3VMP7-M	22	21-22	0.75
A3VMP7-D	A3VMP7-D	27	26-27	0.75
A3VMP8-S	A3VMP8-S	17	16-17	0.75
A3VMP8-M	A3VMP8-M	22	21-22	0.75
A3VMP8-D	A3VMP8-D	27	26-27	0.75
A3VMP9-S	A3VMP9-S	17	16-17	0.75
A3VMP9-M	A3VMP9-M	22	21-22	0.75
A3VMP9-D	A3VMP9-D	27	26-27	0.75
A3VMP10-S	A3VMP10-S	17	16-17	0.75
A3VMP10-M	A3VMP10-M	22	21-22	0.75
A3VMP10-D	A3VMP10-D	27	26-27	0.75
A3VMP11-S	A3VMP11-S	17	16-17	0.75
A3VMP11-M	A3VMP11-M	22	21-22	0.75
A3VMP11-D	A3VMP11-D	27	26-27	0.75
A3VMP12-S	A3VMP12-S	17	16-17	0.75
A3VMP12-M	A3VMP12-M	22	21-22	0.75
A3VMP12-D	A3VMP12-D	27	26-27	0.75
A3VMP13-S	A3VMP13-S	17	16-17	0.75
A3VMP13-M	A3VMP13-M	22	21-22	0.75
A3VMP13-D	A3VMP13-D	27	26-27	0.75

Bioventing System Area Deep Monitoring Well

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A3AS-C	A3AS-C	70	361.19	361.19 - 366.19

F. PILOT-SCALE SOUTHERN BIOSPARGE/BIOVENT SYSTEM

A biosparging/bioventing pilot test was performed to evaluate the performance of this remedial approach and quantify the mass remediation rate (and thus remediation timeframe) in comparison to more traditional LNAPL/COC removal systems, such as groundwater/LNAPL physical extraction, and, in comparison with natural biodegradation rates. The test was also intended to determine the efficiency of using a horizontal well for sparging, and whether this approach could potentially be used to serve as a barrier for contaminant migration in the

dissolved phase. Performance of the pilot-scale system was presented in the October 2018 Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018); the pilot test finding is that biosparging/bioventing is treating hydrocarbons more effectively than previous hydrocarbon recovery efforts.

The biosparge system was modified to treat a larger area to the north and west of the original implementation area and to include use of bioventing. When operating under the expanded bioventing scenario, flow from the existing compressor is routed through a flow amplifying air eductor and manifold to deliver air to 36 vertical biovent wells (as opposed to the original single horizontal biosparge well). The monitoring network was also expanded with the addition of piezometers and VMPs. The wells associated with the bioparge/biovent system expansion were installed in 2019-2020. Active biosparging in the horizontal well was shut down in September 2020 as part of the modifications to the current operating system. Full-time operation of the modified and expanded Southern Biosparge/Biovent System was initiated in July 2021.

In April 2023, BP Main Plant Observation Well G16L was converted to a passive biovent well by fitting a one-way valve to allow ambient air into the vadose zone when negative pressure is present in the subsurface. In December 2023, G16L was then converted to an active biovent well as part of the Pilot-Scale Southern Biosparge/Biovent System.

A timeline of system operations is provided below.

Time Period	Description	Wells
April 2017-September 2020	Initial horizontal well operates with active biosparging.	A5HBS
October 2020-June 2021	System shut down for completion of system expansions and electrical system upgrades.	
July 2021-2024 (ongoing)	Expansion system wells operate with active bioventing.	A5BV-1, A5BV-2, A5BV-3, A5BV-4, A5BV-5, A5BV-6, A5BV-7, A5BV-8, A5BV-9, A5BV-10, A5BV-11, A5BV-12, A5BV-13, A5BV-14, A5BV-15, A5BV-16, A5BV-17, A5BV-18, A5BV-19, A5BV-20, A5BV-21, A5BV-22, A5BV-23, A5BV-24, A5BV-25, A5BV-26, A5BV-27, A5BV-28, A5BV-29, A5BV-30, A5BV-31, A5BV-32, A5BV-33, A5BV-34, A5BV-35

April 2023- November 2023	Main Plant Observation Well used for passive bioventing.	G16L
December 2023- 2024 (ongoing)	Main Plant Observation Well used for active bioventing.	G16L

System Description

The biosparge/biovent pilot test system is designed to deliver air into the subsurface at moderate flow rates and pressure. The biosparge scenario volatizes VOCs in the saturated zone and enhances biodegradation of those impacts via inducing aerobic conditions. The biovent scenario delivers air to the vadose zone to ensure aerobic conditions are present which enhances hydrocarbon biodegradation. Flow from a compressor delivers air at flow rates up to 150 scfm at 40 psi. Air from the compressor has a receiver tank, particulate filter, throttling valve, flow meter, and pressure gauge. The biosparge/biovent process and instrumentation diagram is presented as Figure 4, and the biosparge/biovent process flow schematic is presented as Figure 4A.

Under the biosparge scenario, flow from the equipment is routed directly to the biosparge horizontal well with a flow control valve, flowmeter, pressure regulator, and pressure gauge. Operation of the well is controlled with a normally-closed solenoid controlled via an HMI screen on an interior control panel. The system components are plumbed in a modular/mobile enclosure with environmental controls (e.g. lighting interior and exterior, heating, and ventilation).

Biosparge configurations and flow rates are controlled by system valves, the pressure regulator, PLC and HMI. The system is designed to operate the biosparge well at flow rates between 30 and 150 scfm but typically operates in the range of 50 to 85 scfm total flow. Flow rates, pressures, and operational timing are monitored and maintained by system technicians and engineers.

Under the biovent configuration, rather than running compressed air directly to the biosparge horizontal well, compressed air is run through an air eductor to boost flow rates up to 240 scfm at 10 psi in a manifold building with 36 manifold points. Each well on the manifold is equipped with a flow control valve, flowmeter, pressure regulator, and pressure gauge. Operation of each well is controlled with a normally-closed solenoid controlled via an HMI screen on an interior control panel. The manifold components are plumbed in a modular/mobile enclosure with environmental controls (e.g. lighting interior and exterior, heating, and ventilation).

Biosparge System Layout and Well Network

The biosparge/biovent system layout and well network are depicted on Figure 5. The Biosparge Remediation Well includes the horizontal biosparge well. There are 35 biovent remediation wells in the Southern Biosparge/Biovent System area, plus the monitoring well (G16L) to

which bioventing is being applied. Performance monitoring utilizes a series of piezometers and VMPs as summarized below.

Biosparge Horizontal Well:

One (1) horizontal biosparge well was installed for the pilot test. The biosparge well construction described below was designed to be placed at the bottom of groundwater impacts to create an oxygen curtain through which impacted water should pass. The screened portion of the well is 150 feet long and placed perpendicular to groundwater flow; the screen length allows for groundwater flow to be influenced within the targeted area even with minor temporal variations in groundwater flow.

Horizontal biosparge well construction specifications are summarized below:

I. Horizontal directional drilling methodology;
II. Installed at a depth of 45 ft-bgs;
III. Screen length of 150 feet;
IV. Riser length of 240 to 250 feet on each end of well (630 feet total length horizontally);
V. 3-inch diameter, HDPE construction;
VI. Custom slotting to uniformly sparge approximately 2 to 10 scfm per 10 horizontal feet of screen.

Biovent Wells:
Thirty-five (35) biovent wells were installed during the system expansion. Biovent well construction was designed to target the vadose zone directly above the groundwater table under typical conditions. In December 2023, G16L was converted to an active biovent well, for a current total of thirty-six (36) biovent wells.

Piezometers:
A total of twenty-two (22) piezometers were installed at three different depths – fifteen (15) shallow, six (6) mid, and one (1) deep to monitor the vertical extent of impacts in the water table. In the biosparge area, seven (7) wells were installed upgradient of the biosparge well and twelve (12) wells downgradient. In the biovent area, three (3) additional piezometers supplement existing monitoring wells in the treatment area (A6MW03, G048, and G049).

Vapor Monitoring Points:
Twenty-eight (28) nested VMPs were installed to monitor the vadose zone impacts. Each set of nested points contains two (2) to three (3) depths of monitoring points to assess the vadose zone vertically for a total of 81 points. VMP placement is meant to measure influence at different depths and measure the extent of influence perpendicular from the well screen orientation.

The wells comprising the Biosparging system are listed below:

Biosparging Hydrocarbon Remediation Well

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A5HBS*	A5HBS	45	varies*	(150 ft long)*

*Horizontal Well

Bioventing Hydrocarbon Remediation Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A5BV-1	A5BV-1	36	395.27	405.27-395.27
A5BV-2	A5BV-2	36	396.77	406.77-396.77
A5BV-3	A5BV-3	36	396.08	406.08-396.08
A5BV-4	A5BV-4	36	395.99	405.99-395.99
A5BV-5	A5BV-5	36	395.93	405.93-395.93
A5BV-6	A5BV-6	36	394.65	404.65-394.65
A5BV-7	A5BV-7	36	395.51	405.51-395.51
A5BV-8	A5BV-8	36	NS	NS
A5BV-9	A5BV-9	36	396.53	406.53-396.53
A5BV-10	A5BV-10	36	396.45	406.45-396.45
A5BV-11	A5BV-11	36	396.33	406.33-396.33
A5BV-12	A5BV-12	36	396.32	406.32-396.32
A5BV-13	A5BV-13	34	397.05	407.05-397.05
A5BV-14	A5BV-14	36	397.62	407.62-397.62
A5BV-15	A5BV-15	36	NS	NS
A5BV-16	A5BV-16	36	NS	NS
A5BV-17	A5BV-17	36	396.39	406.39-396.39
A5BV-18	A5BV-18	36	396.38	406.38-396.38
A5BV-20	A5BV-20	36	395.21	405.21-395.21
A5BV-21	A5BV-21	36	395.26	405.26-395.23
A5BV-22	A5BV-22	36	397.00	407.00-397.00
A5BV-23	A5BV-23	38	391.95	406.95-391.95
A5BV-24	A5BV-24	41	391.75	406.75-391.75
A5BV-25	A5BV-25	41	391.38	406.38-391.38
A5BV-26	A5BV-26	36	397.40	407.40-397.40
A5BV-27	A5BV-27	38	395.68	405.68-395.68
A5BV-28	A5BV-28	38	393.43	408.43-393.43
A5BV-29	A5BV-29	38	395.04	410.04-395.04
A5BV-31	A5BV-31	38	394.73	409.73-394.73
A5BV-32	A5BV-32	33	398.32	408.32-398.32
A5BV-33	A5BV-33	34	397.61	407.61-397.61
A5BV-34	A5BV-34	38	391.53	406.53-391.53
A5BV-35	A5BV-35	38	391.48	406.48-391.48
A5BV-36	A5BV-36	38	391.65	406.65-391.65

NS – Not surveyed, in a health and safety exclusion zone during surveying.

Biosparging/Bioventing System Area Piezometers

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A5PZN-S	A5PZN-S	40	389.29	389.29 - 399.29
A5PZNW-S	A5PZNW-S	38	391.56	391.56 - 401.56
A5PZNW-M	A5PZNW-M	45	384.51	384.51 - 389.51
A5PZW-S	A5PZW-S	39.5	390.44	390.44 - 400.44
A5PZW-M	A5PZW-M	45	385.07	385.07 - 390.07
A5PZW-D	A5PZW-D	65	365.04	365.04 - 370.04
A5PZW-S1	A5PZW-S1	40	389.51	389.51 - 399.51
A5PZW-S2	A5PZW-S2	40	389.85	389.85 - 399.85
A5PZSW-S	A5PZSW-S	40	389.82	389.82 - 399.82
A5PZSW-M	A5PZSW-M	45	384.86	384.86 - 389.86
A5PZNE-S	A5PZNE-S	40	389.51	389.51 - 399.51
A5PZNE-M	A5PZNE-M	45	384.51	384.51 - 389.51
A5PZE-S1	A5PZE-S1	40	389.93	389.93 - 399.93
A5PZE-S2	A5PZE-S2	40	390.72	390.72 - 400.72
A5PZE-M	A5PZE-M	45	384.62	384.62 - 389.62
A5PZSE-S	A5PZSE-S	40	389.79	389.79 - 399.79
A5PZSE-M	A5PZSE-M	45	384.71	384.71 - 389.71
A5PZS-S1	A5PZS-S1	40	389.51	389.51 - 399.51
A5PZS-S2	A5PZS-S2	40	389.90	389.90 - 399.90
A5PZ-1	A5PZ-1	40	392.47	402.47-392.47
A5PZ-2	A5PZ-2	40	391.59	401.59-391.59
A5PZ-3	A5PZ-3	40	NS	NS

Biosparging System Area Vapor Monitoring Points

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Interval (ft. BGS)	Well Diameter (inches)
A5VMPNW-S	A5VMPNW-S	10	9.5-10	0.75
A5VMPNW-M	A5VMPNW-M	20	19.5-20	0.75
A5VMPNW-D	A5VMPNW-D	25	24.5-25	0.75
A5VMPSW-S	A5VMPSW-S	10	9.5-10	0.75
A5VMPSW-M	A5VMPSW-M	20	19.5-20	0.75
A5VMPSW-D	A5VMPSW-D	25	24.5-25	0.75
A5VMPW-S	A5VMPW-S	10	9.5-10	0.75
A5VMPW-M	A5VMPW-M	20	19.5-20	0.75
A5VMPW-D	A5VMPW-D	25	24.5-25	0.75
A5VMPE-S	A5VMPE-S	10	9.5-10	0.75
A5VMPE-M	A5VMPE-M	20	19.5-20	0.75

A5VMPE-D	A5VMPE-D	25	24.5-25	0.75
A5VMP1-S	A5VMP1-S	23	22-23	0.75
A5VMP1-M	A5VMP1-M	28	27-28	0.75
A5VMP2-S	A5VMP2-S	23	22-23	0.75
A5VMP2-M	A5VMP2-M	28	27-28	0.75
A5VMP2-D	A5VMP2-D	33	32-33	0.75
A5VMP3-S	A5VMP3-S	22	21-22	0.75
A5VMP3-M	A5VMP3-M	27	26-27	0.75
A5VMP3-D	A5VMP3-D	32	31-32	0.75
A5VMP4-S	A5VMP4-S	22	21-22	0.75
A5VMP4-M	A5VMP4-M	29	28-29	0.75
A5VMP4-D	A5VMP4-D	33	32-33	0.75
A5VMP5-S	A5VMP5-S	23	22-23	0.75
A5VMP5-M	A5VMP5-M	28	27-28	0.75
A5VMP6-S	A5VMP6-S	21	20-21	0.75
A5VMP6-M	A5VMP6-M	26	25-26	0.75
A5VMP6-D	A5VMP6-D	31	30-31	0.75
A5VMP7-S	A5VMP7-S	21	20-21	0.75
A5VMP7-M	A5VMP7-M	26	25-26	0.75
A5VMP7-D	A5VMP7-D	31	30-31	0.75
A5VMP8-S	A5VMP8-S	22	21-22	0.75
A5VMP8-M	A5VMP8-M	27	26-27	0.75
A5VMP8-D	A5VMP8-D	32	31-32	0.75
A5VMP9-S	A5VMP9-S	20	19-20	0.75
A5VMP9-M	A5VMP9-M	25	24-25	0.75
A5VMP10-S	A5VMP10-S	20	19-20	0.75
A5VMP10-M	A5VMP10-M	25	24-25	0.75
A5VMP10-D	A5VMP10-D	30	29-30	0.75
A5VMP11-S	A5VMP11-S	22	21-22	0.75
A5VMP11-M	A5VMP11-M	27	26-27	0.75
A5VMP11-D	A5VMP11-D	32	31-32	0.75
A5VMP12-S	A5VMP12-S	22	21-22	0.75
A5VMP12-M	A5VMP12-M	27	26-27	0.75
A5VMP12-D	A5VMP12-D	32	31-32	0.75
A5VMP13-S	A5VMP13-S	22	21-22	0.75
A5VMP13-M	A5VMP13-M	27	26-27	0.75
A5VMP13-D	A5VMP13-D	32	31-32	0.75
A5VMP14-S	A5VMP14-S	22	21-22	0.75
A5VMP14-M	A5VMP14-M	27	26-27	0.75
A5VMP14-D	A5VMP14-D	32	31-32	0.75
A5VMP15-S	A5VMP15-S	22	21-22	0.75
A5VMP15-M	A5VMP15-M	27	26-27	0.75
A5VMP15-D	A5VMP15-D	32	31-32	0.75
A5VMP16-S	A5VMP16-S	22	21-22	0.75
A5VMP16-M	A5VMP16-M	27	26-27	0.75
A5VMP16-D	A5VMP16-D	32	31-32	0.75
A5VMP17-S	A5VMP17-S	22	21-22	0.75

A5VMP17-M	A5VMP17-M	27	26-27	0.75
A5VMP17-D	A5VMP17-D	32	31-32	0.75
A5VMP18-S	A5VMP18-S	22	21-22	0.75
A5VMP18-M	A5VMP18-M	27	26-27	0.75
A5VMP18-D	A5VMP18-D	32	31-32	0.75
A5VMP19-S	A5VMP19-S	22	21-22	0.75
A5VMP19-M	A5VMP19-M	27	26-27	0.75
A5VMP19-D	A5VMP19-D	32	31-32	0.75
A5VMP20-S	A5VMP20-S	24	23-24	0.75
A5VMP20-M	A5VMP20-M	28	27-28	0.75
A5VMP20-D	A5VMP20-D	32	31-32	0.75
A5VMP21-S	A5VMP21-S	22	21-22	0.75
A5VMP21-M	A5VMP21-M	27	26-27	0.75
A5VMP21-D	A5VMP21-D	32	31-32	0.75
A5VMP22-S	A5VMP22-S	22	21-22	0.75
A5VMP22-M	A5VMP22-M	27	26-27	0.75
A5VMP22-D	A5VMP22-D	35	34-35	0.75
A5VMP23-S	A5VMP23-S	22	21-22	0.75
A5VMP23-M	A5VMP23-M	27	26-27	0.75
A5VMP23-D	A5VMP23-D	32	31-32	0.75
A5VMP24-S	A5VMP24-S	23	22-23	0.75
A5VMP24-M	A5VMP24-M	28	27-28	0.75
A5VMP24-D	A5VMP24-D	32	31-32	0.75

G. PILOT-SCALE AIR SPARGE / SOIL VAPOR EXTRACTION (AS/SVE) SYSTEM

An AS/SVE pilot test was performed to evaluate performance of this remedial approach and quantify the mass remediation rate (and thus remediation timeframe) in comparison to more traditional LNAPL/COC removal systems, such as groundwater/LNAPL physical extraction, and, in comparison with natural biodegradation rates. The AS/SVE test is evaluating the combined effects air sparging below the water table for stripping of contaminants and enhancing aerobic biodegradation in the vadose zone and below the water table via introduction of ambient air. SVE is specifically utilized when biodegradation is insufficient to control the VOCs in soil gas during sparging or bioventing. Performance of the pilot-scale system was presented in the October 2018 Performance Report – Pilot-Scale Bioremediation Systems (BP, 2018); the pilot test finding is that AS/SVE is treating hydrocarbons more effectively than previous hydrocarbon recovery efforts.

The AS/SVE extraction system was modified to treat a larger area to the south, east, and west of the original AS/SVE pilot test area. This included installation of additional air sparge and soil vapor extraction wells. To treat the additional loading, a catalytic oxidizer is being used for the treatment of off-gases, a change from the previous granular activated carbon off-gas treatment system. The monitoring network was also modified with the addition of piezometers and VMPs. All of the expansion wells were installed in 2019-2020. The initial AS/SVE pilot system was shut down in July 2020 as part of the modifications to the current operating system. Full-time operation of the expanded AS/SVE System was initiated in December 2020.

The four SVE wells and four shallow piezometers from the initial AS/SVE system area were converted to passive biovent wells in December 2021 by fitting one-way valves that allow ambient air into the vadose zone when negative pressure is present in the subsurface.

A timeline of system operations is provided below.

Time Period	Description	Wells
June 2017-July 2020	Initial pilot wells operate AS/SVE with granular activated carbon (GAC) off-gas treatment.	A8AS-N, A8AS-W, A8AS-E, A8AS-S, A8AS-C, A8SVE-NW, A8SVE-NE, A8SVESW, A8SVE-SE
August 2020- November 2020	System shut down for completion of system expansions and electrical system upgrades.	
December 2020- 2024 (ongoing)	Expansion system wells operate AS/SVE with catalytic oxidizer off-gas treatment.	A8AS-1A, A8AS-1B, A8AS-1C, A8AS-2A, A8AS-2B, A8AS-2C, A8AS-3A, A8AS-3B, A8AS-3C, A8AS-4A, A8AS-4B, A8AS-4C, A8AS-5A, A8AS-5B, A8AS-5C, A8SVE-1A, A8SVE-1B, A8SVE-2A, A8SVE-2B, A8SVE-3A, A8SVE-3B
October 2022-2024 (ongoing)	Initial pilot SVE wells and shallow piezometers used for passive bioventing.	A8SVE-NW, A8SVE-NE, A8SVE-SW, A8SVE-SE, A8PZS-S, A8PZN-S, A8PZNE-S, A8PZSW-S

System Description

The AS/SVE pilot test system is designed to deliver air into the subsurface and capture resultant vapors. Flow from the AS compressor delivers air at total flow rates up to 150 scfm at 50 psi, split into up to fifteen (15) of the twenty (20) AS wells. Air from the blower has a receiver tank, particulate filter, throttling valve, flow meter, and pressure gauge. Flow from the SVE blower collects vapors at total flow rates up to 500 scfm at 60 inches of water column (iw), split among up to six (6) of the ten (10) SVE wells. Vapors collected from the blower pass through throttling valves, a moisture knockout tank, dilution valve, vacuum gauges, and particulate filter prior to entering the blower. After exiting the blower discharged vapors pass through a flow meter, pressure gauge, and temperature gauge prior to passing through a heat exchanger and catalytic oxidizer prior to discharging through a stack. The off-gas treatment via a catalytic oxidizer was installed in the third quarter of 2020 and is a change from granular activated carbon treatment utilized during initial pilot test operation.

Condensate collected in the moisture separator is drained via an automated pumping system to a condensate holding tank within the enclosure. This condensate is periodically pumped out manually and discharged to the catch basin in the wash down pad for entry into the site groundwater treatment system. The AS/SVE process and instrumentation plan is presented as Figure 6, and the AS/SVE system schematic is presented as Figure 6A.

AS flow is routed through a five (5)-point manifold and split to reach up to fifteen (15) of the twenty (20) AS wells. Each manifold leg has a solenoid valve, flow control valve, rotameter-style flowmeter, and pressure gauge. SVE flow is collected through a four (4)-point manifold to up to six (6) of the ten (10) SVE wells. Each manifold leg has a flow control valve, pilot-tube flowmeter, and vacuum gauge.

The system components are plumbed in a modular/mobile enclosure with interior/exterior lighting and environmental controls (e.g. heating and ventilation). Operational controls for the system include programmed/automated controls in the form of a PLC with HMI, individual equipment components, and automated operation of the process control valves. The gas flow capacities of the AS/SVE system are controlled by the air compressor and the SVE blower. AS compressor flow rates to the individual air sparge wells are between 1 and 30 scfm, with a combined rate of up to 150 scfm at 50 psi. Flow from the SVE blower collects vapors at total flow rates up to 500 scfm at 60 iw, split among the SVE wells. Flow rates, pressures, and operational timing are monitored and maintained by system technicians and engineers.

AS/SVE System Layout and Well Network

The AS/SVE system layout and well network are depicted on Figure 7. The Remediation Wells include twenty (20) AS wells and ten (10) SVE wells. At any given time, up to fifteen (15) AS wells and six (6) SVE wells can be active; the active Remediation Wells can be configured based on the capacity of the equipment and manifold listed above. Performance monitoring utilizes a series of piezometers and VMPs as summarized below.

Air Sparge Wells: Twenty (20) AS wells were installed in the treatment areas. The AS wells were installed to the full depth of groundwater impacts.

SVE Wells: Ten (10) SVE wells were installed to capture vapors created by the AS wells. The wells were placed to cover the AS well layout to ensure capture of any generated vapors.

Piezometers: A total of sixteen (16) piezometers were installed at three different depths - shallow, mid, and deep to monitor the full extent of impacts in groundwater. In the expansion area, the piezometers supplement existing monitoring wells in the treatment area (G85L and G86L). In June 2023, R85L, R85D, and R85A were installed to replace G85L, which was plugged and abandoned in November 2023.

Vapor Monitoring Points: Seventeen (17) nested VMPs were installed to monitor the vadose zone impacts. Each nested point contains three depths of monitoring points to assess the full vadose zone vertically, for a total of fifty-one (51) total VMPs.

The wells comprising the AS/SVE system are listed below:

Active AS/SVE Hydrocarbon Remediation Wells

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A8AS-N	A8AS-N	50	390.49	395.49 – 390.49
A8AS-W	A8AS-W	50	390.51	395.51 – 390.51
A8AS-C	A8AS-C	50	390.74	395.74 – 390.74
A8AS-E	A8AS-E	45	395.59	400.59 – 395.59
A8AS-S	A8AS-S	45	395.71	400.71 – 395.71
A8SVE-NW	A8SVE-NW	35	405.55	415.55 – 405.55
A8SVE-NE	A8SVE-NE	35	405.49	415.49 – 405.49
A8SVE-SW	A8SVE-SW	35	405.71	415.71 – 405.71
A8SVE-SE	A8SVE-SE	35	405.64	415.64 – 405.64
A8AS-1A	A8AS-1A	67	373.53	378.53-373.53
A8AS-1B	A8AS-1B	67	373.57	378.57-373.57
A8-AS-1C	A8-AS-1C	70	369.62	374.62-369.62
A8AS-2A	A8AS-2A	67	373.28	378.28-373.28
A8AS-2B	A8AS-2B	67	372.67	377.67-372.67
A8AS-2C	A8AS-2C	70	369.06	374.06-369.06
A8-AS-3A	A8-AS-3A	65	375.59	380.59-375.59
A8AS-3B	A8AS-3B	67	372.66	377.66-372.66
A8-AS-3C	A8-AS-3C	70	368.98	373.98-368.98
A8-AS-4A	A8-AS-4A	65	376.67	381.67-376.67
A8-AS-4B	A8-AS-4B	65	375.83	380.83-375.83
A8-AS-4C	A8-AS-4C	65	375.25	380.25-375.25
A8-AS-5A	A8-AS-5A	65	376.87	381.87-376.87
A8-AS-5B	A8-AS-5B	65	376.71	381.71-376.71
A8-AS-5C	A8-AS-5C	65	376.10	381.10-376.10
A8SVE-1A	A8SVE-1A	25	415.27	425.27-415.27
A8SVE-1B	A8SVE-1B	25	411.49	421.49-411.49
A8SVE-2A	A8SVE-2A	25	415.73	425.73-415.73
A8SVE-2B	A8SVE-2B	25	413.82	423.82-413.82
A8SVE-3A	A8SVE-3A	25	416.91	426.91-416.91
A8SVE-3B	A8SVE-3B	25	416.31	426.31-416.31

AS/SVE System Area Piezometers

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Depth Elevation (ft. MSL)	Well Screen Interval (ft. MSL)
A8PZN-S	A8PZN-S	30	410.88	410.88 - 420.88
A8PZN-M	A8PZN-M	40	400.78	400.78 - 405.78
A8PZN-D	A8PZN-D	45	395.70	395.70 - 400.70
A8PZNW-S	A8PZNW-S	30	410.56	410.56 - 420.56
A8PZNW-M	A8PZNW-M	40	400.57	400.57 - 405.57

A8PZNW-D	A8PZNW-D	45	395.63	395.63 - 400.63
A8PZSE-S	A8PZSE-S	30	410.77	410.77 - 420.77
A8PZSE-M	A8PZSE-M	40	400.76	400.76 - 405.76
A8PZSE-D	A8PZSE-D	45	395.71	395.71 - 400.71
A8PZS-S	A8PZS-S	30	410.66	410.66 - 420.66
A8PZS-M	A8PZS-M	40	400.62	400.62 - 405.62
A8PZS-D	A8PZS-D	45	395.61	395.61 - 400.61
A8PZ-C	A8PZ-C	52	387.85	397.85-387.85
A8PZ-SE	A8PZ-SE	45	396.18	406.18-396.18
A8PZ-NE	A8PZ-NE	50	391.82	401.82-391.82
A8PZ-SW	A8PZ-SW	49	387.30	397.30-387.30

AS/SVE System Area Vapor Monitoring Points

IEPA Well No.	Facility Well No.	Well Depth (ft.)	Well Screen Interval (ft. BGS)	Well Diameter (inches)
A8VMPN-S	A8VMPN-S	10	9.5-10	0.75
A8VMPN-M	A8VMPN-M	20	19.5-20	0.75
A8VMPN-D	A8VMPN-D	25	24.5-25	0.75
A8VMPNE-S	A8VMPNE-S	10	9.5-10	0.75
A8VMPNE-M	A8VMPNE-M	20	19.5-20	0.75
A8VMPNE-D	A8VMPNE-D	25	24.5-25	0.75
A8VMPS-S	A8VMPS-S	10	9.5-10	0.75
A8VMPS-M	A8VMPS-M	20	19.5-20	0.75
A8VMPS-D	A8VMPS-D	25	24.5-25	0.75
A8VMPSW-S	A8VMPSW-S	10	9.5-10	0.75
A8VMPSW-M	A8VMPSW-M	20	19.5-20	0.75
A8VMPSW-D	A8VMPSW-D	25	24.5-25	0.75
A8VMP1-S	A8VMP1-S	5	4-5	0.75
A8VMP1-M	A8VMP1-M	15	14-15	0.75
A8VMP1-D	A8VMP1-D	25	24-25	0.75
A8VMP2-S	A8VMP2-S	5	4-5	0.75
A8VMP2-M	A8VMP2-M	15	14-15	0.75
A8VMP2-D	A8VMP2-D	25	24-25	0.75
A8VMP3-S	A8VMP3-S	5	4-5	0.75
A8VMP3-M	A8VMP3-M	15	14-15	0.75
A8VMP3-D	A8VMP3-D	25	24-25	0.75
A8VMP4-S	A8VMP4-S	5	4-5	0.75
A8VMP4-M	A8VMP4-M	15	14-15	0.75
A8VMP4-D	A8VMP4-D	25	24-25	0.75
A8VMP5-S	A8VMP5-S	5	4-5	0.75
A8VMP5-M	A8VMP5-M	15	14-15	0.75
A8VMP5-D	A8VMP5-D	25	24-25	0.75
A8VMP6-S	A8VMP6-S	5	4-5	0.75
A8VMP6-M	A8VMP6-M	15	14-15	0.75
A8VMP6-D	A8VMP6-D	25	24-25	0.75

A8VMP7-S	A8VMP7-S	5	4-5	0.75
A8VMP7-M	A8VMP7-M	15	14-15	0.75
A8VMP7-D	A8VMP7-D	25	24-25	0.75
A8VMP8-S	A8VMP8-S	5	4-5	0.75
A8VMP8-M	A8VMP8-M	15	14-15	0.75
A8VMP8-D	A8VMP8-D	25	24-25	0.75
A8VMP9-S	A8VMP9-S	5	4-5	0.75
A8VMP9-M	A8VMP9-M	15	14-15	0.75
A8VMP9-D	A8VMP9-D	25	24-25	0.75
A8VMP10-S	A8VMP10-S	5	4-5	0.75
A8VMP10-M	A8VMP10-M	15	14-15	0.75
A8VMP10-D	A8VMP10-D	25	24-25	0.75
A8VMP11-S	A8VMP11-S	5	4-5	0.75
A8VMP11-M	A8VMP11-M	15	14-15	0.75
A8VMP11-D	A8VMP11-D	25	24-25	0.75
A8VMP12-S	A8VMP12-S	5	4-5	0.75
A8VMP12-M	A8VMP12-M	15	14-15	0.75
A8VMP12-D	A8VMP12-D	25	24-25	0.75
A8VMP13-S	A8VMP13-S	5	4-5	0.75
A8VMP13-M	A8VMP13-M	15	14-15	0.75
A8VMP13-D	A8VMP13-D	25	24-25	0.75

Figures to Attachment E:

E-1 -- Site Plan
E-2 -- Process and Instrumentation Plan – Central Biovent System
E-2A- Process Flow Schematic Central Biovent Area
E-3 – Area 3 Biovent Expansion
E-4 -- Process and Instrumentation Plan – Southern Biosparge System
E-4A-Process Flow Schematic Southern Biosparge/Biovent Area
E-5 – Area 5 Biosparge/ Biovent System Area
E-6 – Process and Instrumentation Plan – Air Sparge/SVE System
E-6A-Process Flow Schematic Northern AS/SVE Area
E-7 – Northern Air Sparge/ Soil Vapor Extraction System Area

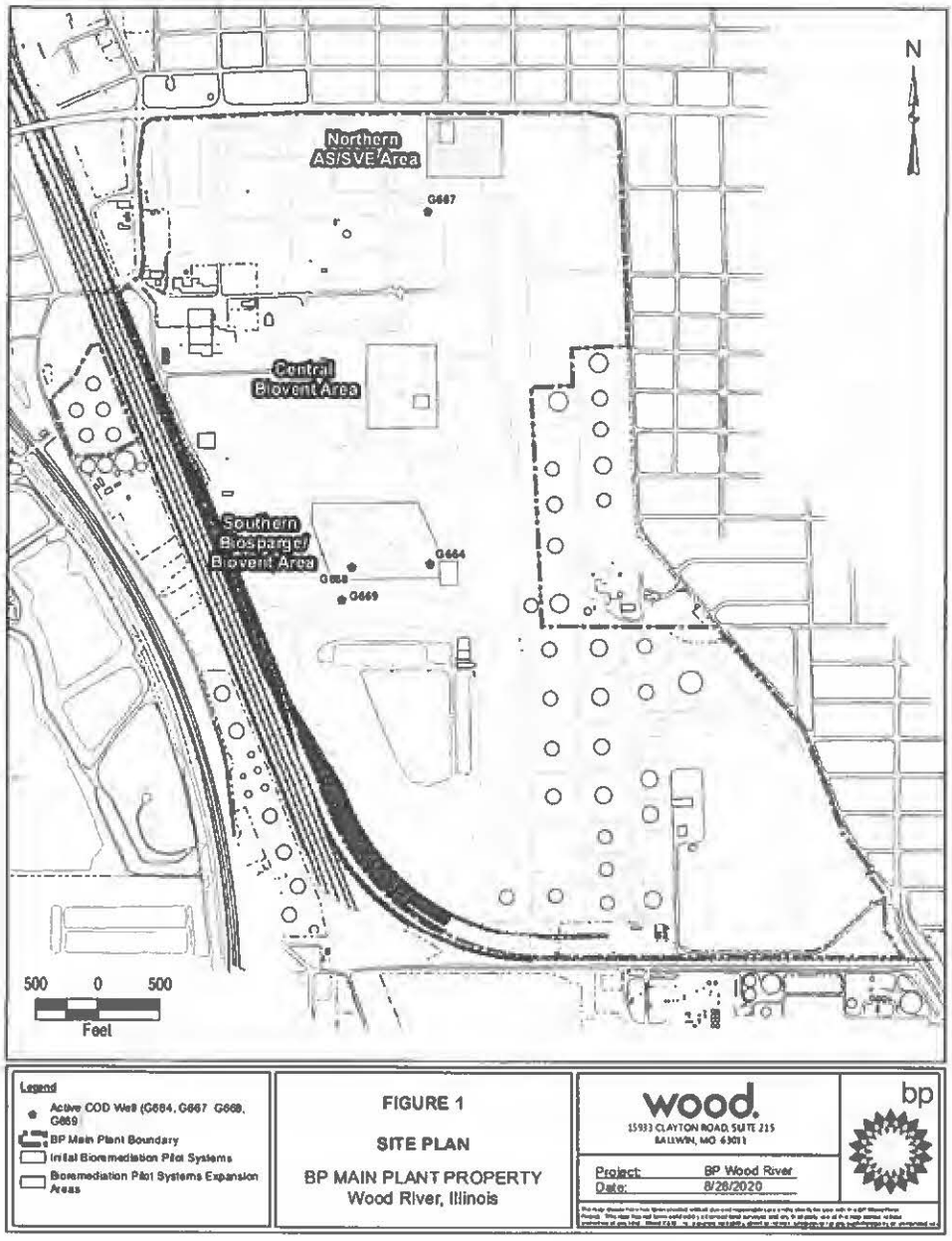


Figure E-1 -- Site Plan

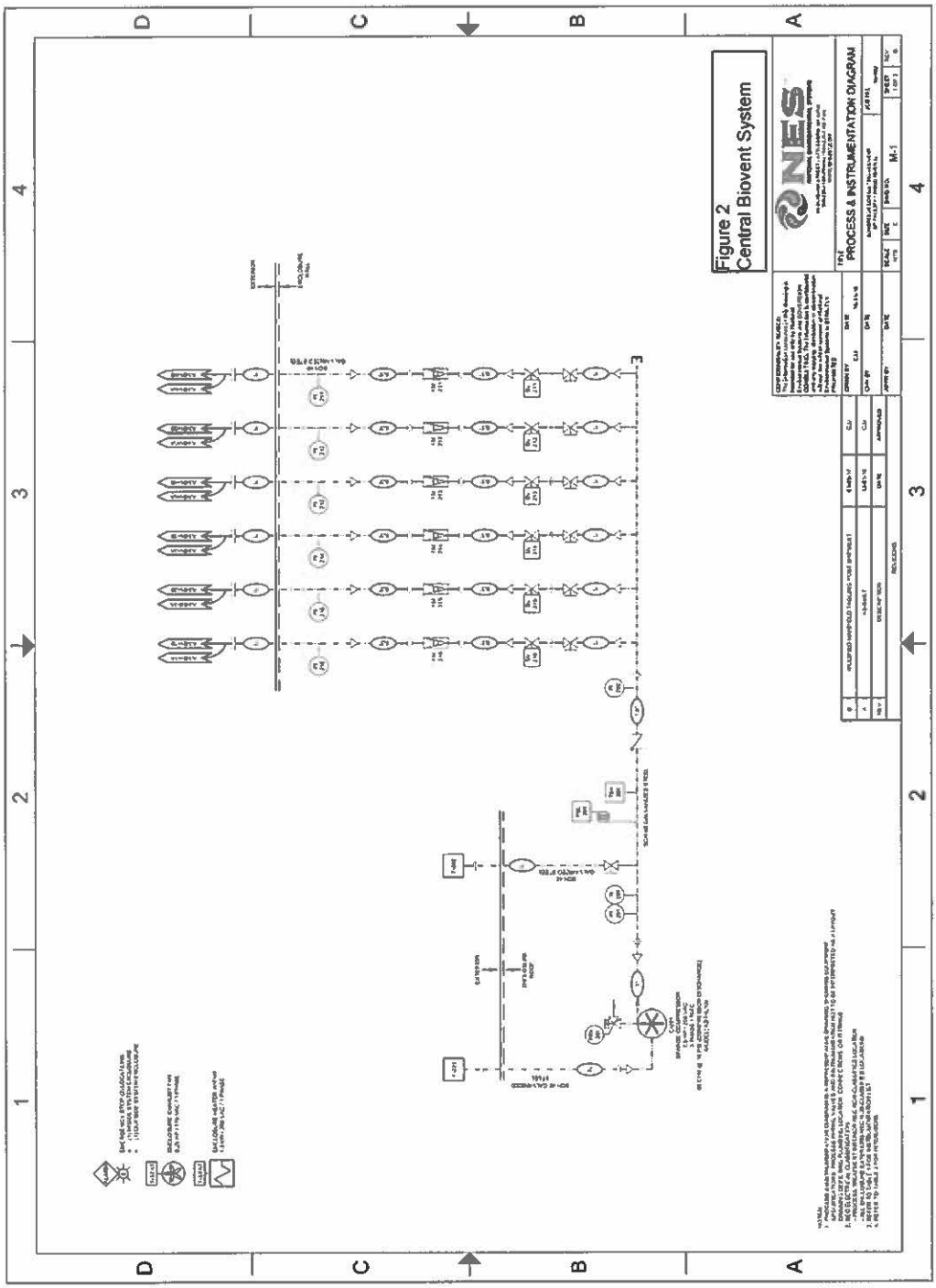


Figure E-2 -- Process and Instrumentation Plan – Central Biovent System

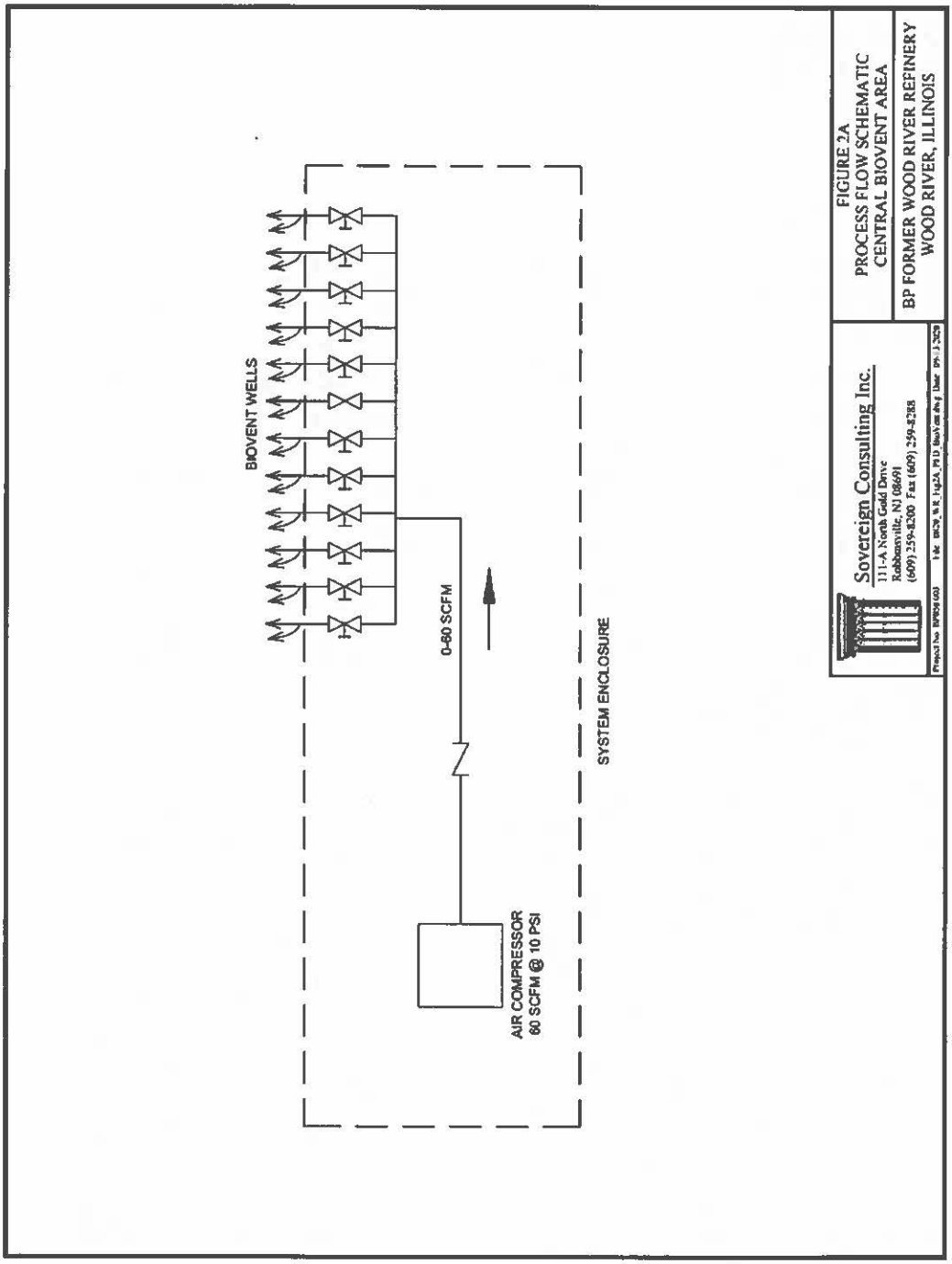


Figure E-2A- Process Flow Schematic Central Biovent Area

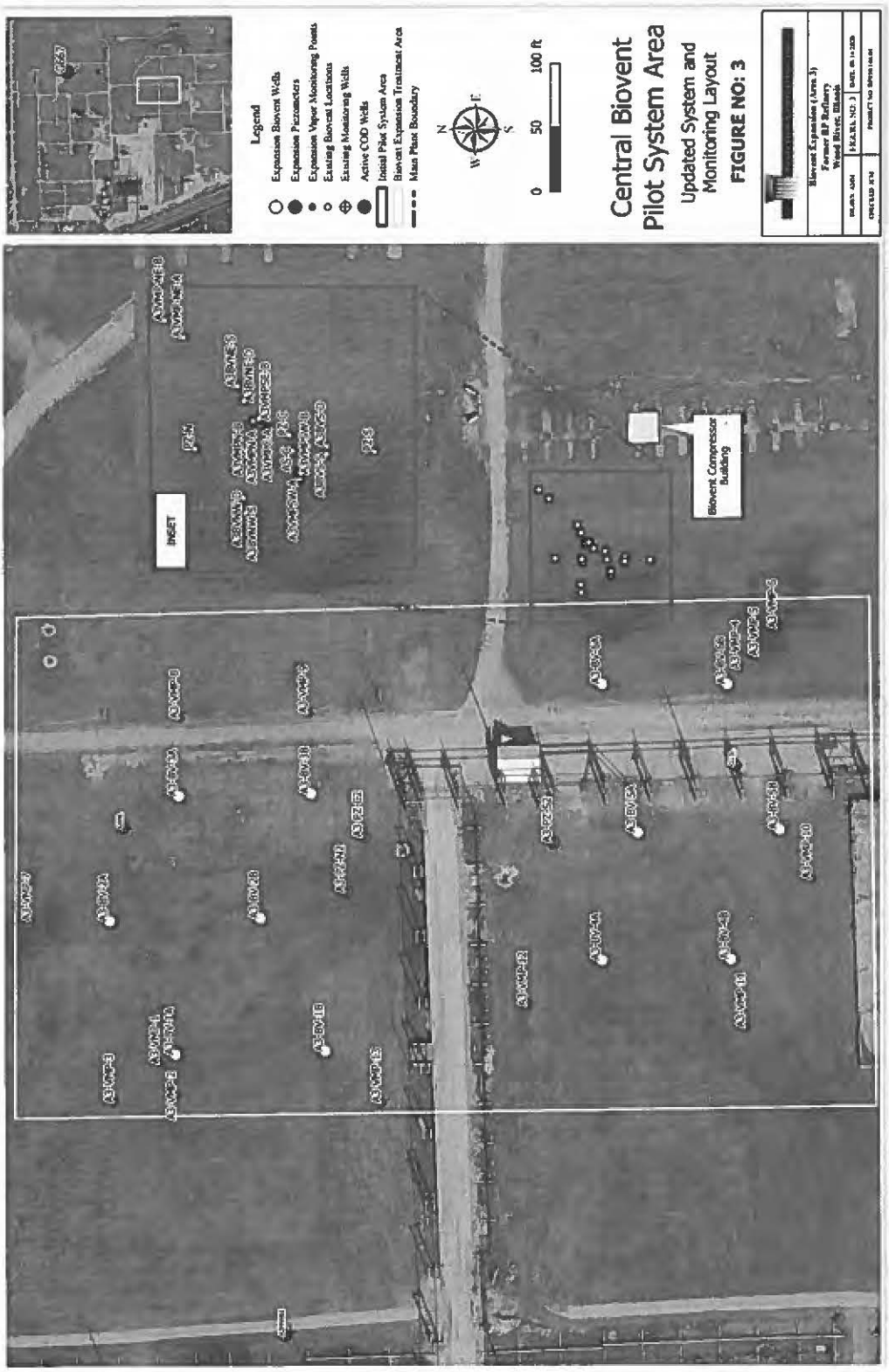


Figure E-3 – Area 3 Biovent Expansion

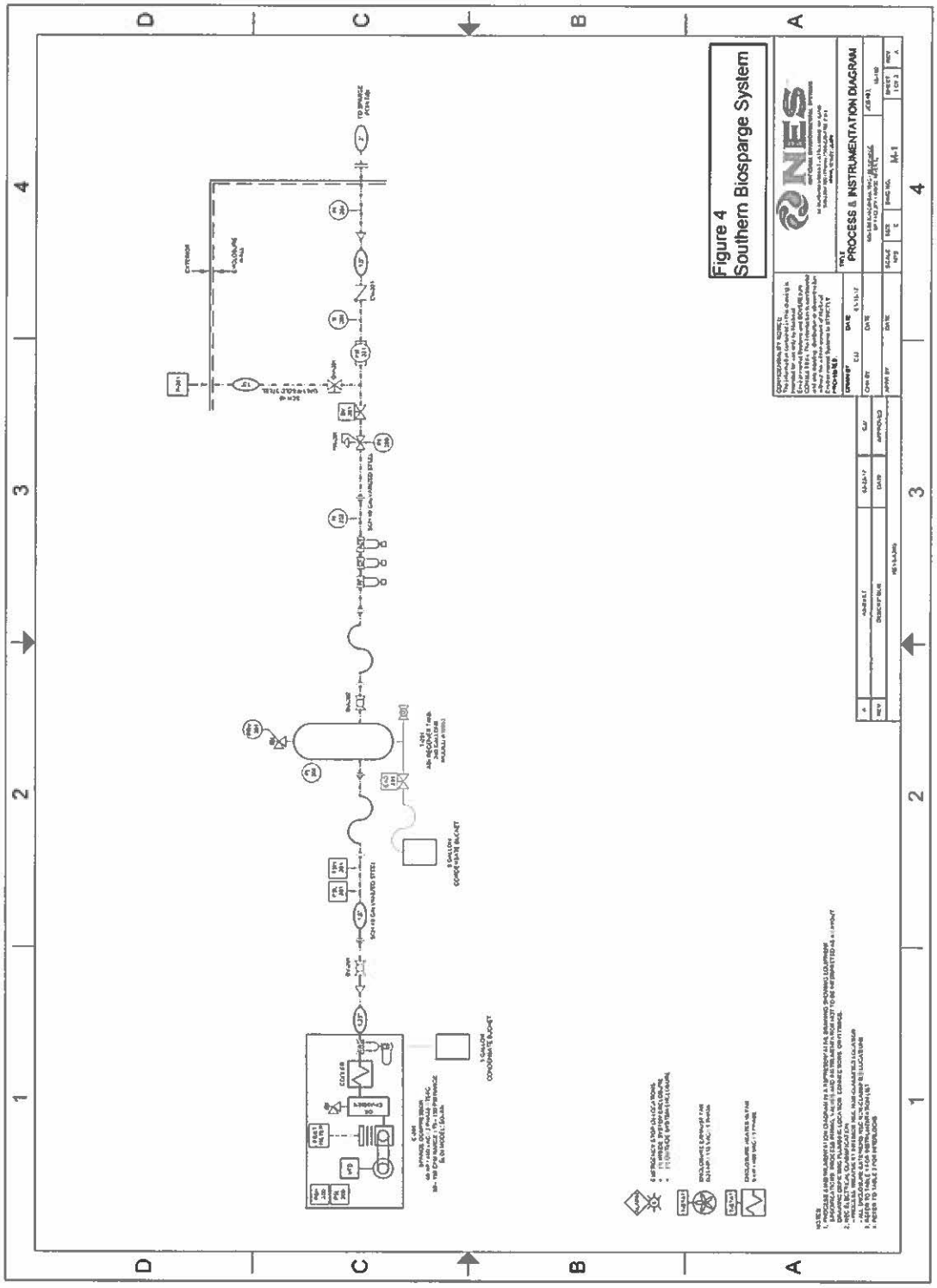


Figure E-4 – Process and Instrumentation Plan – Southern Biosparge System

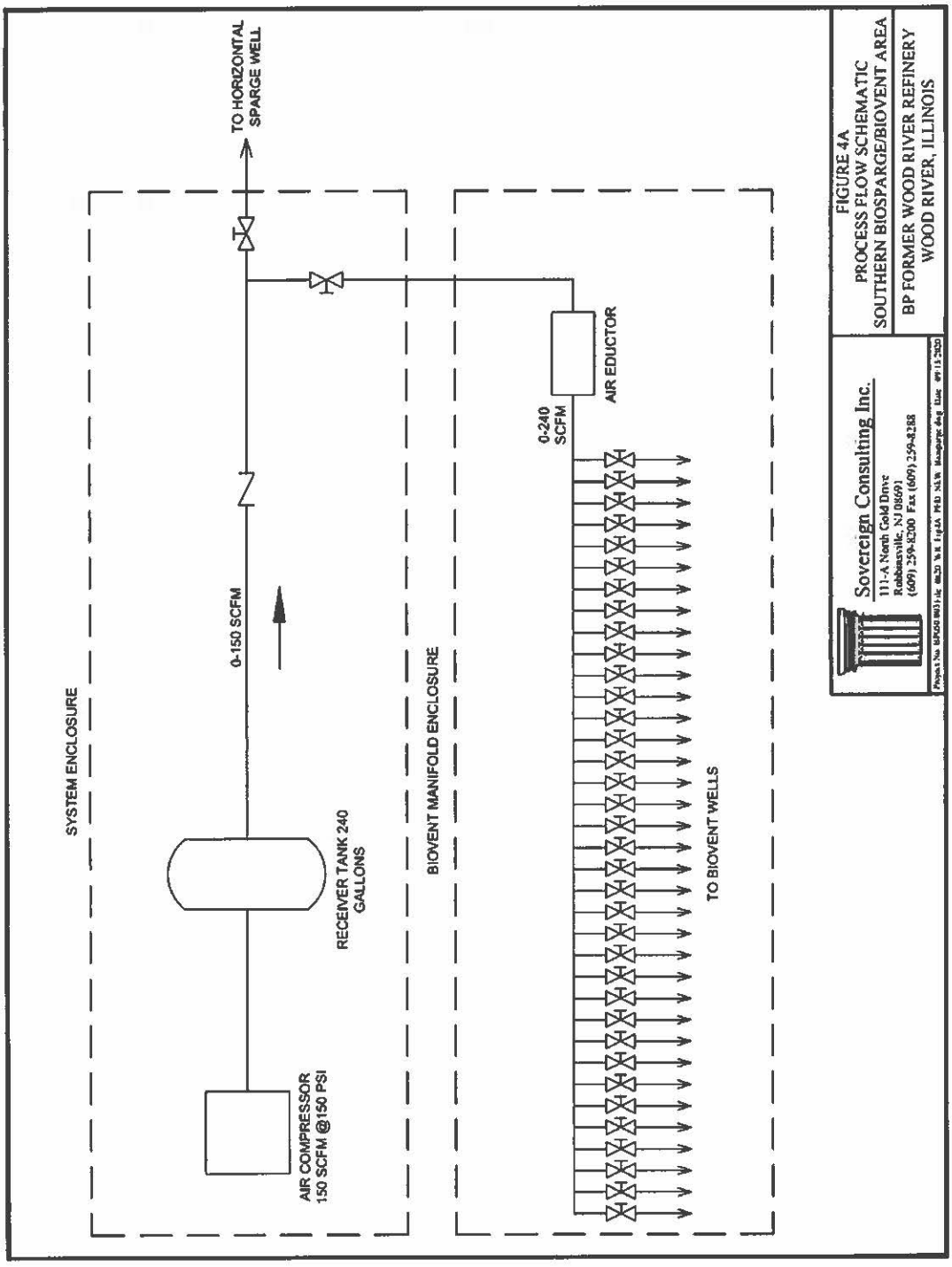


Figure E-4A-Process Flow Schematic Southern Biosparge/Biovent Area

Figure E-5 – Area 5 Biosparge/ Biovent System Area

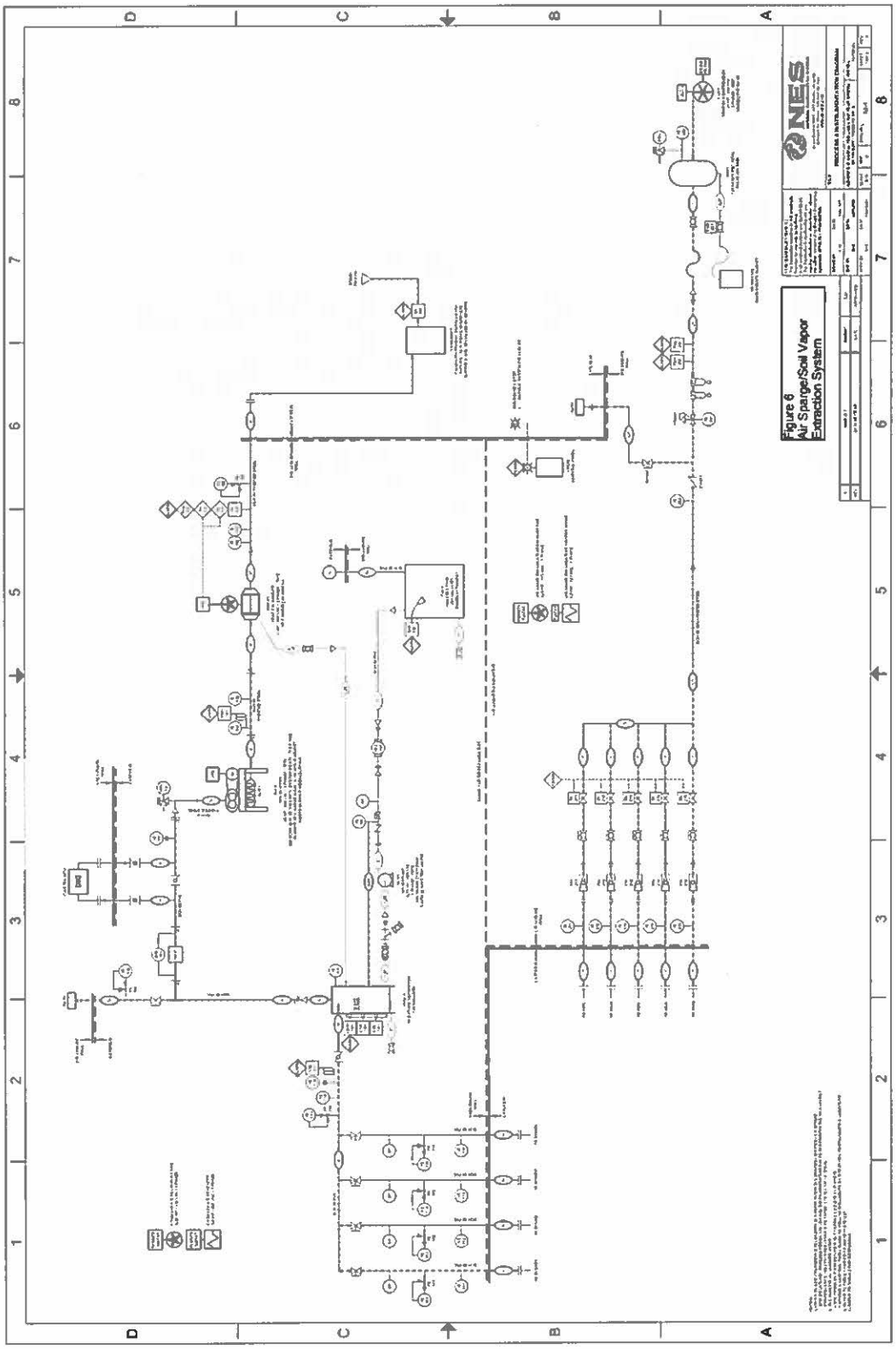


Figure E-6 – Process and Instrumentation Plan – Air Sparge/SVE System

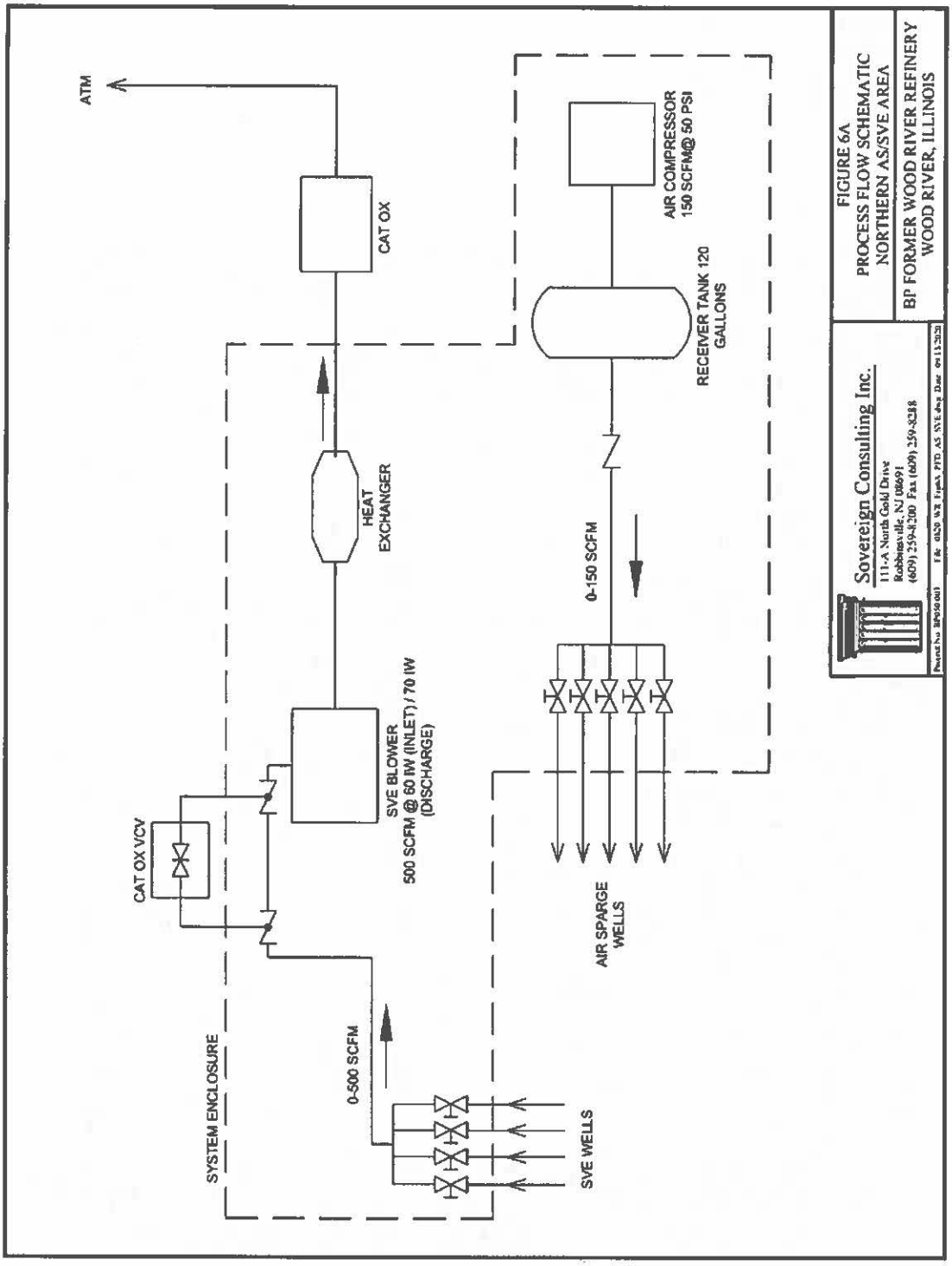


Figure E-6A-Process Flow Schematic Northern AS/SVE Area

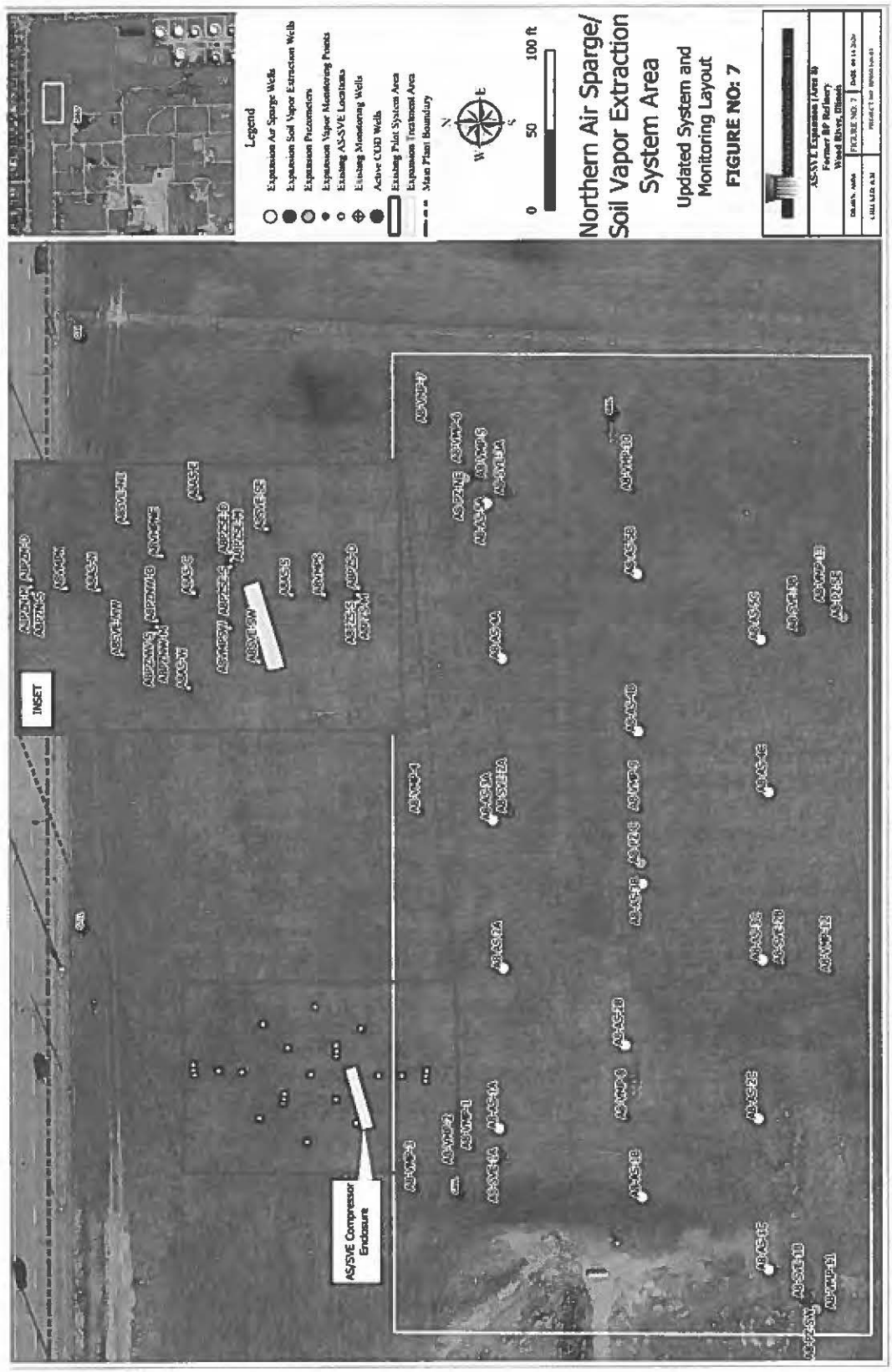


Figure E-7 – Northern Air Sparge/ Soil Vapor Extraction System Area

ATTACHMENT F

NORTHING AND EASTING WELL COORDINATES

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT F

NORTHING AND EASTING WELL COORDINATES

Facility Well ID	IEPA Well ID	Northing	Easting
G-01R	G002	2315679.6730	798263.3670
B-5D	G005	2320442.8070	794103.4080
B-6	G006	2321445.3990	792326.8380
B-8D	G008	2318701.1380	794139.4760
B-9	G009	2317504.0380	797808.5810
C-1	G011	2316145.9890	798128.1810
C-3	G013	2315486.7910	797313.6600
C-6	G016	2315568.4280	796545.3270
C-7	G017	2316068.8140	796709.5230
C-10	G020	2316846.4770	796084.5010
C-11	G021	2316032.8980	795553.1050
C-13	G023	2316726.7590	794627.7530
G-5	G045	2319331.7120	798107.7350
G-6	G046	2319352.1710	797717.7080
G-8	G048	2317665.9870	794905.3140
G-9	G049	2317730.1180	794933.0350
B-4R	G04R	2319383.4870	796886.7270
G-10	G050	2316647.7000	797276.8380
G-15	G055	2319304.5810	798579.1090
G-17	G057	2314016.8910	797192.5450
G18	G058	2313697.9150	797669.3160
G-19	G059	2314720.3470	796603.7740
G-22	G062	2316138.2830	798781.4700
G-24	G064	2317405.0010	798759.2780
G-25	G065	2318431.6080	798763.5760
G-27	G067	2317282.7860	798854.8410
G-28	G068	2317437.6450	798858.2920
G-33	G073	2316629.9380	798762.8210
G-39	G079	2314655.5710	796217.3950
G-42	G082	2315061.8680	796341.7040
G32R	G084	2315809.4730	798824.7170
G-26R	G085	2319412.1830	797888.5090
H-20	G10L	2318428.6930	796675.2540
SWMU12-MW02	G111	2321150.8470	792075.9720
G-H1	G112	2320408.7820	792141.5070
G128	G128	2321505.0490	791869.4520
H-23	G13L	2317555.5600	796223.3910
H-24	G14L	2318100.0690	796149.0410

Facility Well ID	IEPA Well ID	Northing	Easting
H-26A	G16L	2317933.9290	795414.3950
H-28	G18	2318392.0710	798666.2510
H-29	G19	2317302.5480	798664.2160
C-12R	G22R	2316821.8910	795303.2200
RP-1	G301	2318950.2690	793678.5400
RP-3D	G303	2317187.1060	793125.3120
RP-4D	G304	2316844.8760	794402.4720
RP-5	G305	2317182.2120	794484.3180
RP-6	G306	2317650.7810	794478.4090
RP-7D	G307	2318033.2090	794439.6030
H-30R	G30R	2316949.7660	798660.8350
H-31R	G31R	2316452.9700	798645.6100
H32R	G32R	2315452.6910	797881.6690
H-33	G33	2315831.1310	795895.8320
H-34	G34	2317227.4270	795061.9100
H-37	G37	2319887.0480	791941.2110
H-39	G39	2318294.9450	793276.9050
B-17	G417	2317985.3380	796482.1650
G-5B	G5B	2319331.6770	798112.5710
RC-1	G601	2317016.0710	797966.4900
RC-2	G602	2317021.1740	797306.8430
RC-3	G603	2317054.1820	796580.3380
RC-4	G604	2316673.2710	797256.1700
RC-5	G605	2317658.7670	794911.5820
RC-6	G606	2316366.9220	798334.8220
RC-7	G607	2316841.2620	798360.1430
RC-8	G608	2317174.6960	798373.7870
RC-9	G609	2317389.3470	798157.0880
RC-10	G610	2317589.3950	798369.7090
RC-11	G611	2317919.3640	798321.7330
RC-12	G612	2318326.6020	798335.2680
RC-13	G613	2317136.7880	795587.8480
RC-14	G614	2317659.8050	795257.5300
RC-15	G615	2317812.4390	795006.7230
RC-16	G616	2316988.7800	795311.7320
RC-17	G617	2316517.6020	797774.1780
RC-18	G618	2316620.1360	797976.4530
RC-19	G619	2316679.6860	798115.2650
RC-20	G620	2316673.3790	797366.0800
RC-H-29	G629	2317403.7210	798663.8640
G-29R	G69R	2317835.9950	798880.4770

Facility Well ID	IEPA Well ID	Northing	Easting
G-31	G71L	2318022.9480	798666.1450
G-34	G74L	2318878.5220	798776.9620
G-35	G75L	2318335.5340	798849.9300
G-36	G76L	2318005.7010	798852.2200
G-37	G77L	2317535.8570	798767.0950
H-3	G83L	2316856.7180	798243.9080
H-4	G84L	2317395.0430	798262.1620
H-6	G86L	2318343.7720	798335.5420
H-7	G87L	2315843.9780	797583.0780
H-9	G89L	2316801.1780	797725.1370
M-1D	G91	2320805.0380	793634.6680
H-11	G91L	2318078.0000	797797.7740
M-2D	G92	2320963.8860	793234.9600
H-12	G92L	2318520.0740	797772.2940
M-3D	G93L	2321139.3660	792810.7060
H-16	G96L	2318043.8500	797261.2130
H-17	G97L	2318509.0470	797205.0340
H-18	G98L	2315593.1660	796997.6950
H-19	G99L	2317507.8130	796699.9450
H-31B	H31B	2316448.2440	798648.0050
G-2D	R042	2319932.2010	793607.1120
G-23R	R063	2317101.3500	798768.1600
G-4DR	R083	2320117.5960	792916.8810
H-21R	R11L	2316250.0960	796182.4280
RP-2D	R302	2318146.3020	792164.0310
H36R	RG36	2318906.9170	796630.9950

ATTACHMENT G

WATER WELL SURVEY GUIDANCE FOR RCRA FACILITIES

ILLINOIS EPA NO. 1191150001

USEPA NO. ILD980700967

RCRA CORRECTIVE ACTION PERMIT LOG NO. B-147R2

ATTACHMENT G

WATER WELL SURVEY GUIDANCE FOR RCRA FACILITIES

In order to determine the impacts and potential impacts to potable water supply wells from soil, soil gas, or groundwater contamination, 35 IAC 1600, Subpart B establishes the minimum standards and requirements for performing water well surveys to ensure these wells are accurately identified and located. All Solid Waste permitted facilities, RCRA permitted facilities, and facilities pursuing RCRA closure, where exceedances of the applicable 35 IAC Part 620 groundwater quality standards (or in the case of RCRA closure, 35 IAC Part 742, Tier 1 groundwater remediation objectives), have the potential to impact potable water supply wells, must determine the existence and location of potable water supply wells as described in 35 IAC Part 1600 and this procedure. This procedure applies to projects that require the location of potable water wells to be identified as part of site investigation, corrective action activities, or Right to Know evaluation.

In order to meet these requirements, the facility in question must submit maps that identify the following:

1. All private, semi-private and non-community water system wells located at the property where the release occurred or within 200 feet of the property boundary where the release occurred;

2. All community water system wells located at the property where the release occurred or within 2,500 feet of the property boundary where the release occurred; and

3. All wellhead protection areas in which all or any portion of the property where the release occurred is located within that zone or area.

The facility must submit verification that all of the below sources have been investigated and the water well survey data (electronic, paper or physical) from these sources have been included on the map. This information shall be obtained from the following sources:

- Illinois State Geological Survey
- Illinois State Water Survey
- Illinois EPA Division of Public Water Supplies
- Illinois Department of Public Health
- County and Municipal Health Departments
- Local water supply entity (i.e., public water districts, public water supply companies), if data is not included in the previous listed sources.

If it is determined that groundwater contamination exceedances of the applicable 35 IAC Part 620, groundwater quality standards (or in the case of RCRA closure the 35 IAC Part 742, Tier 1, groundwater remediation objectives), are measured or modeled to migrate off-site, the area of the water well survey must be expanded based on the measured and/or modeled groundwater plume.

NOTE: If contamination at a remediation site cannot be modeled due to geological constraints (i.e. bedrock), the information requested above shall be collected inside a survey area to be determined by the Illinois EPA on a site-by-site basis.

Documentation of the results of the water well survey or the expanded water well survey, must include the following information:

- Map(s) to appropriate scale showing the location of community water supply wells, potable water supply wells, and all applicable wellhead protection areas of the wells identified in the survey. The location of the measured and modeled contamination plume shall also be shown on the map(s) if the measured or modeled plume extends off-site.

- Tables of potable water supply wells and their respective wellhead protection areas.

- Narrative to supplement the map(s) and table(s) identified above. This includes the person(s) contacted as part of the survey, that person's title, sources of information used, field observations, etc.

- Certification by a Licensed Professional Engineer or Licensed Professional Geologist that the entities listed above have been contacted as part of the well survey and the information obtained is included in the map(s), table(s) and narrative.

When data sources as identified above do not appear to have adequately identified the location of potable wells or site-specific conditions warrant, additional investigation may be required. Such conditions include, but are not limited to:

- The local water supply entity does not bill a residence/business located within the search area, and the other record searches do not show a potable well on the property; or

- The water well survey does not appear to identify an accurate number of potable wells for the area when the locational information is compared to aerial photography or local zoning maps which identify residential and commercial structures.

The additional investigation must include, at a minimum, notification in the form of written communication to properties within the water well survey area and may include a physical well survey (e.g. face-to-face interviews with property owners, a reconnaissance survey looking for wellheads, etc.)

EXHIBIT D

URS

January 27, 2003

Ms. Joyce L. Munie, P.E.
Illinois Environmental Protection Agency
Bureau of Land - #33
Permit Section
1021 North Grand Avenue East
Springfield, Illinois 62702

Subject: 1191150001 – Madison County
BP Products North America Inc., Former Wood River Refinery Main Plant
ILD980700967
Log No. B-147-CA-11

Dear Ms. Munie:

URS Corporation (URS) has enclosed on behalf of BP Products North America Inc. (BP) three (3) copies of the Environmental Land Use Control (ELUC) as recorded by Madison County for Area 1 (PIN No. 19-1-08-28-12-201-001.001) at the BP former Wood River Refinery Main Plant.

Please note the original Recorder's Certificate of Photocopy (Certificate) as the final page of one of the copies. This Certificate certifies that the document attached to it is a true and correct photocopy of the filed document. The Certificate also confirms that conditions 3 and 4 of the January 10, 2003 Illinois EPA letter approving the ELUC have been satisfied.

If you have any questions, please contact Janice McLain of BP at 312-856-4138, Greg Jevyak of Group Environmental Management Company (GEM Co.) at 618-254-9866, or me at 312-697-7225.

Sincerely,

John Dennison

John Dennison
Project Scientist

Enclosure

cc: Greg Jevyak, GEM Co.
Janice McLain, BP
Jim Carris, BP
Jody Jung, Jung & Associates, P.C.

URS Corporation
122 South Michigan Avenue, Suite 1920
Chicago, IL 60603
Tel: 312.939.1000
Fax: 312.939.4198

PREPARED BY:

4544 4872

Name: Greg S. Jevyak
Environmental Business Manager
Group Environment Management Company
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

2003R05241

STATE OF ILLINOIS
MADISON COUNTY
FILED FOR RECORD IN
THE RECORDERS OFFICE

01-23-2003 11:15:53 A

DANIEL R. DONOHOO
RECORDER

DOC. FEE: 35.00
PAGES: 21

RETURN TO:

Name: Greg S. Jevyak
Environmental Business Mana
Group Environment Manager
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

COPY

$35.00 CKH

THE ABOVE SPACE FOR RECORDER'S OFFICE

Environmental Land Use Control

THIS ENVIRONMENTAL LAND USE CONTROL ("ELUC"), is made this 8th day of November, 2002, by BP Products North America Inc. f/k/a Amoco Oil Company, a Maryland corporation, ("Property Owner"), Property Owner of the real property located at 301 Evans Avenue, Wood River, Illinois.

WHEREAS, 35 Ill. Admin. Code 742 and 415 ILCS 5/58.17 provide for the use of an ELUC as an institutional control in order to impose land use limitations or requirements related to environmental contamination so that persons conducting remediation can obtain a No Further Action determination from the Illinois Environmental Protection Agency ("IEPA"). Such determination has been obtained on December 5, 2001 and is attached hereto as Exhibit C. The reason for an ELUC is to ensure protection of human health and the environment. The limitations and requirements contained herein are necessary in order to protect against exposure to contaminated soil or groundwater or both that may be present on the property as a result of prior industrial activities. Under 35 Ill. Adm. Code 742, the use of risk-based, site specific remediation objectives may require the use of an ELUC on real property and the ELUC may apply to certain physical features (e.g., engineered barriers, monitoring wells, caps, etc.).

WHEREAS, Property Owner intends to request risk-based, site specific soil and groundwater remediation objectives from the IEPA under 35 Ill. Admin. Code Part 742 to obtain risk-based closure of the site, identified by Bureau of Land LPC number 1191150001, utilizing an ELUC.

NOW, THEREFORE, the recitals set forth above are incorporated by reference as if fully set forth herein and the Property Owner agrees as follows:

Section One. Property Owner does hereby establish an ELUC on the real estate, situated in the County of Madison, State of Illinois and further described in Exhibit A attached hereto and incorporated herein by reference (the "Property").

Attached as Exhibit B is a site map and table that shows the legal boundary of the Property, any physical features to which the ELUC applies, the horizontal and vertical extent of the contaminants of concern above applicable remediation objectives for soil or groundwater or both, and the nature, location of the source, and direction of movement of the contaminants of concern, as required under 35 Ill. Admin. Code Part 742.

Section Two. Property Owner represents and warrants it is the current owner of the Property and has the authority to record this ELUC on the chain of title for the Property in the Office of the Recorder or Registrar of Titles in Madison County, Illinois.

Section Three. The Property Owner hereby agrees, for itself, and its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessees, possessor or user of the Property or the holder of any portion thereof or interest therein, that:

a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IL Admin. Code 742;

c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

e. Contaminated soil removed from the Property shall be sent off-site for disposal as a special waste. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds ("VOCs"). Soil shall be considered "contaminated" if (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) the field screening test detects the presence (i.e., PH) readings> 100 units) of VOCs in soil. Soils exhibiting potential contamination based on the visual or field screening will either be sampled for VOC and SVOC analysis or considered contaminated. If laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives ("ROs") developed for the Property then the soils will be considered to be not contaminated for reuse on the former BP Refinery Main Plant Facility, which is shown on Exhibit C. If the soils are less than the site specific ROs but greater than residential standards

they will be considered contaminated if transported off-site. 4544 4874

(i) If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(ii) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as clean fill in other areas of the former BP Refinery Main Plant Facility. However, procedures must be in place to ensure that this material remains on the former BP Refinery Main Plant Facility and is not to be transported off-site, unless it is transported off-site as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal or unless such material is shown to not be a special waste to the satisfaction of Illinois EPA.

(iii) Documentation of all these activities must be placed in the facility's operating records.

f. The two areas of the Property which are identified on Exhibit B require an engineered barrier to restrict exposure to the soils beneath the barrier. Ten (10) feet of the existing soil in place over the contaminated soil (or a comparable designed engineered control) shall be used as the engineered barrier and must remain in place over the contaminated soils. This barrier must be properly maintained as an engineered barrier to restrict exposure to the soils beneath the barrier. Prior to commencement of any future excavation and/or construction in or near the areas containing the engineered barriers, a safety plan for these areas is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations; and other U.S. EPA guidance as provided. At a minimum, the plan should address possible worker exposure if any future excavation and construction activities occur within the contaminated soil. Any contaminated soil removed, or excavated from, or disturbed at the areas containing the engineered barriers must be handled in accordance with all applicable laws and regulations.

Section Four. This ELUC is binding on the Property Owner, its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein. This ELUC shall apply in perpetuity against the Property and shall not be release until the IEPA determines there is no longer a need for the ELUC as an institutional control; until the IEPA, upon written request, issues a new no further action determination approving modification or removal of the limitation(s) or requirement(s); and until and a release or modification of the land use limitation or requirement is filed in the chain of title for the Property.

Section Five. Information regarding the remediation performed on the Property may be obtained from the IEPA through a request under the Freedom of Information Act (5 ILCS 140) and rules promulgated thereunder by providing the IEPA with the 10-digit LPC number listed above.

Section Six. The effective date of this ELUC shall be the date that it is officially recorded in the chain of title for the Property to which this ELUC applies.

WITNESS the following signature:

4544 4875

BP Products North America Inc.

By: Janice McLain

Attest: D. A. Dowling

Printed: JANICE McLAIN

Printed: D. A. Dowling

Its: ATTORNEY

Its: ASSISTANT SECRETARY

Date: 11-08-02

Date: 11-8-02

STATE OF ILLINOIS)
) SS:
COUNTY OF COOK)

I, Debra L. Walls the undersigned, a Notary Public for said County and State, DO HEREBY CERTIFY, that Janice McLain and Debra Dowling, personally known to me to be the Attorney and (Assistant) Secretary, respectively, of **BP Products North America Inc. f/k/a Amoco Oil Company**, a Maryland corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that in said capacities they signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

Given under my hand and official seal, this 8th day of November, 2002.

OFFICIAL SEAL
DEBRA L. WALLS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES 9/6/05

Debra L. Walls
Notary Public

4544 4876

PIN NO. 19-1-08-28-12-201-001.001

Exhibit A

The subject property is located in the City of Wood River, Madison County, State of Illinois, commonly known as 301 Evans Avenue, Wood River, Illinois and more particularly described as:

LEGAL DESCRIPTION AND
REAL ESTATE TAX INDEX OR PARCEL #
(PURSUANT TO 742. 1010(D)(2))

Commencing at Northeast corner of the Southeast Quarter of the Northeast Quarter of Section 28, Township 5 North, Range 9 West; thence South 00° 46' 18" East, along the east line of said Quarter Quarter Section, a distance of 60.06 feet to the south right of way line of Illinois Route 143 (F.A. Route 789) (Madison Avenue, 60 feet wide); thence North 88° 13' 21" West, along said south right of way line, a distance of 1.44 feet; thence South 89° 25' 05" West, continuing along said right of way, a distance of 309.27 feet to the POINT OF BEGINNING of the tract herein described; thence South 00° 40' 48" East a distance of 313.19 feet; thence North 89° 23' 04" West a distance of 932.64 feet to the existing easterly right of way line of Alton-St. Louis Road (60 feet wide); thence North 06° 30' 37" East, along said right of way, a distance of 35.04 feet to the easterly line of a tract of land conveyed by Amoco to Illinois Department of Transportation by deed recorded in Book 3186 Page 440 of Madison County Records; thence North 13° 21' 11" East, along said east line, a distance of 50.36 feet; thence North 06° 30' 37" East, continuing along said east line, a distance of 102.97 feet to the easterly line of a tract of land surveyed by Amoco to Illinois Department of Transportation by deed recorded in Book 3164 Page 272 of Madison County Records; thence North 18° 28' 37" East, along said easterly right of way line, a distance of 72.16 feet; thence North 54° 30' 50" East, continuing along said right of way line, a distance of 48.71 feet; thence North 74° 14' 40" East, continuing along said right of way line, a distance of 45.06 feet to the existing south right of way line of said Illinois Route 143; thence North 89° 25' 05" East, along said south right of way line, a distance of 795.74 feet to the point of beginning, containing 6.29 acres.

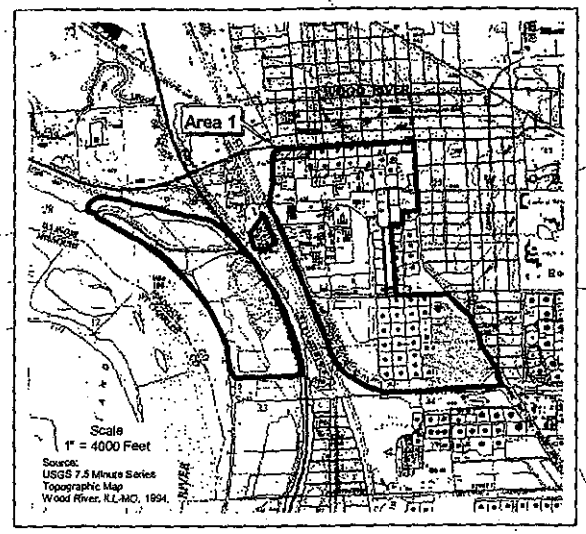
PIN NO. 19-1-08-28-12-201-001.001

Exhibit B

Scaled Maps and tables showing:

A) The legal boundary of the Property to which the ELUC applies;
B) The horizontal and vertical extent of contaminants of concern above applicable remediation objectives for soil and groundwater to which the ELUC applies;
C) Any physical features to which the ELUC applies (e.g. engineered barriers, monitoring wells, caps)
D) The nature, location of the source, and direction of movement of the contaminants of concern.

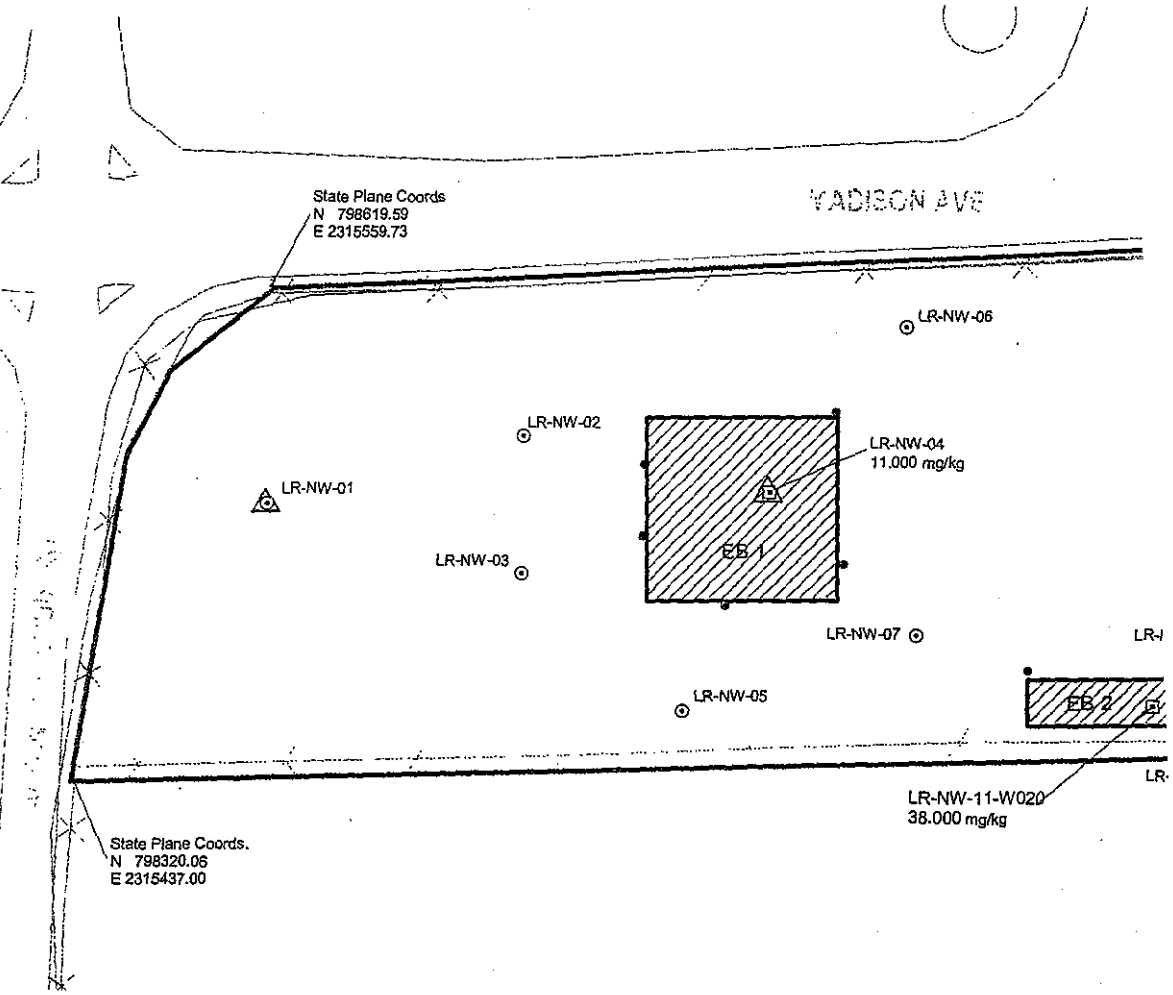
4544 4878



Summary of Perched Water Results
A Comparison with Illinois Class II Groundwater Objectives

Chemicals	Units	Illinois Class II Groundwater Objectives (1)	Sample Locations LR-NW-01	LR-NW-04
Metals:				
Arsenic	mg/l	0.2	0.05 U	0.604
Barium	mg/l	2	0.176	2.7
Cadmium	mg/l	0.05	0.01 U	0.1 U
Chromium	mg/l	1	0.04	2.8
Cobalt	mg/l	1	0.02	0.754
Lead	mg/l	0.1	1.99	52.5
Nickel	mg/l	2	0.044	1.87
Selenium	mg/l	0.05	0.1 U	1 U
Vanadium	mg/l	N/A	0.05 U	3.69
Organics:				
Benzene	mg/l	0.025	0.002 J	0.095
Ethylbenzene	mg/l	1	0.001 J	0.003 J
Toluene	mg/l	2.5	0.003 J	0.004 J
Xylene (Total)	mg/l	10	0.001 J	0.002 J

(1) Illinois Class II Groundwater Objectives were obtained from Appendix B, Table E of TACO.
N/A = Not Available
Shaded values exceed Illinois Class II Groundwater Objectives.



Legend

- 11,000 mg/kg — Benzene Result from Soil Sample from Depth Greater than 16 feet Below Ground Surface

Sample Locations

- Benzene in Soil Result Below Tier 2 Inhalation Remediation Objective (RO)
- Benzene in Soil Result Exceeding Tier 2 Inhalation RO
- Perched Groundwater Location
- Midpoint Between Samples With and Without Tier 2 Exceedance
- Area of ELUC (Pin No. 19-1-08-26-12-201-001.001)
- Area of Engineered Barrier (EB) / Model of Soil Impact in Excess of Tier 2 Inhalation RO

Basis For EB Area Identification:

- Application of Engineered Barriers to ensure 10 feet of soil is maintained atop exceedences of Tier 2 Inhalation RO.
- The proposed Tier 2 soil inhalation Engineered Barrier areas are represented as polygons to facilitate georeferencing of area boundaries.

EB Boundary Locations:

EB 1

Location	East	North
NW Corner	2,315,800	798,544
NE Corner	2,315,921	798,544
SE Corner	2,315,921	798,428
SW Corner	2,315,800	798,428

The surface elevation of EB 1 must remain over 424 feet MSL (measured elevation of LR-NW-04 is 429.52 ft MSL).

EB 2

Location	East	North
NW Corner	2,316,042	798,378
NE Corner	2,316,159	798,378
SE Corner	2,316,159	798,348
SW Corner	2,316,042	798,348

The surface elevation of EB 2 must remain over 425 feet MSL (measured elevation of LR-NW-11 is 430.60 ft MSL).

* Illinois State Plane Coordinates NAD 83

45 0 45 Feet

Scale
1" = 90 Feet

Exhibit C

Copy of the NFA letter dated December 5, 2001 with attachments

1191150001—Madison County
BP Products North America Inc – Wood River Refinery
ILD980700967
Log No. B-147-CA-11
RCRA Permit

4544 4879

4544 4880

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

RENEE CIPRIANO, DIRECTOR

217/524-3300

December 5, 2001

CERTIFIED MAIL
7099 3400 0001 1279 1827

Gregory S. Jevyak, Environmental Business Manager
BP America
Global Environmental Management Business Unit
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095

Re: 1191150001 -- Madison County
BP Products North America Inc. - Wood River Refinery
ILD980700967
Log No. B-147-CA-11
Date Received: June 20, 2001
RCRA Permit

Dear Mr. Jevyak:

This letter responds to the June 19, 2001 revised Land Reuse Investigation Report regarding RCRA corrective action activities at an area known as the "Northwest Corner Parcel (Area 1)" at the above-referenced facility, submitted on your behalf by Mr. Frederick W. Johnson, P.E. of URS. Mr. Johnson's submittal contained soil investigation effort results and a risk-based evaluation of the subject parcel in accordance with 35 Ill. Adm. Code 742. A site layout map, showing this area within the Main Plant facility, and the parcel's legal description, are enclosed. Overall, the corrective action activities at the subject facility are being conducted in accordance with a RCRA permit issued to the facility (Log No. B-147 and associated modifications).

The Illinois EPA has completed its review of the revised investigation/risk evaluation report for the Northwest Corner Parcel (the "Parcel") of the above-referenced facility. The IEPA hereby approves no further action at the Parcel subject to the following conditions and modifications:

1. Based upon a comparison of the results in the report to soil remediation objectives developed in accordance with 35 Ill. Adm. Code 742, Illinois EPA has determined that subject to certain conditions: (1) the soils within the Parcel pose no threat via the soil ingestion, inhalation, and migration to groundwater exposure route; and (2) no further action is required for the groundwater ingestion route for perched groundwater only. This no further action determination applies to the soils and perched groundwater within the Parcel as shown and described in the enclosed legal description, subject to the following conditions:

a. Two areas within the Parcel require an engineered barrier and associated institutional control to restrict exposure to the soils beneath the barrier. Ten (10) feet of the existing soil in place over the contaminated soil (or a comparable designed engineered control) shall be used as the engineered barrier. The institutional control must require maintenance of the engineered barrier, implementation of a site safety plan to protect construction workers during construction activities associated with these two areas, and proper management of any soil removed from beneath the engineered barrier. A plan view of the parcel delineating the two areas identified is presented in Attachment 3.

b. Any excavation and subsurface construction work in the Parcel shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils in the Parcel and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan.

c. The soil within the Parcel shall in place, except where necessary to remove it for construction activities.

d. Contaminated soil removed from the Parcel shall be sent off-site for disposal as a special waste. Soil excavated during construction/demolition/excavation activities within the Parcel must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds (VOCs). Soil shall be considered "contaminated" if (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) the field screening test detects the presence (i.e. PID readings >100 units) of VOCs in soil. Soils exhibiting potential contamination based on the visual or field screening will either be sampled for VOC and SVOC analysis or considered contaminated. If laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives (ROs) developed for the parcel then the soils will be considered to be not contaminated for reuse on the Main Plant property. If the soils are less than the site specific ROs but greater than residential standards they will be considered contaminated if transported offsite.

(1) If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(2) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as clean fill in other areas of the former

refinery facility. However, procedures must be in place to ensure that this material remains on the former refinery facility and is not be transported off-site, unless it is transported off-site as a special waste in accordance with 35 Ill. Adm. Code Subtitle G: Waste Disposal or unless such material is shown to not be a special waste to the satisfaction of Illinois EPA.

(3) Documentation of all these activities must be placed in the facility's operating records.

e. Appropriate institutional controls meeting the requirements of 35 Ill. Admin. Code, Part 742, Subpart J must be established to ensure the requirements in subparagraphs 1(a) through 1(d) immediately above will be met in the future.

f. The parcel's use shall remain commercial/industrial in the future.

g. With respect to perched groundwater, an institutional control must be established in accordance with 35 Ill. Adm. Code Part 742, Subpart J, for the exclusion of the groundwater ingestion exposure route, to meet the criteria found 35 Ill. Adm. Code 742.925. The institutional control shall include either an Environmental Land Use Control (ELUC) prohibiting the use of groundwater at the Parcel in accordance with 35 Ill. Adm. Code 742.1010 or the approval of a City of Wood River ordinance as follows:

(1) The facility may submit to the Illinois EPA for review and approval, a City of Wood River ordinance that will serve as an institutional control restricting groundwater use at the Parcel. In addition to meeting the 35 Ill. Adm. Code, Part 742, Subpart J, institutional control requirements, the ordinance will also address the issue of the possibility of the groundwater ingestion exposure route becoming active in the future, as required by 35 Ill. Adm. Code 742.925(f).

(2) Once the City of Wood River ordinance is approved for use as an institutional control to restrict the use of groundwater at the Parcel, BP must submit the information requirements under Ill. Adm. Code 742.1015 for the Parcel to the Illinois EPA for review and approval. Attached to this letter is Agency guidance entitled "Use of Ordinance as an Institutional Control for Groundwater for RCRA Closure Projects".

2. The groundwater beneath the facility is being addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications. Groundwater activities associated with the uppermost aquifer are subject to the following conditions:

a. The groundwater within the Parcel must still be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications; and

b. An approved institutional control to meet the criteria found in 35 Ill. Adm. Code 742.925, to exclude the groundwater ingestion exposure route, shall be established in accordance with 35 Ill. Adm. Code, Part 742, Subpart J. Such institutional control may include the approval of a City of Wood River ordinance as set forth in subparagraph 1(g) above. Once such an institutional control is established, no further remediation will be required with respect to the groundwater at the Parcel, except as required by Condition No. 2a above.

c. The Groundwater Management Zone (GMZ) for the uppermost aquifer at the facility shall be revised to include the areas where constituent concentrations in groundwater exceed Class I groundwater standards. Following IEPA's receipt and review of the revised GMZ, Illinois EPA will determine whether the proposed changes to the GMZ are adequate and grant approval of the GMZ, if appropriate.

3. Overall, corrective action activities at the former refinery facility must continue to be implemented in accordance with: (1) this letter, (2) 35 Ill. Adm. Code 620, 724.201, and 742; and (3) the requirements set forth in its RCRA Part B permit (Log No. B-147) and all other associated modifications or other comparable mechanism issued thereafter by the Illinois EPA for this facility.

4. A completed RCRA Corrective Action Certification form (copy enclosed) must accompany all submittals made to Illinois EPA regarding RCRA corrective action activities at this facility.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal 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 concerning groundwater-related aspects of this letter, please contact Ryan Bennett at (217) 558-2150. Questions about any other aspects of this letter should be directed to Kalpesh A. Patel, P.E. at 217/524-3862.

Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:KAP:bjh\2001261s.doc

Attachments:
1. Topographic Map/Site Layout Map
2. Legal Description of Northwest parcel
3. Institutional Control and Restrictive Covenant Locations Map
4. Use of Ordinance as an Institutional Control for Groundwater for RCRA Closure Projects
5. Corrective Action Certification Form

cc: Frederick W. Johnson, P.E. – URS Corporation (w/attachments)

Attachment 1

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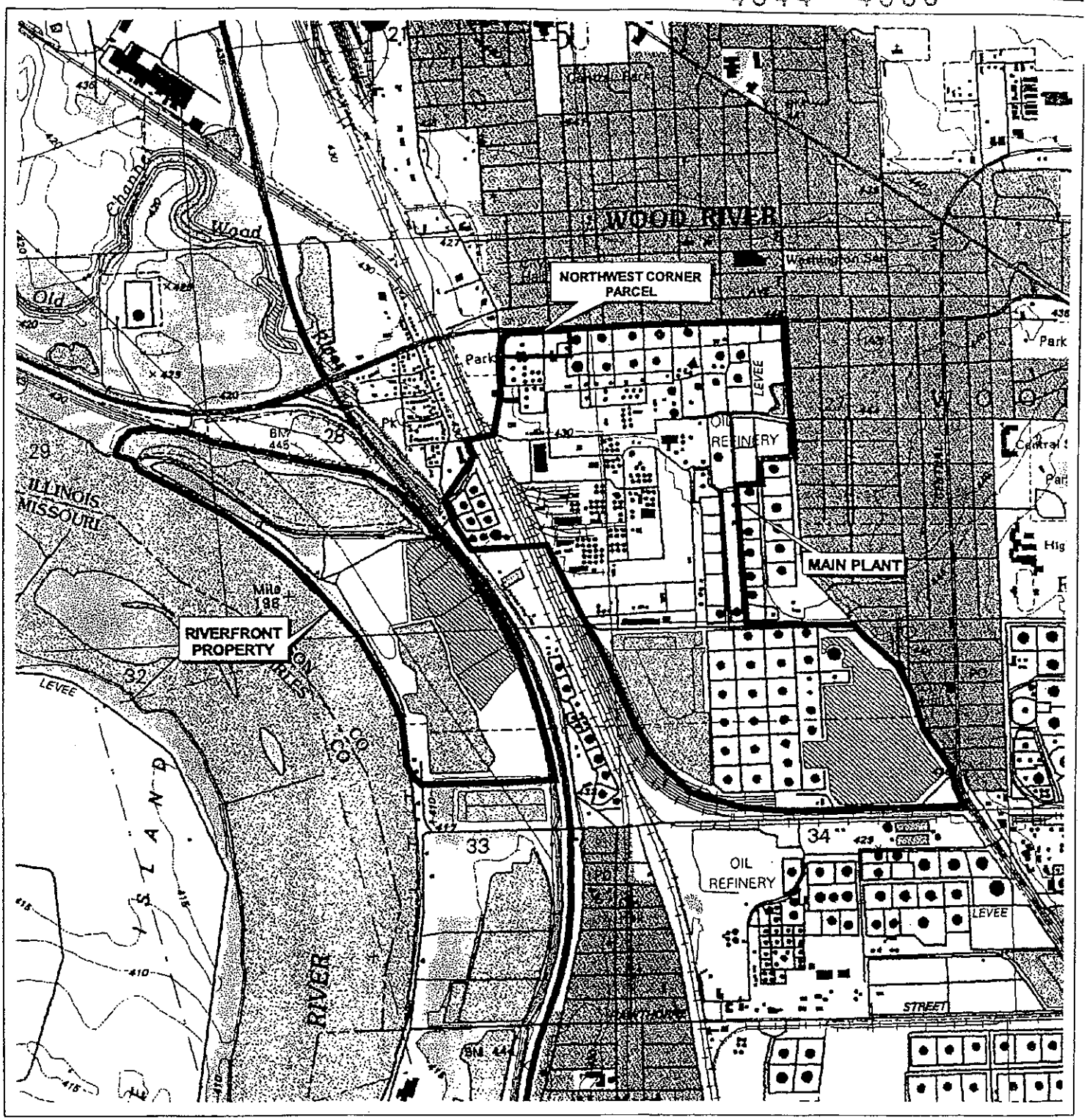


Legend

- Northwest Parcel
- BP Property

2000 0 2000 Feet

- Source: U.S.G.S. 7.5 Minute Series, Topographic Map Wood River, ILL.-MO., 1994

D:\GIS\MDC054\GIS\DATA\PROJECT\BITOPO.APR

URS 122 South Michigan Avenue Suite 1920 Chicago, Illinois 60603

TOPOGRAPHIC MAP
BP AMOCO WOOD RIVER
WOOD RIVER, ILLINOIS

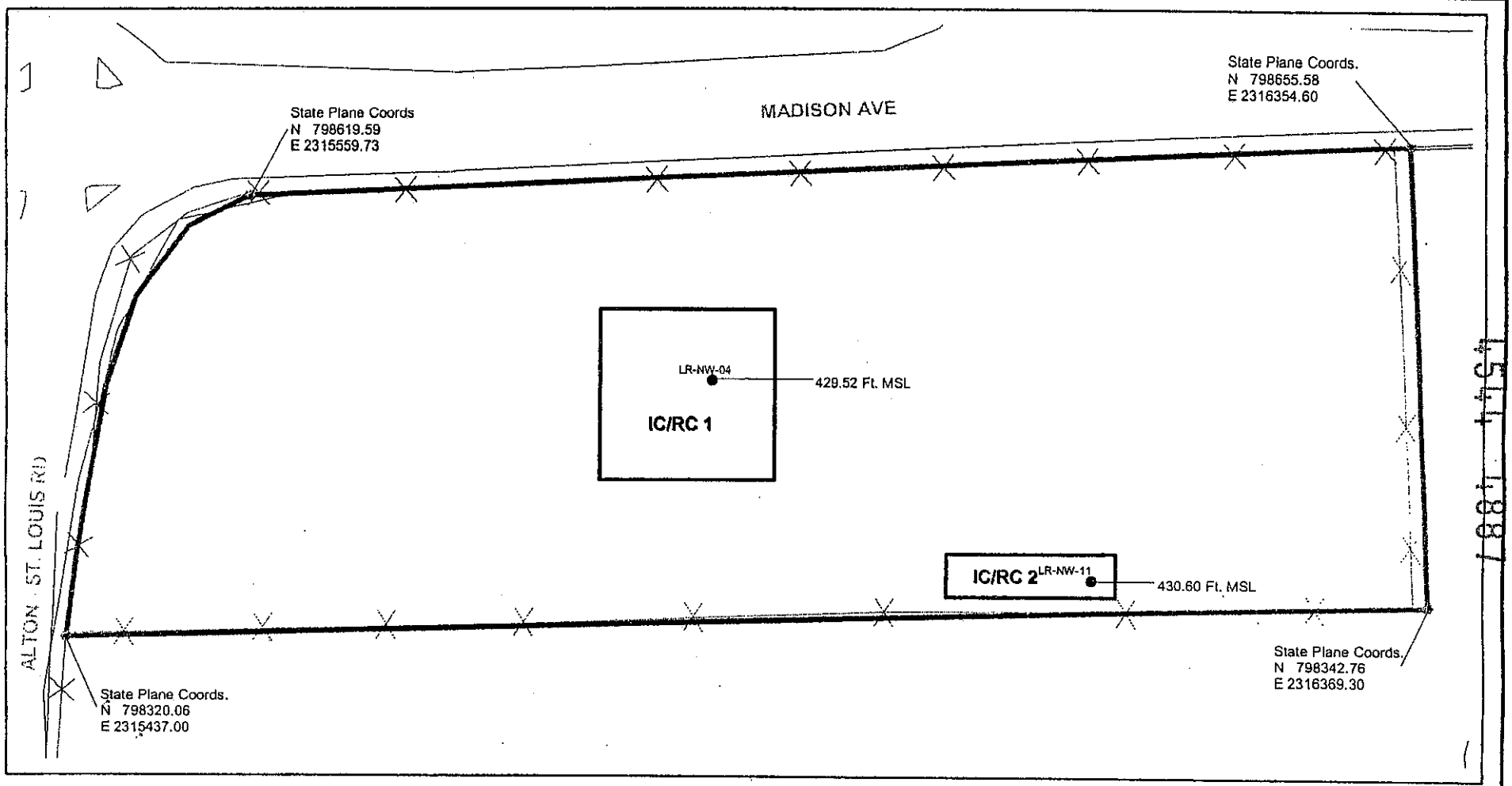
DESIGN: JTD	CHK'D: KW	PROJECT NO. 83C054	FIG. NO. 1-1
DRAWN: MDC	DATE: 6/4/01		

Attachment 2

Legal Description of 6.29 Acres Parcel in the Northwest Corner of Amoco Main Plant Facility, Wood River, Illinois

Commencing at Northeast corner of the Southeast Quarter of the Northeast Quarter if Section 28, Township 5 North, Range 9 West; thence South 00° 46' 18" East, along the east line of said Quarter Quarter Section, a distance of 60.06 feet to the south right of way line of Illinois Route 143 (F.A. Route 789) (Madison Avenue, 60 feet wide); thence North 88° 13' 21" West, along said south right of way line, a distance of 1.44 feet; thence south 89° 25' 05" West, continuing along said right of way, a distance of 309.27 feet to the POINT OF BEGINNING of the tract herein described; thence South 00° 40' 48" East a distance of 313.19 feet; thence North 89° 23' 04" West a distance of 932.64 feet to the existing easterly right of way line of Alton-St. Louis Road (60 feet wide); thence North 06° 30' 37" East, along said right of way, a distance of 35.04 feet to the easterly line of a tract of land conveyed by Amoco to Illinois Department of Transportation by deed recorded in Book 3186 Page 440 of Madison County Records; thence North 13° 21' 11" East, along said east line, a distance of 50.36 feet; thence North 06° 30' 37" East, continuing along said east line, a distance of 102,97 feet to the easterly line of a tract of land surveyed by Amoco to Illinois Department of Transportation by deed recorded in Book 3164 Page 272 of Madison County Records; thence north 18° 28' 37" East, along said easterly right of way line, a distance of 72.16 feet; thence north 54° 30' 50" East, continuing along said right of way line, a distance of 48.71 feet; thence North 74° 14' 40' East, continuing along said right of way line, a distance of 45.06 feet to the existing south right of way line of said Illinois Route 143; thence North 89° 25' 05" east, along said south right of way line, a distance of 795.74 feet to the point of beginning, containing 6.29 acres.

Attachm 3



Legend

- Sample Locations
- Locations Planned for Institutional Control/ Restrictive Covenant (IC/RC)
- Northwest Corner Parcel (Area 1)

Note:
- Elevations shown hereon are ground elevations.
- Coordinates in Illinois State Plane Coordinate System (NAD83).

Basis For IC/RC Area Identification:

- Application of Institutional Controls to ensure 10 feet of soil is maintained atop exceedences of Tier 2 Inhalation Remediation Objectives (ROs)
- Application of Restrictive Covenants to require site Safety Plan to protect Construction Workers.
- The proposed Tier 2 soil inhalation institutional control areas are represented as polygons to facilitate georeferencing of area boundaries.

IC/RC Boundary Survey Locations:

IC/RC 1

Location	East	North
NW Corner	2,315,800	798,544
NE Corner	2,315,921	798,544
SE Corner	2,315,921	798,428
SW Corner	2,315,800	798,428

The surface elevation of IC/RC1 must remain over 424 feet MSL.

IC/RC 2

Location	East	North
NW Corner	2,316,042	798,378
NE Corner	2,316,159	798,378
SE Corner	2,316,159	798,348
SW Corner	2,316,042	798,348

The surface elevation of IC/RC1 must remain over 425 feet MSL.

* Illinois State Plane Coordinates NAD 83

50 0 50
Feet
Scale
1" = 100 Feet

URS
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603

INSTITUTIONAL CONTROL AND RESTRICTIVE COVENANT LOCATIONS
NW CORNER LAND REUSE PARCEL
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

DESIGN: KW	CHKD: JD	PROJECT NO.	FIG. NO.
DRAWN: MDC	DATE: 11/13/01	83C054	2

Attachment 4

Use of Ordinance as an Institutional Control for Groundwater
for RCRA Closure Projects

35 Ill. Adm. Code 742.1015 sets forth the requirements for using ordinances as institutional controls to restrict groundwater usage in an area. Such an ordinance must effectively prohibit the installation and use of potable water supply wells. 35 Ill. Adm. Code 742.1015(b) and (c) prescribes specific requirements for the information that must be submitted to the Illinois EPA along with a request for approval of an ordinance. The remainder of 35 Ill. Adm. Code 742.1015 includes notification, tracking, and recording requirements that also must be met. All provisions of 35 Ill. Adm. Code 742.1015 must be satisfied to perfect the use of the ordinance as an environmental institutional control. The purpose of this document is to identify the requirements which must be met when using an ordinance as an institutional control to restrict groundwater usage at a RCRA closure site.

The informational requirements under 35 Ill. Adm. Code 742.1015(b) (Items 1.a through f below) must be met and submitted to Illinois EPA for the approval of a local ordinance as an institutional control. The document prepared to address these informational requirements will be incorporated into the Illinois EPA's eventual no further remediation determination to be recorded as required by 35 Ill. Adm. Code 742.1015(f). Additionally, upon Illinois EPA approval of this document, the document shall be submitted to all owners of each affected property and to the unit of local government as required in 35 Ill. Adm. Code 742.1015(b)(6) (Item 1.f below) and 742.1015(e), respectively. A more detailed discussion of these requirements follows:

1. Pursuant to 35 Ill. Adm. Code 742.1015(b), a request submitted to Illinois EPA for approval of a local ordinance as an institutional control shall provide the following:

    a. A copy of the ordinance restricting groundwater use certified by an official of the unit of local government in which the site is located that it is the latest, most current copy of the ordinance. The ordinance must demonstrate that potable use of groundwater from potable water supply wells is prohibited;

    b. A scaled map(s) delineating the areal extent of groundwater contamination (measured or modeled) above the applicable Tier 1, Class I groundwater remediation objectives, including:

        i. map scale (i.e., 1 inch is equal to no more than 200 feet) and date,

        ii. orientation of the map (north arrow),

        iii. legal boundaries of the facility,

iv. buildings and other permanent structures,

c. Information showing the concentration of contaminants of concern in which the applicable Tier 1, Class I groundwater remediation objectives are exceeded. This information would best be presented as a table identifying the contaminant(s) of concern and their respective concentration(s);

d. A scaled map delineating the boundaries of all properties under which groundwater is located which exceeds the applicable Tier 1, Class I groundwater remediation objectives;

e. Information identifying the current owner(s) of each property identified in 1.d. This information would best be presented as a table which identifies the property owner's name(s) and address(es); and

f. A copy of the proposed submission of the information to the current owners identified in 1.d of the information required in 1.a through 1.e and a copy of the written notification document required in 2.

As required by 35 Ill. Adm. Code 742.1015(b)(6) (Item 1.f above), the written notification in 742.1015(c) (Item 2 below) shall be prepared and submitted for Illinois EPA review. This document shall, upon Illinois EPA approval, be submitted, as required by 35 Ill. Adm. Code 742.1015(c) (Item 2 below) to the property owners identified in 35 Ill. Adm. Code 742.1015(b)(5) (Item 1.e above) and the unit of local government. This document shall also be incorporated into the Illinois EPA's no further remediation determination to be recorded as required by 35 Ill. Adm. Code 742.1015(f).

2. Each of the property owners identified in 1.d and the unit of local government must receive written notification from the party desiring to use the institutional control that groundwater remediation objectives have been approved by the Illinois EPA. Written proof of this notification shall be submitted to the Illinois EPA within 45 days from the date of the instrument memorializing the Illinois EPA's no further remediation determination. The notification shall include:

a. The name and address of the unit of local government;

b. The citation to the ordinance;

c. A description of the property being sent notice by adequate legal description or by reference to a plat showing the boundaries;

d. A statement that the ordinance restricting groundwater use has been used by the Illinois EPA in reviewing a request for a groundwater remediation objective;

e. A statement as to the nature of the release and response action with the site name, address, and Illinois EPA site number or Illinois inventory identification number; and

f. A statement that more information may be obtained regarding the ordinance through a written request under the Freedom of Information Act (5 ILCS 140) to:

Illinois Environmental Protection Illinois EPA
Attention: Freedom of Information Act Officer
Bureau of Land -- #24
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

RH\mls\993311S.WPD

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Attachment 5

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 FACILITY IDENTIFICATION

Name: _____ County: _____

Street Address: _____ Site No. (IEPA): _____

City: _____ Site No. (USEPA): _____

2.0 OWNER INFORMATION

Name: _____

Mailing Address: _____

_____

_____

Contact Name: _____

Contact Title: _____

Phone No.: _____

3.0 OPERATOR INFORMATION

_____

_____

_____

_____

_____

_____

4.0 TYPE OF SUBMISSION (check applicable item and provide requested information, as applicable)

___ RFI Phase I Workplan/Report
___ RFI Phase II Workplan/Report
___ CMP Report; Phase _____
___ Other (describe): _____
_____
Date of Submittal _____

IEPA Permit Log No. _____
Date of Last IEPA Letter on Project _____
Log No. of Last IEPA Letter on Project _____
Does this submittal include groundwater information: _ Yes _ No

5.0 DESCRIPTION OF SUBMITTAL: (briefly describe what is being submitted and its purpose)

_____

_____

6.0 DOCUMENTS SUBMITTED (identify all documents in submittal, including cover letter; give dates of all documents)

_____

_____

7.0 CERTIFICATION STATEMENT - *(This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below).* The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. 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.

7.1 OWNER/OPERATOR CERTIFICATION (Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice-president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used).

Owner Signature: _____ _____ (Date)

Title: _____

Operator Signature: _____ _____ (Date)

Title: _____

7.2 PROFESSIONAL CERTIFICATION *(if necessary)* - Work carried out in this submittal 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. No one is relieved 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.

Professional's Signature: _____ _____ Date:

Professional's Name: _____ Professional's Seal:

Professional's Address: _____

_____

_____

Professional's Phone No.: _____

7.3 LABORATORY CERTIFICATION *(if necessary)* - The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA.

_____ _____

Name of Laboratory Signature of Laboratory Responsible Officer Date

Mailing Address of Laboratory _____

Name and Title of Laboratory Responsible Officer

_____

_____

END OF DOCUMENT

_____

Recorder's Certificate of Photocopy

STATE OF ILLINOIS)
) SS
COUNTY OF MADISON)

I, DANIEL R. DONOHOO, the duly elected RECORDER in and for the County and State aforesaid do hereby certify that the foregoing copy of a certain ENVIRONMENTAL DISCLOSURER is the true and correct photocopy of said ENVIRONMENTAL DISCLOSURER from BP PRODUCTS NORTH AMERICA INC., F/K/A AMOCO OIL COMPNANY to ENVIRONMENTAL DISCLOSURER including the Certificate of Acknowledgement bearing date the 8TH day of NOVEMBER A.D. 2002 as the same appears in the records of my office in Book 4544 Page 4872 recorded on the 23RD day of JANUARY A.D. 2003.

GIVEN under my hand and OFFICIAL SEAL of the RECORDER at Edwardsville, Illinois, this 23RD day of JANUARY, A.D. 2003.

Daniel R. Donohoo

DANIEL R. DONOHOO
RECORDER
in and for
MADISON COUNTY, ILLINOIS

RECORDER MADISON COUNTY ILLINOIS

95

LITHO. IN U.S.A.

EXHIBIT E

Atlantic Richfield Company

Greg Jevyak
Environmental Business Manager

301 Evans Avenue
P.O. Box 167
Wood River, IL 62095-0167
Phone: (618) 254-9866
Fax: (618) 254-8718
jevyakgs@bp.com

October 6, 2004

Ms. Joyce L. Munie, P.E.
Illinois Environmental Protection Agency
Bureau of Land - #33
Permit Section
1021 North Grand Avenue East
Springfield, IL 62702

Subject: 1191150001 – Madison County
BP Products North America Inc., Former Wood River Refinery Main Plant
ILD980700967
Log Nos. B-147-CA-31, 36, 37, 42 and 43

Dear Ms. Munie:

Enclosed on behalf of BP Products North America Inc. (BP) are three (3) copies of the Environmental Land Use Control (ELUC) as recorded by Madison County for Area 15 (PIN No. 19-1-08-28-00-000-010.001) at the BP former Wood River Refinery Main Plant.

Please note the original Recorder's Certificate of Photocopy (Certificate) is the final page of the copies. This Certificate certifies that the document attached to it is a true and correct photocopy of the filed document. The Certificate also confirms that conditions outlined in paragraph #4 and #5 of the August 23, 2004 Illinois EPA letter approving the ELUC have been satisfied. Also, the required changes mentioned in paragraphs #3A and #3B were made to the final ELUC.

If you have any questions, please contact Janice McLain of BP at 312-856-4138 or me at 618-254-9866.

Sincerely,

Greg S. Jevyak
Environmental Business Manager

Enclosure

cc: Ryan Hartley, URS
Janice McLain, BP

2004R59615

STATE OF ILLINOIS
MADISON COUNTY
FILED FOR RECORD IN
THE RECORDERS OFFICE

10/01/2004 04:06PM

DANIEL R. DONOHOO
RECORDER

DOC FEE: $37.00
PAGES: 23

PREPARED BY:

Name: Greg S. Jevyak
Environmental Business Manager
Atlantic Richfield Company
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

RETURN TO:

Name: Greg S. Jevyak
Environmental Business Manager
Atlantic Richfield Company
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

37.00 pd cash (C)

THE ABOVE SPACE FOR RECORDER'S OFFICE

Environmental Land Use Control

THIS ENVIRONMENTAL LAND USE CONTROL ("ELUC"), is made this 24th day of September, 2004, by BP Products North America Inc. f/k/a Amoco Oil Company, a Maryland corporation, ("Property Owner"), Property Owner of the real property located at 301 Evans Avenue, Wood River, Illinois.

WHEREAS, 35 Ill. Admin. Code 742 and 415 ILCS 5/58.17 provide for the use of an ELUC as an institutional control in order to impose land use limitations or requirements related to environmental contamination so that persons conducting remediation can obtain a No Further Action determination from the Illinois Environmental Protection Agency ("IEPA"). Such determination has been obtained on November 19, 2003 and is attached hereto as Exhibit C. The reason for an ELUC is to ensure protection of human health and the environment. The limitations and requirements contained herein are necessary in order to protect against exposure to contaminated soil or groundwater or both that may be present on the property as a result of prior industrial activities. Under 35 Ill. Adm. Code 742, the use of risk-based, site specific remediation objectives may require the use of an ELUC on real property and the ELUC may apply to certain physical features (e.g., engineered barriers, monitoring wells, caps, etc.).

WHEREAS, Property Owner intends to request risk-based, site specific soil and groundwater remediation objectives from the IEPA under 35 Ill. Admin. Code Part 742 to obtain risk-based closure of the site, identified by Bureau of Land LPC number 1191150001, utilizing an ELUC.

NOW, THEREFORE, the recitals set forth above are incorporated by reference as if fully set forth herein and the Property Owner agrees as follows:

Section One. Property Owner does hereby establish an ELUC on the real estate, situated in the County of Madison, State of Illinois and further described in Exhibit A attached hereto and incorporated herein by reference (the "Property").

Attached as Exhibit B is a site map and table that shows the legal boundary of the Property, any physical features to which the ELUC applies, the horizontal and vertical extent of the contaminants of concern above applicable remediation objectives for soil or groundwater or both, and the nature, location of the source, and direction of movement of the contaminants of concern, as required under 35 Ill. Admin. Code Part 742.

Section Two. Property Owner represents and warrants it is the current owner of the Property and has the authority to record this ELUC on the chain of title for the Property in the Office of the Recorder or Registrar of Titles in Madison County, Illinois.

Section Three. The Property Owner hereby agrees, for itself, and its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessees, possessor or user of the Property or the holder of any portion thereof interest therein, that:

a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IL Admin. Code 742;

c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

e. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds ("VOCs"). Soil shall be considered "contaminated" if (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) the field screening test detects the presence (i.e., PID readings > 100 units) of VOCs in soil. Soils exhibiting potential contamination based on the visual or field screening will either be sampled for VOC and SVOC analysis or considered contaminated. If laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives ("ROs") developed for the Property then the soils will be considered to be not contaminated for reuse on the former BP Refinery

Main Plant Facility, which is shown on Exhibit B. If the soils are less than the site specific ROs but greater than residential standards they will be considered contaminated if transported off-site.

(i) If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(ii) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as clean fill in other areas of the former BP Refinery Main Plant Facility. However, procedures must be in place to ensure that this material remains on the former BP Refinery Main Plant Facility and is not to be transported off-site, unless it is transported off-site as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal or unless such material is shown to not be a special waste to the satisfaction of Illinois EPA.

(iii) Documentation of all these activities must be placed in the facility's operating records.

f. The four areas of the Property, which are identified on Exhibit B, require an engineered barrier to restrict exposure to the soils beneath the barrier. This barrier must be properly maintained as an engineered barrier to restrict exposure to the soils beneath the barrier. Prior to commencement of any future excavation and/or construction in or near the areas containing the engineered barriers, a safety plan for these areas is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations; and other U.S. EPA guidance as provided. At a minimum, the plan should address possible worker exposure if any future excavation and construction activities occur within the contaminated soil. Any contaminated soil removed, or excavated from, or disturbed at the areas containing the engineered barriers must be handled in accordance with all applicable laws and regulations.

Section Four. This ELUC is binding on the Property Owner, its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein. This ELUC shall apply in perpetuity against the Property and shall not be released until the IEPA determines there is no longer a need for the ELUC as an institutional control; until the IEPA, upon written request, issues a new no further action determination approving modification or removal of the limitation(s) or requirement(s); and until a release or modification of the land use limitation or requirement is filed in the chain of title for the Property.

Section Five. Information regarding the remediation performed on the Property may be obtained from the IEPA through a request under the Freedom of Information Act (5 ILCS 140) and rules promulgated thereunder by providing the IEPA with the 10-digit LPC number listed above.

Section Six. The effective date of this ELUC shall be the date that it is officially recorded in the chain of title for the Property to which this ELUC applies.

WITNESS the following signature:

BP Products North America Inc.

By: Janice McLain Attest: Dorothy Toth

Printed: JANICE McLAIN Printed: DOROTHY TOTH

Its: Attorney Its: ADMINISTRATIVE ASSISTANT

Date: 9-24-04 Date: 9-24-04

STATE OF ILLINOIS)
) SS:
COUNTY OF COOK)

I, Debra Walls the undersigned, a Notary Public for said County and State, DO HEREBY CERTIFY, that Janice McLain and Dorothy Toth personally known to me to be the Attorney and Adm. Asst., respectively, of **BP Products North America Inc. f/k/a Amoco Oil Company**, a Maryland corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that in said capacities they signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

Given under my hand and official seal, this 24th day of September, 2004.

OFFICIAL SEAL
DEBRA L. WALLS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES 9/6/05

Debra L. Walls
Notary Public

PIN NO. 19-1-08-28-00-000-010.001

Exhibit A

The subject property is located in the City of Wood River, Madison County, State of Illinois, commonly known as 301 Evans Avenue, Wood River, Illinois and more particularly described as:

LEGAL DESCRIPTION AND
REAL ESTATE TAX INDEX OR PARCEL #
(PURSUANT TO 742. 1010(D)(2))

Part of Section 28, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Section 28; thence South 89° 38' 16" West, along the south line of said Section 28, a distance of 505.47 feet to the existing northeasterly right of way line of the Illinois Terminal Railroad; thence along the existing northeasterly right of way line of said Illinois Terminal Railroad for the following 3 courses: (1) North 21° 37' 36" West a distance of 1496.26 feet, (2) South 88° 38' 39" West a distance of 26.65 feet, (3) North 21° 37' 36" West a distance of 1397.11 feet to the existing southeasterly right of way line of Alton-St. Louis Road (60 feet wide); thence North 49° 41' 05" East, along said existing right of way line, a distance of 82.55 feet to the POINT OF BEGINNING; thence North 49° 41' 05" East, continuing along said right of way line, a distance of 138.11 feet; thence South 56° 35' 11" East a distance of 267.57 feet; thence North 84° 24' 57" East a distance of 59.79 feet; thence North 2° 05' 12" West a distance of 128.27 feet; thence North 85° 25' 10" East a distance of 149.26 feet; thence North a distance of 86.43 feet; thence North 88° 02' 30" East a distance of 544.16 feet; thence South 1° 32' 36" East a distance of 540.81 feet; thence North 89° 54' 02" West a distance of 196.51 feet; thence South 2° 23' 35" East a distance of 116.61 feet; thence South 88° 13' 39" West a distance of 96.99 feet; thence South 1° 24' 27" East a distance of 84.80 feet; thence South 88° 22' 16" West a distance of 445.52 feet; thence North 2° 00' 01" West a distance of 427.01 feet; thence South 87° 46' 10" West a distance of 81.52 feet; thence North 45° 35' 29" West a distance of 72.57 feet; thence South 53° 07' 46" West a distance of 63.47 feet; thence North 43° 17' 19" West a distance of 150.36 feet; thence North 71° 54' 11" West a distance of 59.71 feet to the point of beginning, containing 11.73 acres (510,804 sq. ft.).

PIN NO. 19-1-08-28-00-000-010.001

PIN NO. 19-1-08-28-00-000-010.001

Exhibit B

Scaled Maps and tables showing:

A) The legal boundary of the Property to which the ELUC applies;

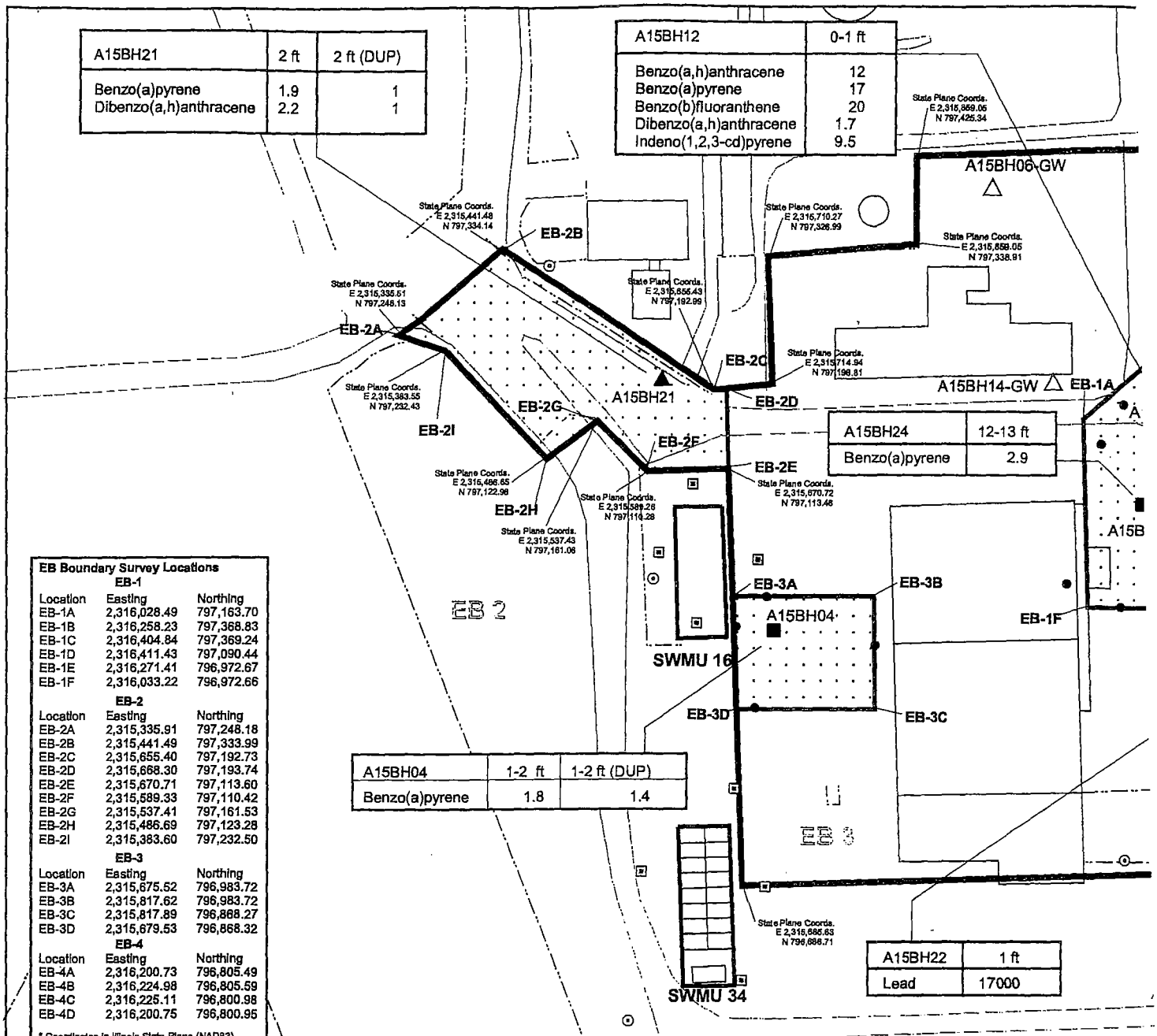
B) The horizontal and vertical extent of contaminants of concern above applicable remediation objectives for soil and groundwater to which the ELUC applies;

C) Any physical features to which the ELUC applies (e.g. engineered barriers, monitoring wells, caps)

D) The nature, location of the source, and direction of movement of the contaminants of concern.

A15BH21	2 ft	2 ft (DUP)
Benzo(a)pyrene	1.9	1
Dibenzo(a,h)anthracene	2.2	1

A15BH12	0-1 ft
Benzo(a,h)anthracene	12
Benzo(a)pyrene	17
Benzo(b)fluoranthene	20
Dibenzo(a,h)anthracene	1.7
Indeno(1,2,3-cd)pyrene	9.5



A15BH24	12-13 ft
Benzo(a)pyrene	2.9

A15BH04	1-2 ft	1-2 ft (DUP)
Benzo(a)pyrene	1.8	1.4

A15BH22	1 ft
Lead	17000

EB Boundary Survey Locations

EB-1

Location	Easting	Northing
EB-1A	2,316,028.49	797,163.70
EB-1B	2,316,258.23	797,368.83
EB-1C	2,316,404.84	797,369.24
EB-1D	2,316,411.43	797,090.44
EB-1E	2,316,271.41	796,972.67
EB-1F	2,316,033.22	796,972.66

EB-2

Location	Easting	Northing
EB-2A	2,315,335.91	797,248.18
EB-2B	2,315,441.49	797,333.99
EB-2C	2,315,655.40	797,192.73
EB-2D	2,315,668.30	797,193.74
EB-2E	2,315,670.71	797,113.60
EB-2F	2,315,589.33	797,110.42
EB-2G	2,315,537.41	797,161.53
EB-2H	2,315,486.69	797,123.28
EB-2I	2,315,383.60	797,232.50

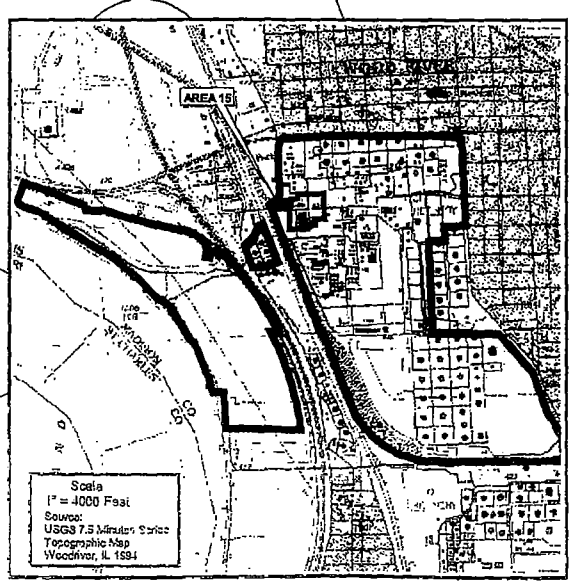
EB-3

Location	Easting	Northing
EB-3A	2,315,675.52	796,983.72
EB-3B	2,315,817.62	796,983.72
EB-3C	2,315,817.89	796,868.27
EB-3D	2,315,679.53	796,868.32

EB-4

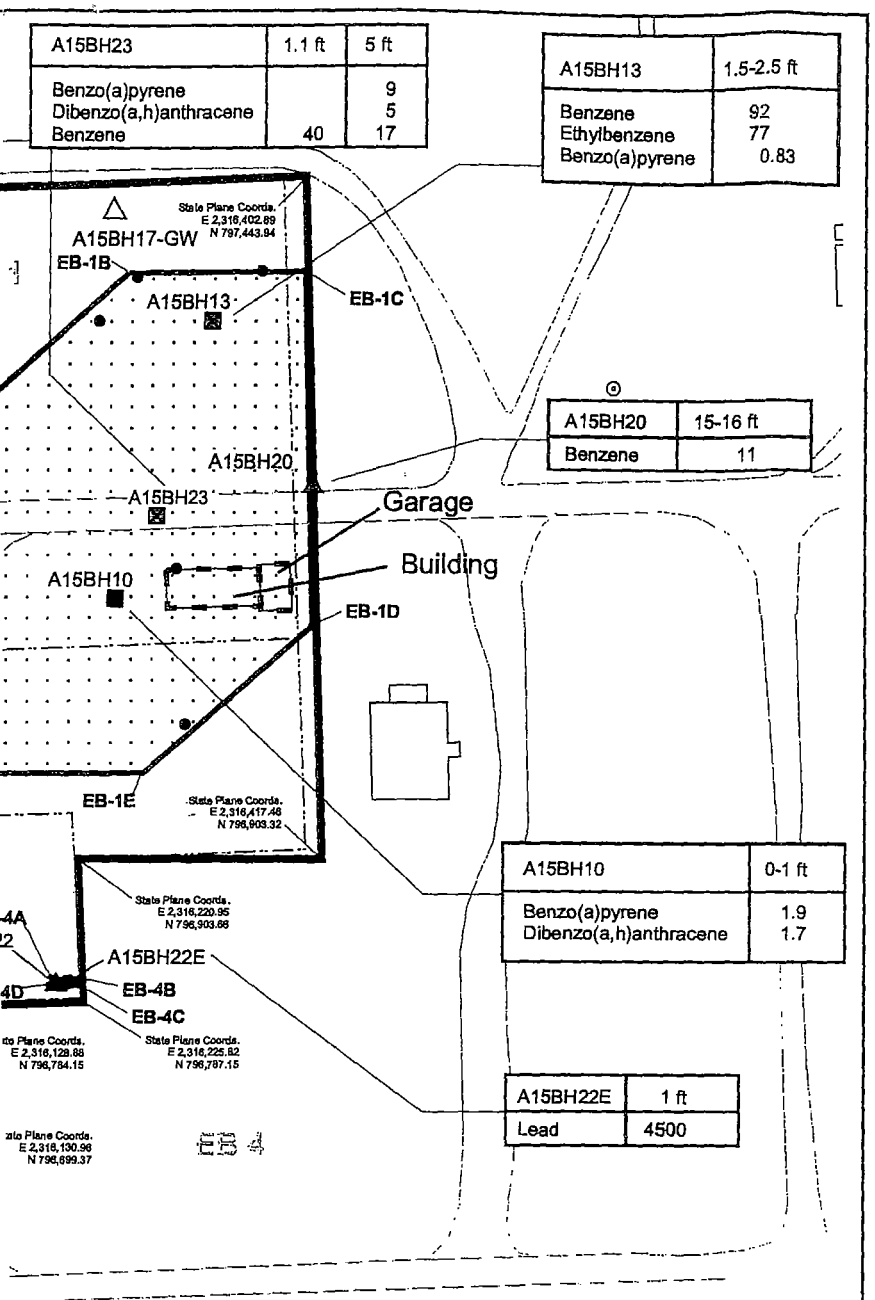
Location	Easting	Northing
EB-4A	2,316,200.73	796,805.49
EB-4B	2,316,224.98	796,805.59
EB-4C	2,316,225.11	796,800.98
EB-4D	2,316,200.75	796,800.95

* Coordinates in Illinois State Plane (NAD83)



Summary of Perched Water Results
A Comparison with Illinois Class II Groundwater Objectives

Chemicals	Units	Illinois Class II Groundwater Objectives (1)	Sample Locatic		
			BH06-GW	BH06A-GW	BH1
Metals					
Arsenic	mg/l	0.2	0.057	–	0.0
Barium	mg/l	2	2.66	–	1.8
Lead	mg/l	0.1	0.983	–	0.1
VOCs					
Benzene		0.025	–	0.031	
SVOCs					
Benzo(a)anthracene	mg/l	0.00065	0.0001 U	–	
Benzo(b)pyrene	mg/l	0.002	0.0001	-	
Benzo(b)fluoranthene	mg/l	0.0009	0.0001 U		
Chrysene	mg/l	0.0075	0.0003 J	–	



0 50 100 Feet

Scale
1" = 150 Feet

Legend

- Administration Building Parcel (Area 15)
- Solid Waste Management Unit (SWMU)
- Area of Engineered Barrier (EB)

Sample Locations

- Midpoint between samples with and without Tier 1 Ingestion or Tier 2 Inhalation Exceedences
- Phase I RFI Soil Boring Location
- Boring with Tier 2 Industrial/Commercial Worker Inhalation Exceedence
- Existing Monitoring Well
- Boring with Tier 1 Ingestion Exceedence
- Perched Groundwater Location

(All results are presented in mg/Kg)

Basis For EB Area Identification

- Application of Institutional Controls to ensure a surface engineered barrier of approved specifications is maintained atop exceedances of Tier 2 Inhalation Remedation Objectives (ROs) or Tier 1 Ingestion ROs.

- Application of Institutional Control to require Site Safety Plan to protect Construction Workers.

Notes:

1. No specific source areas were identified
2. The occurence of perched water is sporadic and not vertically or laterally continuous; therefore it is not possible to determine the extent of impacted perched water or direction of flow.
3. Figure is based on Attachment 3 of IEPA No Further Action Letter, dated 11/19/03.

BH17-GW

.008 J
.003 J
.002 J
.012 J

(1) - Illinois Class II Groundwater Objectives were obtained from Appendix B, Table E of TACO.
– - Not analyzed
U - The analyte was analyzed for, but not detected. Value shown is the reporting limit.
J - Estimated concentration because the results were below the sample reporting limit, or quality control criteria were not met.

Shaded values exceed Illinois Class II Groundwater Objectives

Property of BP Corporation North America Inc.

C:\Drawables\Library\BPWood_River\MainPlant\Area15\area15_figureB-1.pdf

URS
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603

AREA 15 ELUC EXHIBIT B PARTS A/B/C/D INSTITUTIONAL CONTROL/ENGINEERED BARRIER AREAS BP FORMER REFINERY WOOD RIVER, ILLINOIS

DESIGN: CF	CHKD: JTD	PROJECT NO. 83C054	FIG. NO B-1
DRAWN: DCW/KH	DATE: 4/5/04		

PIN NO. 19-1-08-28-00-000-010.001

Exhibit C

Copy of the NFA letter dated November 19, 2003 with attachments
1191150001 – Madison County
BP Products North America Inc. – Wood River Refinery
ILD980700967
Log Nos. B-147-CA-31, 36, and 37
RCRA Permit

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/524-3300

November 19, 2003

CERTIFIED MAIL
7002 3150 0000 1219 9473

Mr. Gregory S. Jevyak
Environmental Business Manager
BP Products North America Inc.
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095

Re: 1191150001 -- Madison County
BP Products North America Inc./Main Plant
ILD980700967
Log Nos. B-147-CA-31, 36 and 37
Received: October 21, 2002 and July 24, 2003
RCRA Permit

Dear Mr. Jevyak:

This is in response to a document entitled Administration Building Area (Area 15) Land Reuse Investigation Report and Closure Plan, dated October 18, 2002, which was prepared and submitted on your behalf by Mr. Dennis A. Kasner and Frederick W. Johnson, P.E., of URS. Two addendums to this submittal were submitted on July 23, 2003 that contained additional information requested by Illinois EPA. These submittals contained information regarding investigative activities performed as part of RCRA corrective action at an area referred to as "Area 15" or the "Administration Building Parcel" at the above-referenced facility. Illinois EPA had previously approved plans for conducting these activities for all recognized environmental conditions in Area 15 on March 20, 2002 (soil aspects) and April 9, 2002 (groundwater aspects). Minor modifications to this plan were approved by Illinois EPA on September 27, 2002. A site layout map showing this area within the facility and the parcel's legal description are provided as Attachments 1 and 2, respectively. Overall, the corrective action activities at the subject facility are being conducted in accordance with a RCRA permit issued to the facility (Log No. B-147 and associated modifications).

Based on a review of the information, Illinois EPA has determined that no further action is necessary in Area 15 provided the following requirements are met:

1. Four areas within Area 15 require an engineered barrier and associated institutional control meeting the requirements of 35 Ill. Adm. Code 742 to restrict exposure to the

soils beneath the barrier. The institutional control must require maintenance of the engineered barrier, implementation of a site safety plan to protect construction workers during construction activities associated with these four areas, and proper management of any soil removed from beneath the engineered barrier. A plan view of Area 15 delineating the four areas where an engineered barrier must be established is presented in Attachment 3 to this letter.

2. Any excavation and subsurface construction work in Area 15 shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils in Area 15 and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan.

3. The soil within Area 15 shall remain in place, except where necessary to remove it for construction activities.

4. Soil excavated during construction/demolition/excavation activities within Area 15 must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds (VOCs). Soil shall be considered "contaminated" if (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) the field screening test detects the presence (i.e. PID readings >100 units) of VOCs in soil. Soils exhibiting potential contamination based on the visual or field screening will either be sampled for VOC and SVOC analysis or considered contaminated. If laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives (ROs) developed for the parcel then the soils will be considered to be not contaminated for reuse on the Main Plant property. If the soils are less than the site specific ROs but greater than residential standards they will be considered contaminated if transported offsite.

   (1) If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

   (2) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as clean fill in other areas of the former refinery facility. However, procedures must be in place to ensure that this material remains on the former refinery facility and is not be transported off-site, unless it is transported off-site as a special waste in accordance with 35 Ill. Adm. Code Subtitle G: Waste Disposal or unless such material is shown to not be a special waste to the satisfaction of Illinois EPA.

(3) Documentation of all these activities must be placed in the facility's operating records.

5. Future use of Area 15 must remain industrial/commercial.

6. Appropriate institutional controls meeting the requirements of 35 Ill. Adm. Code, Part 742, Subpart J must be established and recorded to ensure the requirements in Conditions 1, 2, 3, 4 and 5 will be met in the future. A draft institutional control to establish the required restrictions on the property must be submitted to Illinois EPA for review and approval.

7. High lead levels (above 5 mg/l TCLP) detected in the vicinity of sample location A15BH22 shall be addressed by removal/off-site disposal of contaminated soil followed by collection of verification samples. A report documenting the results of this soil removal effort must be submitted to Illinois EPA for review and approval along with the draft ELUC required by Condition 6 above.

8. The groundwater beneath the facility is being and must continue to be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications. Groundwater activities associated with the uppermost aquifer are subject to the following conditions:

a. The groundwater within the Parcel must still be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications; and

b. The March 28, 2002 letter from the Illinois EPA approved the City of Wood River Ordinance 02-01 and the Memorandum of Understanding (MOU) between the City and the Illinois EPA for use as an institutional control. This approved institutional control meets the criteria found in 35 Ill. Adm. Code 742.925, to exclude the groundwater ingestion exposure route, established in accordance with 35 Ill. Adm. Code Part 742, Subpart J. Therefore, no further action is required with respect to the groundwater at the parcel except as required by Condition 8.a above.

9. Prior to completion of a corrective action associated with the Groundwater Management Zone (GMZ) for the uppermost aquifer at the facility, the groundwater quality standards (Class I or Class II) are not applicable to the uppermost aquifer while the GMZ is being monitored and maintained. In addition, as stated in Condition 8 of the February 5, 2002 letter from the Illinois EPA to BP, a GMZ may not be used to restrict the use of

groundwater in the vicinity of the subject property. A GMZ does not prohibit the use of groundwater within its boundary and therefore does not meet the definition of an institutional control as found in 35 Ill. Adm. Code Part 742, Subpart J.

10. Overall, corrective action activities at the former refinery facility must continue to be implemented in accordance with: (1) this letter, (2) 35 Ill. Adm. Code 620, 724.201, and 742; and (3) the requirements set forth in its RCRA Part B permit (Log No. B-147) and all other associated modifications or other comparable mechanism issued thereafter by the Illinois EPA for this facility.

11. A completed RCRA Corrective Action Certification form must accompany all submittals made to Illinois EPA regarding RCRA corrective action activities at this facility.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal 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 concerning groundwater-related aspects of this letter, please contact Ryan Bennett at 217/558-2150. Questions about any other aspects of this letter should be directed to Munib Ahmad, P.E. at 217/524-3263.

Sincerely,

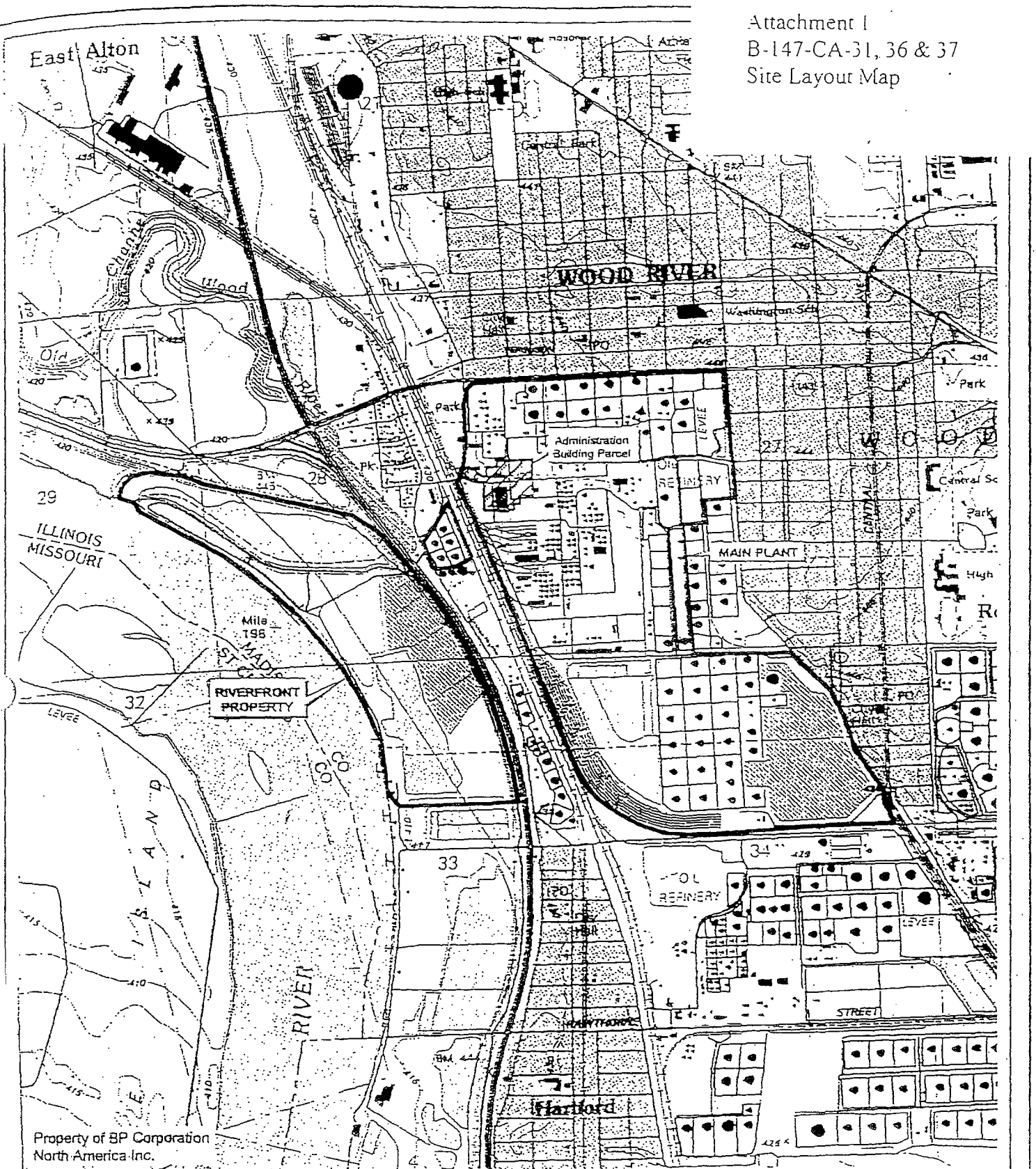
Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:MA:bjh\03511s.doc

Attachments: 1. Site Layout Map
2. Legal Description of Area 15
3. Portions of Area 15 Requiring an Engineered Barrier

cc: Dennis Kasner, URS Corporation
Frederick Johnson, URS Corporation

Attachment 1
B-147-CA-31, 36 & 37
Site Layout Map



Legend

- BP Property
- Administration Building Parcel (Area 15)

- Source: U.S.G.S. 7.5 Minute Series

1000 0 1000 Feet

Scale

URS 122 South Michigan Avenue Suite 1920 Chicago, Illinois 60603

TOPOGRAPHIC MAP
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

Attachment 2
B-147-CA-31, 36 & 37
Legal Description of Area 15

CMT 50 years of service

CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
707 NORTH MAIN STREET
P.O. BOX 597
EDWARDSVILLE, ILLINOIS 62025
(618) 656-0470 FAX (618) 656-0922

Description For
URS Corporation

Area 15
11.73 Acre Tract

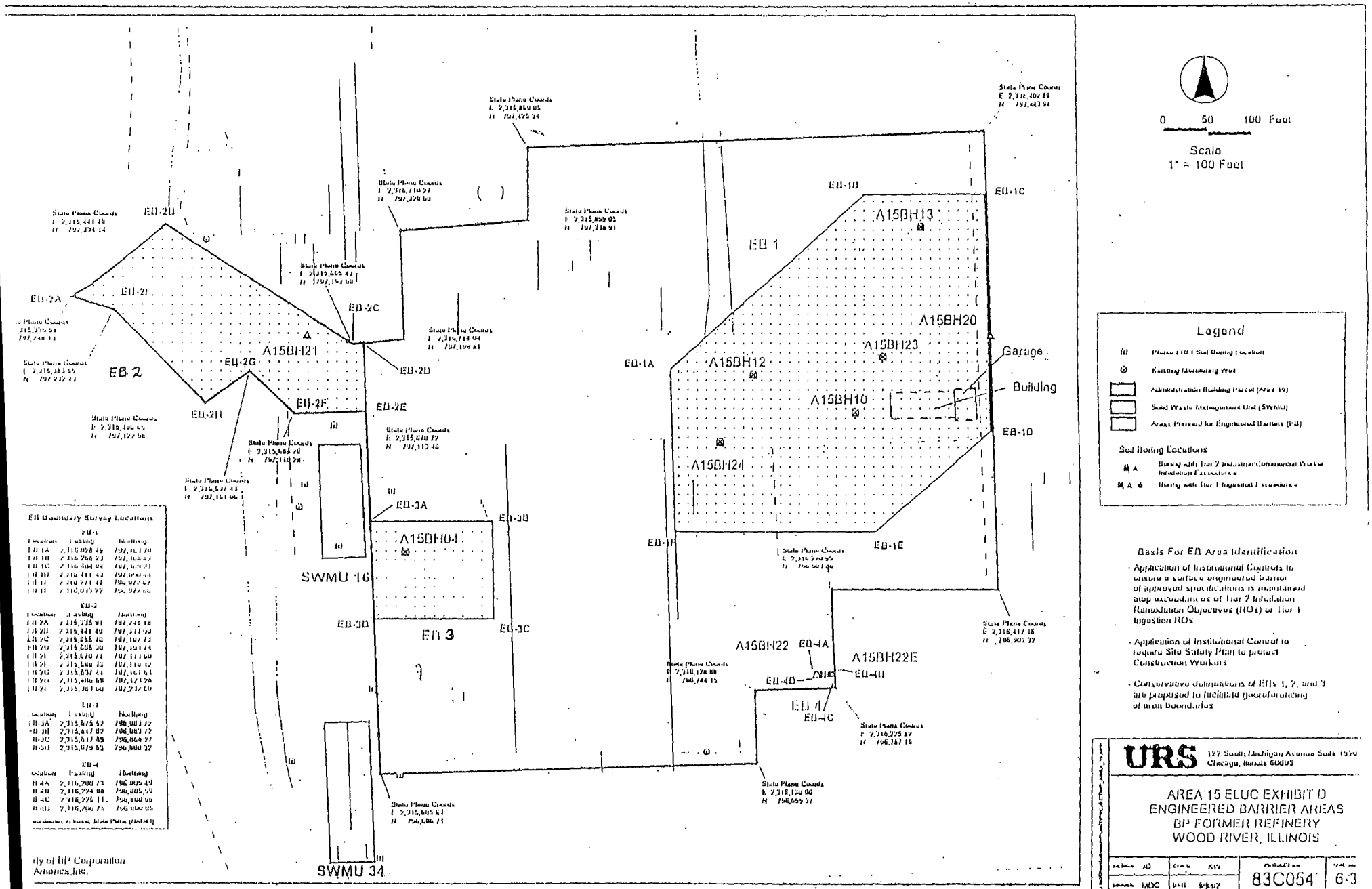
August 21, 2002

Part of Section 28, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Section 28; thence South 89 degrees 38 minutes 16 seconds West, along the south line of said Section 28, a distance of 505.47 feet to the existing northeasterly right of way line of the Illinois Terminal Railroad; thence along the existing northeasterly right of way line of said Illinois Terminal Railroad for the following 3 courses: (1)North 21 degrees 37 minutes 36 seconds West a distance of 1496.26 feet, (2)South 88 degrees 38 minutes 39 seconds West a distance of 26.65 feet, (3)North 21 degrees 37 minutes 36 seconds West a distance of 1397.11 feet to the existing southeasterly right of way line of Alton-St. Louis Road (60 feet wide); thence North 49 degrees 41 minutes 05 seconds East, along said existing right of way line, a distance of 82.55 feet to the POINT OF BEGINNING; thence North 49 degrees 41 minutes 05 seconds East, continuing along said right of way line, a distance of 138.11 feet; thence South 56 degrees 35 minutes 11 seconds East a distance of 267.57 feet; thence North 84 degrees 24 minutes 57 seconds East a distance of 59.79 feet; thence North 2 degrees 05 minutes 12 seconds West a distance of 128.27 feet; thence North 85 degrees 25 minutes 10 seconds East a distance of 149.26 feet; thence North a distance of 86.43 feet; thence North 88 degrees 02 minutes 30 seconds East a distance of 544.16 feet; thence South 1 degree 32 minutes 36 seconds East a distance of 540.81 feet; thence North 89 degrees 54 minutes 02 seconds West a distance of 196.51 feet; thence South 2 degrees 23 minutes 35 seconds East a distance of 116.61 feet; thence South 88 degrees 13 minutes 39 seconds West a distance of 96.99 feet; thence South 1 degree 24 minutes 27 seconds East a distance of 84.80 feet; thence South 88 degrees 22 minutes 16 seconds West a distance of 445.52 feet; thence North 2 degrees 00 minutes 01 second West a distance of 427.01 feet; thence South 87 degrees 46 minutes 10 seconds West a distance of 81.52 feet; thence North 45 degrees 35 minutes 29 seconds West a distance of 72.57 feet; thence South 53 degrees 07 minutes 46 seconds West a distance of 63.47 feet; thence North 43 degrees 17 minutes 19 seconds West a distance of 150.36 feet; thence North 71 degrees 54 minutes 11 seconds West a distance of 59.71 feet to the point of beginning, containing 11.73 acres (510,804 sq.ft.)

SUBJECT TO covenants, conditions, restrictions, and easements of record.

Attachment 3
B-147-CA-31, 36 & 37
Portions of Area 15 Requiring an Engineered Barrier



URS 122 South Michigan Avenue Suite 1920 Chicago, Illinois 60603

AREA 15 ELUC EXHIBIT D
ENGINEERED BARRIER AREAS
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

		PROJECT NO. 83C054	FIG. NO. 6-3

PIN NO. 19-1-08-28-00-000-010.001

Supplementary Exhibit

Letter approving the completion of Condition 7 of the Area 15 NFA

1191150001 – Madison County

BP Products North America Inc. – Wood River Refinery

ILD980700967

Log No. B-147-CA-42

RCRA Permit

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/524-3300

June 16, 2004

Certified Mail
7002 3150 0000 1228 6708

Mr. Greg Jevyak
Environmental Business Manager
BP Products North America Inc.
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095

Area 15

Re: 1191150001 -- Madison County
BP Products North America, Inc/Main Plant
ILD980700967
Log No. B-147-CA-42
Received: April 30, 2004
RCRA Permit

Dear Mr. Jevyak:

This is in response to an April 27, 2004 letter report submitted on your behalf by Mr. Ryan P. Hartley, P.E., and Frederick W. Johnson, P.E. of URS regarding certain activities performed within a parcel referred to as "Area 15" at the above-referenced facility (a drawing showing the location of Area 15 within the facility is attached). The subject facility is carrying out a corrective action program in accordance with Sections IV and VII of its RCRA permit (Log No. B-147 and associated modifications). Illinois EPA issued a No Further Action (NFA) letter for Area 15, subject to several conditions, on November 19, 2003 (Log No. B-147-CA-31, 36 and 37).

Condition 7 of Illinois EPA's November 19, 2003 No Further Action letter for Area 15 required that soil containing high lead levels (greater than 5 mg/l TCLP lead) detected in the vicinity of sample location A15BH22 be addressed by removal/off-site disposal of contaminated soil followed by collection of soil verification samples. The subject submittal describes the soil removal activities required by Condition 7 of the November 19, 2003 letter. The completed activities included: (1) soil excavation and off-site disposal; and (2) collection of soil confirmation samples.

The subject submittal is hereby approved as a modification to the RCRA corrective action program required by the RCRA permit for the above-referenced facility, subject to the following conditions and modifications:

1. It appears that contaminated soil containing high lead levels present in the vicinity of sample location A15BH22 within Area 15 has been adequately removed. As required by the NFA letter, an engineered barrier must be maintained over the contaminated soil present in the vicinity of sample location A15BH22.

2. The facility must continue to comply with the requirements of the November 19, 2003 NFA letter for Area 15. A draft institutional control as required by Condition 6 of the November 19, 2003 letter must be submitted for Illinois EPA's review and approval. This institutional control must contain the following restrictions (required by Conditions 1 through 5 of the November 19, 2003 NFA letter): (1) maintenance of engineered barriers over four areas; (2) implementation of a health and safety plan during any excavation/construction work; (3) proper management of any soil removed during construction activities; and (4) industrial/commercial use for Area 15.

3. Overall, corrective action activities at the subject facility must continue to be carried out in accordance with: (1) 35 Ill. Adm. Code 620, 724.201, and 742; and (2) the requirements set forth in its RCRA permit (Log No. B-147) and all the other associated modifications/letters issued thereafter by the Illinois EPA for this facility.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal 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 this matter, please contact Munib Ahmad, P.E., at 217/524-3300.

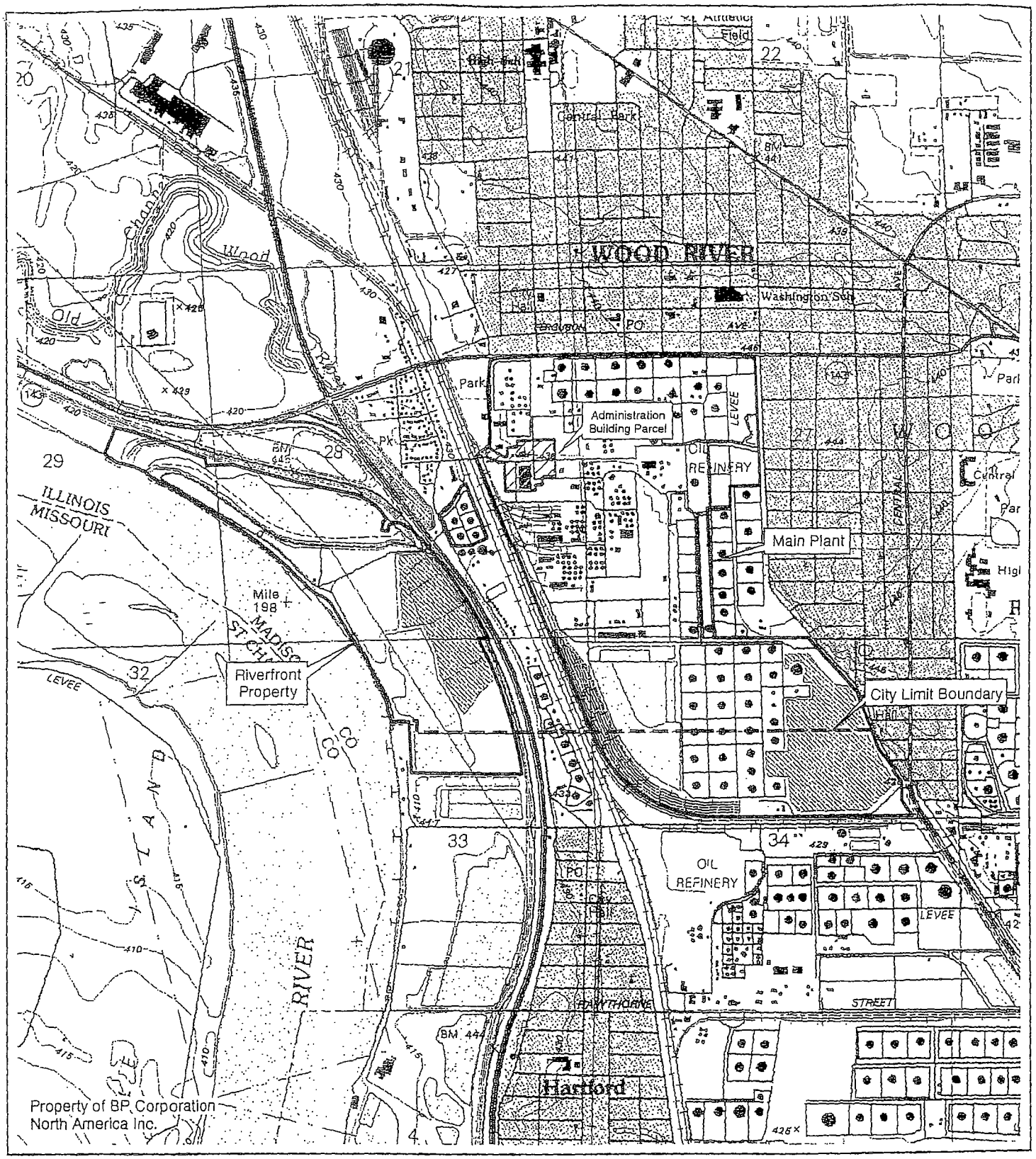
Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:MA:bjh\042113s.doc
JKH

Attachment: Site Map

cc: Ryan P. Hartley, URS
Frederick W. Johnson, URS



Source: USGS 7.5 Minutes Series
Topographic Map
Wood River, ILL.-MO., 1994.

Legend

- Boundary Between Wood River and Hartford
- BP Property
- Administration Building Parcel (Area 15)

1,000 500 0 1,000
Feet

1 inch equals 2,000 feet

URS 122 South Michigan Avenue Suite 1920 Chicago, Illinois 60603

TOPOGRAPHIC MAP
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

TABLES_LIBRARY\BP\WOOD_RIVER\BP_USGSTOPO_AREA15.PDF

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 FACILITY IDENTIFICATION

Name: BP Products North America Inc.

County: Madison

Street Address: 301 Evans Avenue

Site No. (IEPA): 1191150001

City: Wood River

Site No. (USEPA): ILD980700967

2.0 OWNER INFORMATION

Name: BP Products North America Inc.

Mailing Address: 301 Evans Avenue

P.O. Box 167

Wood River, Illinois 62095

Contact Name: Greg Jevyak

Contact Title: Environmental Business Manager

Phone No.: (618) 254-9866

3.0 OPERATOR INFORMATION

BP Products North America Inc.

301 Evans Avenue

P.O. Box 167

Wood River, Illinois 62095

Greg Jevyak

Environmental Business Manager

(618) 254-9866

4.0 TYPE OF SUBMISSION (check applicable item and provide requested information, as applicable)

☐ RFI Phase I Workplan/Report
☐ RFI Phase II Workplan/Report
☐ CMP Report; Phase _____
☒ Other (describe):
Area 15 Environmental Land Use Control
Date of Submittal July 2004

IEPA Permit Log No. B-147
Date of Last IEPA Letter on Project June 16, 2004
Log No. of Last IEPA Letter on Project B-147-CA-42
Does this submittal include groundwater information: ☒ Yes ☐ No

5.0 DESCRIPTION OF SUBMITTAL: (briefly describe what is being submitted and its purpose)

Area 15 Environmental Land Use Control

6.0 DOCUMENTS SUBMITTED (identify all documents in submittal, including cover letter; give dates of all documents)

Area 15 Environmental Land Use Control, July 2004

7.0 CERTIFICATION STATEMENT - *(This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below).*

The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. 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.

7.1 **OWNER/OPERATOR CERTIFICATION** (Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice-president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used).

Owner Signature: _____ 7-6-04 (Date)

Title: Environmental Business Manager

Operator Signature: _____ 7-6-04 (Date)

Title: Environmental Business Manager

7.2 **PROFESSIONAL CERTIFICATION** *(if necessary)* - Work carried out in this submittal 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. No one is relieved 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.

Professional's Signature: _____ 7-01-04 Date:

Professional's Name: Frederick W. Johnson

Professional's Address: 122 S. Michigan Avenue
Suite 1920
Chicago, Illinois 60603

Professional's Phone No.: (312) 697-7200

Professional's Seal:

FREDERICK W. JOHNSON
062 - 042444
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Expires 11-30-05

7.3 **LABORATORY CERTIFICATION** *(if necessary)* - The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA.

Name of Laboratory _____

_____
Signature of Laboratory Responsible Officer — Date

Mailing Address of Laboratory

_____
Name and Title of Laboratory Responsible Officer

_____

_____

_____

END OF DOCUMENT

Recorder's Certificate of Photocopy

STATE OF ILLINOIS)
) SS
COUNTY OF MADISON)

I, DANIEL R. DONOHOO, the duly elected RECORDER in and for the County and State aforesaid, do hereby certify that the foregoing copy of a certain ENVIRONMENTAL LAND USE CONTROL is the true and correct photocopy of said ENVIRONMENTAL LAND USE CONTROL from BP PRODUCTS NORTH AMERICA, INC. & ILLINOIS ENVIRONMENTAL PROTECTION AGENCY TO: NOTICE OF ENVIRONMENTAL DISCLOSURE including the Certificate of Acknowledgment bearing date the 24TH day of SEPTEMBER A.D. 2004 as the same appears in the records of my office in Document # 2004R59615 recorded on the 1ST day of OCTOBER A.D. 2004.

GIVEN under my hand and OFFICIAL SEAL of the RECORDER at Edwardsville, Illinois, this 4TH day of OCTOBER, A.D. 2004.

RECORDER MADISON COUNTY, ILLINOIS

Daniel R. Donohoo

DANIEL R. DONOHOO
RECORDER
in and for
MADISON COUNTY, ILLINOIS

1

LITHO. IN U.S.A.

EXHIBIT F

Atlantic Richfield Company

Greg Jevyak
Environmental Business Manager

301 Evans Avenue
P.O. Box 167
Wood River, IL 62095-0167
Phone: (618) 254-9866
Fax: (618) 254-8718
jevyakgs@bp.com

July 29, 2005

Ms. Joyce L. Munie, P.E.
Illinois Environmental Protection Agency
Bureau of Land - #33
Permit Section
1021 North Grand Avenue East
Springfield, Illinois 62702

Subject: 1191150001 – Madison County
BP Products North America Inc., Former Wood River Refinery Main Plant
ILD980700967
Log No. B-147-CA-47

Dear Ms. Munie:

Enclosed on behalf of BP Products North America Inc. (BP) are three (3) copies of the Environmental Land Use Control (ELUC) as recorded by Madison County for Area 4 (Parcel Index Numbers 19-1-08-28-00-000-010; 19-1-08-33-00-000-013; 19-1-08-34-00-000-001; and 19-1-08-34-00-000-001.001) at the BP former Wood River Refinery Main Plant.

Please note the original Recorder's Certificate of Photocopy (Certificate) is the final page of the copies. This Certificate certifies that the document attached to it is a true and correct photocopy of the filed document. The Certificate also confirms that conditions outlined in paragraph #5 and #6 of the June 1, 2005 Illinois EPA letter approving the ELUC have been satisfied.

If you have any questions, please contact Janice McLain of BP at 312-856-4138 or me at 618-254-9866.

Sincerely,

Ryan Hartley FOR

Greg S. Jevyak
Environmental Business Manager

Enclosure

cc: Ryan Hartley, URS
Janice McLain, BP

2005R38583

STATE OF ILLINOIS
MADISON COUNTY
FILED FOR RECORD IN
THE RECORDERS OFFICE

07/13/2005 03:57PM

DANIEL R. DONOHOO
RECORDER

REC FEE: 66.00
PAGES: 52

PREPARED BY:

Name: Greg S. Jevyak
Environmental Business Manager
Atlantic Richfield Company
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

RETURN TO:

Name; Greg S. Jevyak
Environmental Business Manager
Atlantic Richfield Company
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

$66.00 CASH

THE ABOVE SPACE FOR RECORDER'S OFFICE

ENVIRONMENTAL LAND USE CONTROL FOR FORMER RAIL YARD AREA (AREA 4)

THIS ENVIRONMENTAL LAND USE CONTROL ("ELUC"), is made this 11th day of July, 2005 by BP Products North America Inc. f/k/a Amoco Oil Company, a Maryland corporation, ("Property Owner"), Property Owner of the real property located at 301 Evans Avenue, Wood River, Illinois.

WHEREAS, 35 Ill. Admin. Code 742 and 415 ILCS 5/58.17 provide for the use of an ELUC as an institutional control in order to impose land use limitations or requirements related to environmental contamination so that persons conducting remediation can obtain a No Further Action determination from the Illinois Environmental Protection Agency ("IEPA"). Such determination has been obtained on August 22, 2003 and is attached hereto as Exhibit A. The reason for an ELUC is to ensure protection of human health and the environment. The limitations and requirements contained herein are necessary in order to protect against exposure to contaminated soil or groundwater or both that may be present on the property as a result of prior industrial activities. Under 35 Ill. Adm. Code 742, the use of risk-based, site specific remediation objectives may require the use of an ELUC on real property and the ELUC may apply to certain physical features (e.g., engineered barriers, monitoring wells, caps, etc.).

WHEREAS, Property Owner intends to request risk-based, site specific soil and groundwater remediation objectives from the IEPA under 35 Ill. Admin. Code Part 742 to obtain risk-based closure of the site, identified by Bureau of Land LPC number 1191150001, utilizing an ELUC.

NOW, THEREFORE, the recitals set forth above are incorporated by reference as if fully set forth herein and the Property Owner agrees as follows:

Section One. Property Owner does hereby establish an ELUC on the real estate, situated in the County of Madison, State of Illinois, and further described in Exhibit B attached hereto and incorporated herein by reference (the "Property").

Attached as Exhibit C are site maps and a table that show the legal boundary of the Property, the physical features to which the ELUC applies, the horizontal and vertical extent of the contaminants of concern above applicable remediation objectives for soil or groundwater or both, and the nature, location of the source, and direction of movement of the contaminants of concern, as required under 35 Ill. Admin. Code Part 742.

Section Two. Property Owner represents and warrants it is the current owner of the Property and has the authority to record this ELUC on the chain of title for the Property in the Office of the Recorder or Registrar of Titles in Madison County, Illinois.

Section Three. The Property Owner hereby agrees, for itself, and its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessees, possessor or user of the Property or the holder of any portion thereof interest therein, that:

a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property shall be handled in accordance with all applicable laws and regulations;

b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IL Admin. Code 742;

c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils and impacted perched groundwater on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by a site health and safety plan;

d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

e. Soils excavated during construction/demolition/excavation activities within the Property shall be evaluated to determine if the soils are contaminated. This determination shall be made by visual inspection and by subjecting the soils to field screening tests for volatile organic compounds ("VOCs") and lead. Lead screening will be conducted at the Former Rail Yard Area (Area 4) due to previous exceedances in Area 4 of the hazardous lead limit and of the site-specific lead remediation objective (RO). The soil evaluation and management procedures shall be as follows:

(i) Field Screening. Soil shall be considered "potentially contaminated" if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings > 100 units) of

VOCs in soil; or (3) the field screening test for lead detects a level > 300 mg/kg. The approved site specific RO for lead through laboratory analysis is 400 mg/kg. The conservative field screening action level for lead of 300 mg/kg was selected based on the precision of the field analysis as compared to laboratory analysis.

(ii) Laboratory Analysis. Soils exhibiting potential contamination based on visual discoloring or a field screening test for VOCs will either be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing. Soils exhibiting potential contamination based on a field screening test for lead will either be sampled for lead laboratory analysis, or considered contaminated.

(iii) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if: (1) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific industrial/commercial ROs developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e.(i) above.

(iv) Management of Non-Contaminated Soils. Soils that are considered not contaminated, as determined by field screening or laboratory results, may be reused as clean fill in other areas of the former BP Refinery Main Plant Facility that have not been investigated for redevelopment. A map of the Main Plant Facility is provided in Attachment 1 of Exhibit A. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(v) Management of Contaminated Soils. If soils are found to be contaminated, they shall be sent off-site for disposal in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(vi) Documentation. All of these activities must be documented in the facility's operating records.

f. Three areas of the Property, which are identified in Exhibit C (Figures C-2 and C-3), require an engineered barrier to restrict exposure to the soils beneath the barrier via ingestion by industrial/commercial workers. The engineered barriers will be constructed as part of redevelopment of the Property. These barriers must be properly maintained as engineered barriers to restrict exposure to the soils beneath the barriers. Prior to commencement of future excavation and/or construction in or near the areas containing the engineered barriers, a safety plan for these areas is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations; and other U.S. EPA guidance as provided. At a minimum, the plan should address possible worker exposure if future excavation and construction activities occur within the contaminated soil and associated perched groundwater. Any contaminated soil or perched groundwater removed, or excavated from, or disturbed at the areas

containing the engineered barriers must be handled in accordance with all applicable laws and regulations.

Section Four. This ELUC is binding on the Property Owner, its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein. This ELUC shall apply in perpetuity against the Property and shall not be released until: 1) the IEPA determines there is no longer a need for the ELUC as an institutional control; 2) the IEPA, upon written request, issues a new no further action determination approving modification or removal of the limitation(s) or requirement(s); and 3) a release or modification of the land use limitation or requirement is filed in the chain of title for the Property.

Section Five. Information regarding the remediation performed on the Property may be obtained from the IEPA through a request under the Freedom of Information Act (5 ILCS 140) and rules promulgated thereunder by providing the IEPA with the 10-digit LPC number listed above.

Section Six. The effective date of this ELUC shall be the date that it is officially recorded in the chain of title for the Property to which this ELUC applies.

WITNESS the following signature:

BP Products North America Inc.

By: Janice McClain

Printed: JANICE MCLAIN

Its: Attorney

Date: 7-11-05

Attest: Sarah W. Pedersen

Printed: Sarah W. Pedersen

Its: Sr. Paralegal

Date: 7-11-05

STATE OF ILLINOIS)
) SS:
COUNTY OF COOK)

I, Debra L. Walls the undersigned, a Notary Public for said County and State, DO HEREBY CERTIFY, that Janice McClain and Sarah Pedersen personally known to me to be the Attorney and Sr. Paralegal respectively, of **BP Products North America Inc. f/k/a Amoco Oil Company**, a Maryland corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that in said capacities they signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

Given under my hand and official seal, this 11 day of July, 2005

Debra L. Walls
Notary Public

OFFICIAL SEAL
DEBRA L WALLS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:09/08/09

PIN NOS. 19-1-08-28-00-000-010
19-1-08-33-00-000-013
19-1-08-34-00-000-001
19-1-08-34-00-000-001.001

Area 4 ELUC
Exhibit A

Copy of the NFA letter dated August 22, 2003 with attachments
1191150001 – Madison County
BP Products North America Inc. – Wood River Refinery
ILD980700967
Log Nos. B-147-CA-30
RCRA Permit

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/524-3300

August 22, 2003

CERTIFIED MAIL
7002 3150 0000 1219 8124

Mr. Gregory S. Jevyak
Environmental Business Manager
BP Products North America Inc.
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095

AREA 4 - NFA

RECEIVED AUG 2 5 2003

Re: 1191150001 -- Madison County
BP Products North America Inc./Main Plant
ILD980700967
Log No. B-147-CA-30
Received: October 7, 2002 and June 2, 2003
RCRA Permit

Dear Mr. Jevyak:

This is in response to a document entitled Area 4 Land Reuse Investigation Report and Closure Plan, dated October 4, 2002, which was prepared and submitted on your behalf by Mr. Dennis A. Kasner and Frederick W. Johnson, P.E., of URS. An addendum to this submittal was submitted on May 30, 2003 that contained additional information requested by Illinois EPA. These submittals contained information regarding investigative activities performed as part of RCRA corrective action at an area referred to as "Area 4" at the above-referenced facility. Illinois EPA had previously approved to conduct these activities for all recognized environmental conditions in Area 4 on January 10, 2002 (Log No. B147-CA-17). Minor modifications to this plan were approved by Illinois EPA on September 5, 2002. Overall, the corrective action activities at the subject facility are being conducted in accordance with a RCRA permit issued to the facility (Log No. B-147 and associated modifications).

Area 4 has been divided into three subareas referred to as "the Rail Yard Subarea", "the Overflow Basin Subarea", and "the SWMU 13 Subarea". A site layout map showing the location of Area 4 within the facility and the location of the three subareas within Area 4 are provided as Attachments 1 and 2, respectively. A legal description of Area 4 parcel is provided in Attachment 3.

Based on a review of the information, Illinois EPA has determined that no further action is necessary for Area 4 provided the requirements set forth in Conditions 1 through 8, 10 and 11 are met:

1. Soils within three areas within the Overflow Basin Subarea and the SWMU 13 Subarea require an engineered barrier and associated institutional control meeting the requirements of 35 Ill. Adm. Code 742 to restrict exposure to the soils beneath the barrier.

   a. The boundaries of the engineered barriers proposed for the Overflow Basin Subarea and SWMU 13 Subarea within Area 4 are depicted in Attachments 4 and 5, respectively.

   b. The engineered barrier in these areas must meet the requirements of Illinois EPA's August 3, 2001 letter.

   c. The institutional control must require maintenance of the engineered barrier, implementation of a site safety plan to protect construction workers during construction activities associated with these areas, and proper management of any soil removed from beneath the engineered barrier.

   d. Plans/reports depicting construction of the required engineered barriers must be submitted along with the draft institutional control required by Condition 6 below.

2. Any excavation and subsurface construction work within Area 4 shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan.

3. The soil within Area 4 shall remain in place, except where necessary to remove it for construction activities.

4. Soil excavated during construction/demolition/excavation activities within Area 4 must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds (VOCs). Soil shall be considered "contaminated" if (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) the field screening test detects the presence (i.e. PID readings >100 units) of VOCs in soil. Soils exhibiting potential contamination based on the visual or field screening will either be sampled for VOC and SVOC analysis or considered contaminated. If laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives (ROs) developed for the parcel then the soils will be considered to be not contaminated for reuse on the Main Plant property. If the soils are less than the site specific ROs but greater than residential standards they will be considered contaminated if transported offsite.

(1) If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(2) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as clean fill in other areas of the former refinery facility. However, procedures must be in place to ensure that this material remains on the former refinery facility and is not be transported off-site, unless it is transported off-site as a special waste in accordance with 35 Ill. Adm. Code Subtitle G: Waste Disposal or unless such material is shown to not be a special waste to the satisfaction of Illinois EPA.

(3) Documentation of all these activities must be placed in the facility's operating records.

5. Future use of Area 4 must remain industrial/commercial.

6. Appropriate institutional controls meeting the requirements of 35 Ill. Adm. Code, Part 742, Subpart J must be established and recorded to ensure the requirements in Conditions 1, 2, 3, 4, 5 and 10 will be met in the future. A draft institutional control to establish the required restrictions on the property must be submitted to Illinois EPA for review and approval.

7. High lead levels (above 1.5 mg/l TCLP) detected in the vicinity of sample location A4BH53 in the Overflow Basin Subarea shall be addressed by removal/off-site disposal of contaminated soil followed by collection of verification samples. A report documenting the results of this soil removal effort must be submitted to Illinois EPA for review and approval along with the draft ELUC required by Condition 6 above.

8. Figure 6-2 of the subject submittal indicates that limit of the engineered barrier proposed for the Overflow Basin Subarea extends over the Overflow Basin. The facility must provide a detailed design of the proposed engineer barrier for the Overflow Basin Subarea including an explanation how an engineered barrier will be placed over the Overflow Basin.

9. At this time, the Illinois EPA can approve the exclusion of the groundwater ingestion exposure route from consideration, for perched groundwater only, in accordance with 35 Ill. Adm. Code 742.925.

10. The facility must now submit details associated with the institutional control required by Condition 6, to restrict the use of groundwater for the subject Area, to the Illinois EPA for

review and approval prior to completing the recording requirements found in 35 Ill. Adm. Code Part 742, Subpart J. Such institutional controls may include an ordinance restricting the use of groundwater for the City of Wood River. Once such an institutional control is approved for the subject Area, no further action will be required with respect to the groundwater, except as required by Condition 11 below.

11. The groundwater within the Parcel must still be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications.

12. Overall, corrective action activities at the former refinery facility must continue to be implemented in accordance with: (1) this letter, (2) 35 Ill. Adm. Code 620, 724.201, and 742; and (3) the requirements set forth in its RCRA Part B permit (Log No. B-147) and all other associated modifications or other comparable mechanism issued thereafter by the Illinois EPA for this facility.

13. A completed RCRA Corrective Action Certification form (copy enclosed) must accompany all submittals made to Illinois EPA regarding RCRA corrective action activities at this facility.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal 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.

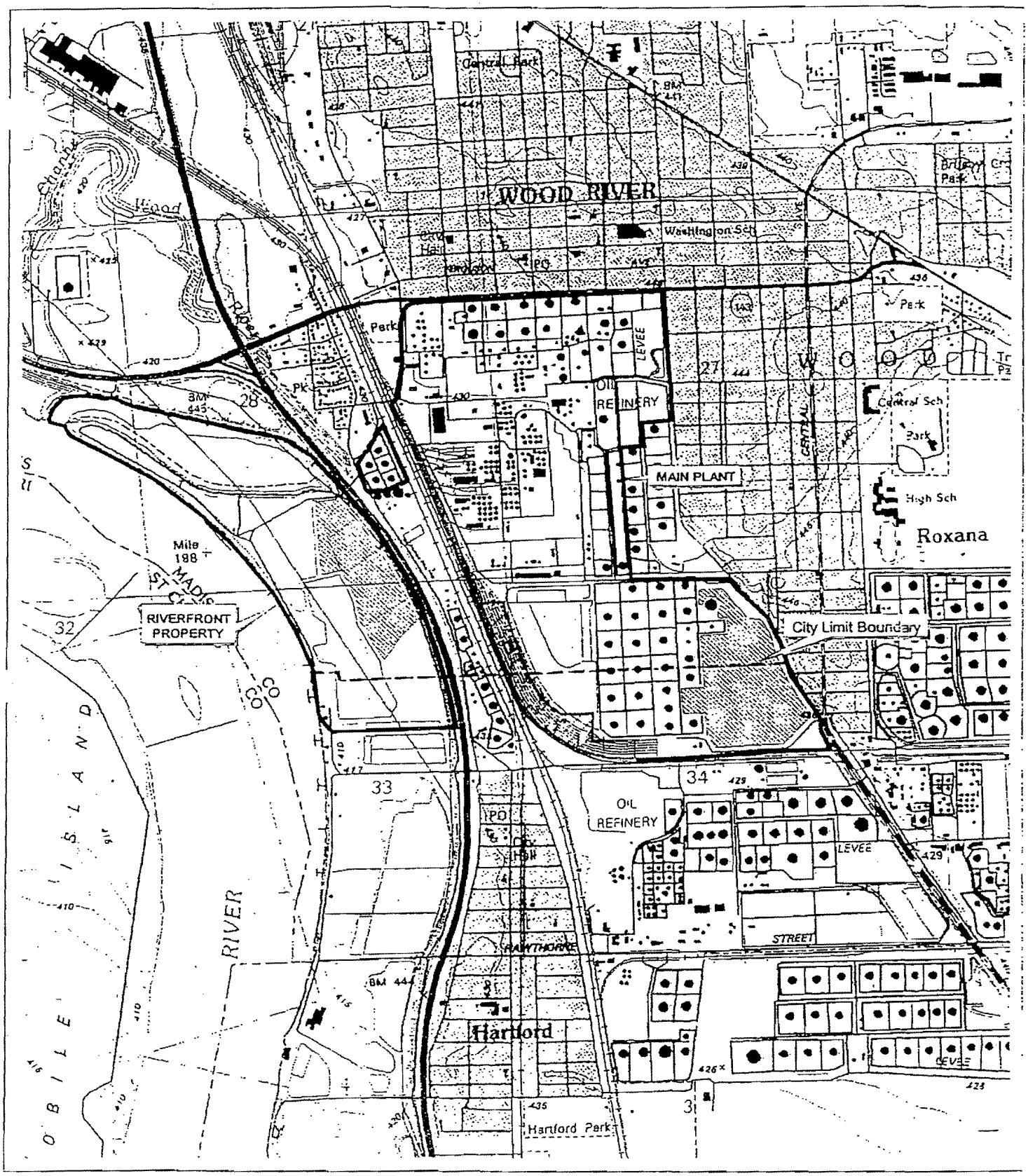
Should you have any questions concerning groundwater-related aspects of this letter, please contact Ryan Bennett at 217/558-2150. Questions about any other aspects of this letter should be directed to Munib Ahmad, P.E., at 217/524-3263.

Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:MA:bjh\031402s.doc
JLM RKB JBM

Attachments:
1. Topographic Map/Site Layout Map
2. Area 4 Site Map
3. Legal Description of Area 4
4. Portions of Overflow Basin Subarea Requiring an Engineered Barrier
5. Portions of SWMU 13 Subarea Requiring an Engineered Barrier
6. IEPA RCRA Corrective Action Certification Form



Legend

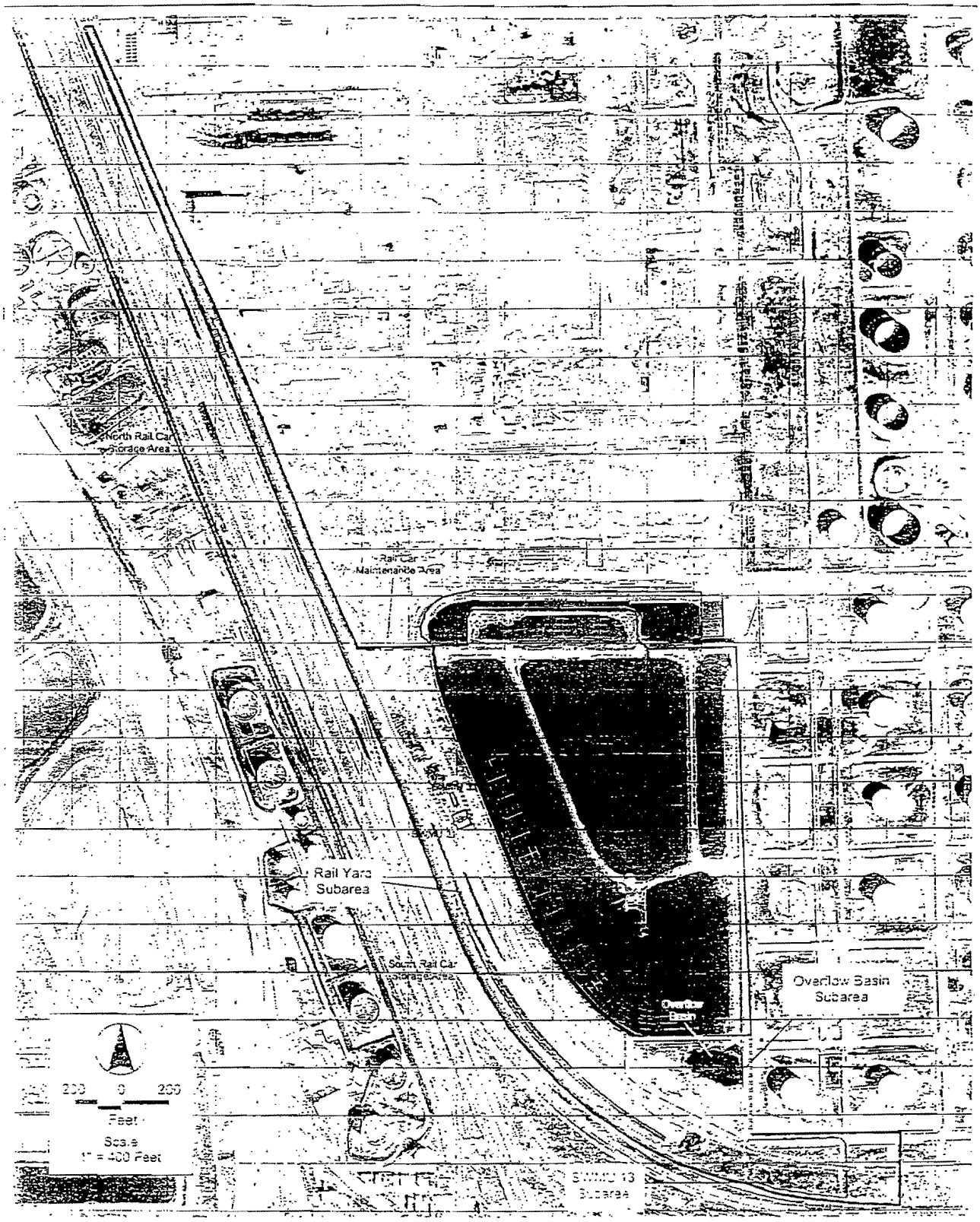
- Boundary Between Wood River and Hartford
- BP Property
- Rail Yard Area (Area 4)

1000 0 1000 Feet

Scale
1" = 2000 Feet

- Source: U.S.G.S. 7.5 Minute Series Topographic Map Wood River, ILL.-MO., 1994

Attachment 1
Topographic Map/Site Layout Map
BP Amoco/Main Plant
Wood River, Illinois
Log No. B-75-CA-30



Legend

Attachment 2
Area 4 Site Map
BP Amoco/Main Plant
Wood River, Illinois
Log No. B-75-CA-30

CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
707 NORTH MAIN STREET
P.O. BOX 597
EDWARDSVILLE, ILLINOIS 62025
(618) 656-0470 FAX (618) 656-0922

Attachment 3
Legal Description of Area 4
BP Amoco/Main Plant
Wood River, Illinois
Log No. B-75-CA-30

Description For
URS Corporation

Area 4
29.44 Acre Tract

August 21, 2002

Part of Sections 28, 33, and 34, all in Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the Northeast corner of said Section 33; thence South 89 degrees 38 minutes 16 seconds West, along the north line of said Section 33, a distance of 467.91 feet to the existing northeasterly right of way line of the Illinois Terminal Railroad, the POINT OF BEGINNING of the tract herein described; thence South 89 degrees 38 minutes 16 seconds West, continuing along the north line of said Section 33 and the existing right of way line of said Illinois Terminal Railroad, a distance of 37.56 feet; thence along the existing northeasterly right of way line of said Illinois Terminal Railroad for the following 3 courses: (1)North 21 degrees 37 minutes 36 seconds West a distance of 1496.26 feet, (2)South 88 degrees 38 minutes 39 seconds West a distance of 26.65 feet, (3)North 21 degrees 37 minutes 36 seconds West a distance of 910.72 feet; thence North 68 degrees 22 minutes 24 seconds East a distance of 54.44 feet; thence South 22 degrees 47 minutes 50 seconds East a distance of 2805.23 feet; thence North 88 degrees 52 minutes 55 seconds East a distance of 322.34 feet; thence South 02 degrees 44 minutes 50 seconds West a distance of 101.28 feet to Point "A"; thence South 21 degrees 18 minutes 43 seconds East a distance of 958.52 feet; thence southeasterly 857.73 feet along a curve to the left, having a radius of 1475.56 feet, the chord of said curve bears South 36 degrees 37 minutes 56 seconds East 845.71 feet; thence North 88 degrees 10 minutes 13 East a distance of 487.08 feet; thence South 00 degrees 25 minutes 03 seconds East a distance of 411.69 feet; thence North 89 degrees 14 minutes 37 seconds East a distance of 614.23 feet; thence South 00 degrees 14 minutes 50 seconds West a distance of 308.09 feet to the existing northerly right of way line of Illinois Terminal Railroad; thence along the existing northerly and northeasterly right of way line for the following 3 courses: (1)South 89 degrees 47 minutes 17 seconds West a distance of 87.44 feet, (2)northwesterly 2286.36 feet along a curve to the right, having a radius of 1910.00 feet, the chord of said curve bears North 55 degrees 55 minutes 11 seconds West

2152.28 feet, (3)North 21 degrees 37 minutes 36 seconds West a distance of 1598.81 feet to the point of beginning.

EXCEPT, part of Sections 33 and 34, all in Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at Point "A", as described above; thence South 21 degrees 18 minutes 43 seconds East a distance of 491.38 feet; thence South 73 degrees 19 minutes 36 seconds West a distance of 81.06 feet to the POINT OF BEGINNING of the exception herein described; thence South 23 degrees 19 minutes 21 seconds East a distance of 152.91 feet; thence South 60 degrees 46 minutes 50 seconds West a distance of 96.85 feet; thence North 30 degrees 21 minutes 05 seconds West a distance of 177.97 feet; thence North 73 degrees 19 minutes 36 seconds East a distance of 118.92 feet to the point of beginning.

The above described tract contains a total of 29.44 acres (1,282,202 sq.ft.)

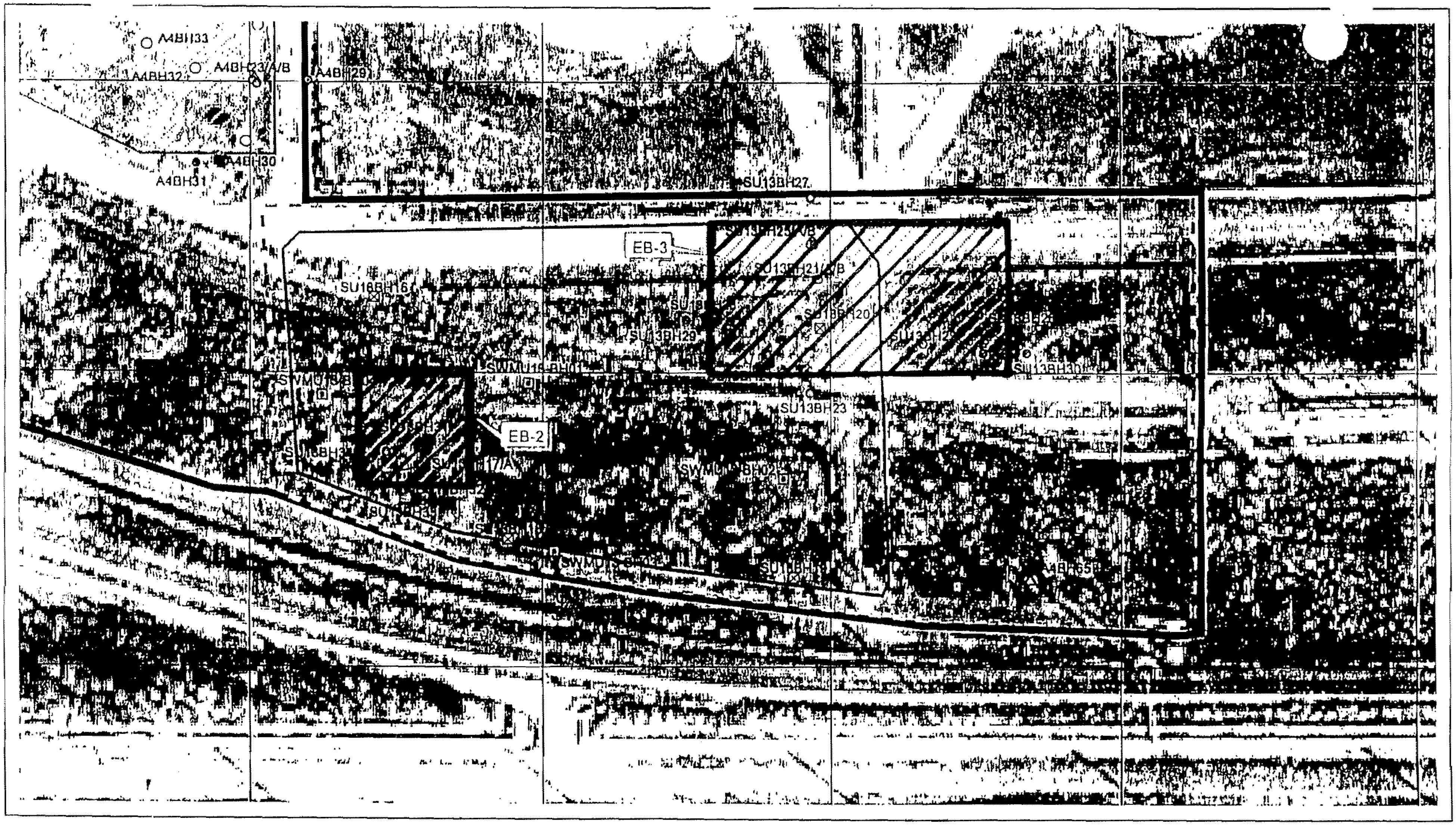
SUBJECT TO covenants, conditions, restrictions, and easements of record.

Scale
1" = 100 Feet

ILLEGIBLE WHEN PRESENTED

ILLEGIBLE WHEN PRESENTED

Attachment 4
Portions of Overflow Basin Subarea Requiring an Engineered Barrier
BP Amoco/Main Plant
Wood River, Illinois
Log No. B-75-CA-30



Legend

Soil Boring Locations

- Systematic Soil Boring (Sample(s) Analyzed)
- Systematic Soil Boring (Sample(s) Not Analyzed)
- Biased Soil Boring (Sample(s) Analyzed)
- Delineation Boring (Sample(s) Analyzed)
- Delineation Boring (Sample(s) Not Analyzed)
- Phase I/II Soil Boring Locations (Sample(s) Analyzed)
- Extent of Rail Tracks
- SWMU 13 Subarea
- Solid Waste Management Unit (SWMU)
- Area 4 Boundary
- Areas that Require Engineered Barriers

Engineered Barriers Boundary Survey Locations

EB-2

Location	Easting	Northing
NW Corner	2,318,275.18	791,999.84
NE Corner	2,318,347.25	791,999.84
SE Corner	2,318,347.25	791,924.68
SW Corner	2,318,275.18	791,924.68

EB-3

Location	Easting	Northing
NW Corner	2,318,516.00	792,102.92
NE Corner	2,318,721.58	792,102.92
SE Corner	2,318,721.58	791,999.88
SW Corner	2,318,516.00	791,999.88

* Illinois State Plane Coordinates (NAD83)

50 0 50 Feet

Scale
1" = 100 Feet

Notes:

1. The proposed engineered barrier areas are represented as polygons to facilitate georeferencing of area boundaries.
2. Orthophotograph taken on February 27, 2000.
   - Source: Surdex Corporation.
3. The 200-foot grid interval is based on the Illinois State Plane Coordinate System (NAD83).

Attachment 5
Portions of SWMU 13 Subarea Requiring an Engineered Barrier
BP Amoco/Main Plant
Wood River, Illinois
Log No. B-75-CA-30

DESIGN KC	CHKD TV	PROJECT NO 83C054	FIG NO 6-3
DRAWN MDC	DATE		

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 FACILITY IDENTIFICATION

Name: _____ County: _____

Street Address: _____ Site No. (IEPA): _____

City: _____ Site No. (USEPA): _____

2.0 OWNER INFORMATION

Name: _____

Mailing
Address: _____

_____

_____

Contact Name: _____

Contact Title: _____

Phone No.: _____

3.0 OPERATOR INFORMATION

_____

_____

_____

_____

_____

_____

4.0 TYPE OF SUBMISSION (check applicable item and provide requested information, as applicable)

___ RFI Phase I Workplan/Report
___ RFI Phase II Workplan/Report
___ CMP Report; Phase _____
___ Other (describe): _____
_____
Date of Submittal _____

IEPA Permit Log No. _____
Date of Last IEPA Letter
on Project _____
Log No. of Last IEPA
Letter on Project _____
Does this submittal include groundwater information: _ Yes _ No

5.0 DESCRIPTION OF SUBMITTAL: (briefly describe what is being submitted and its purpose)

_____

_____

6.0 DOCUMENTS SUBMITTED (identify all documents in submittal, including cover letter; give dates of all documents)

_____

_____

7.0 CERTIFICATION STATEMENT - ***(This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below).*** The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. 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.

7.1 OWNER/OPERATOR CERTIFICATION (Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice-president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used).

Owner Signature: _____ _____ (Date)

Title: _____

Operator Signature: _____ _____ (Date)

Title: _____

7.2 PROFESSIONAL CERTIFICATION *(if necessary)* - Work carried out in this submittal 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. No one is relieved 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.

Professional's Signature: _____ _____ Date:

Professional's Name: _____ Professional's Seal:

Professional's Address: _____

_____

_____

Professional's Phone No.: _____

7.3 LABORATORY CERTIFICATION *(if necessary)* - The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA.

_____ _____

Name of Laboratory Signature of Laboratory Responsible Officer Date

Mailing Address of Laboratory

_____

Name and Title of Laboratory Responsible Officer

_____

_____

_____

PIN NOS. 19-1-08-28-00-000-010
19-1-08-33-00-000-013
19-1-08-34-00-000-001
19-1-08-34-00-000-001.001

Area 4 ELUC
Exhibit B

The subject property is located in the City of Wood River, Madison County, State of Illinois, commonly known as 301 Evans Avenue, Wood River, Illinois and more particularly described as:

LEGAL DESCRIPTION AND
REAL ESTATE TAX INDEX OR PARCEL #
(PURSUANT TO 742. 1010(D)(2))

Part of Section 28, 33, and 34, all in Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the Northeast corner of said Section 33; thence South 89° 38' 16" West, along the north line of said Section 33, a distance of 467.91 feet to the existing northeasterly right of way line of the Illinois Terminal Railroad, the POINT OF BEGINNING of the tract herein described; thence South 89° 38' 16" West, continuing along the north line of said Section 33 and the existing right of way line of said Illinois Terminal Railroad, a distance of 37.56 feet; thence along the existing northeasterly right of way line of said Illinois Terminal Railroad for the following 3 courses: (1) North 21° 37' 36" West a distance of 1496.26 feet, (2) South 88° 38' 39" West a distance of 26.65 feet, (3) North 21° 37' 36" West a distance of 910.72 feet; thence North 68° 22' 24" East a distance of 54.44 feet; thence South 22° 47' 50" East a distance of 2805.23 feet; thence North 88° 52' 55" East a distance of 322.34 feet; thence South 02° 44' 50" West a distance of 101.28 feet to Point "A"; thence South 21° 18' 43" East a distance of 958.52 feet; thence southeasterly 857.73 feet along a curve to the left, having a radius of 1475.56 feet, the chord of said curve bears South 36° 37' 56" East 845.71 feet; thence North 88° 10' 13" East a distance of 487.08 feet; thence South 00° 25' 03" East a distance of 41.69 feet; thence North 89° 14' 37" East a distance of 614.23 feet; thence South 00° 14' 50" West a distance of 308.09 feet to the existing northerly right of way line of Illinois Terminal Railroad; thence along the existing northerly and northeasterly right of way line for the following 3 courses: (1) South 89° 47' 17" West a distance of 87.44 feet, (2) northwesterly 2286.36 feet along a curve to the right, having radius of 1910.00 feet, the chord of said curve bears North 55° 55' 11" West 2152.28 feet, (3) North 21° 37' 36" West a distance of 1598.81 feet to the point of beginning.

Except, part of Sections 33 and 34, all in Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at Point "A", as described above; thence South 21° 18' 43" East a distance of 491.38 feet; thence South 73° 19' 36" West a distance of 81.06 feet to the POINT OF BEGINNING of the exception herein described; thence South 23° 19' 21" East a distance of 152.91 feet; thence South 60° 46' 50" West a distance of 96.85 feet; thence North 30° 21' 05" West a distance of 177.97 feet; thence North 73° 19' 36" East a distance of 118.92 feet to the point of beginning.

The above described tract contains a total of 29.44 acres (1,282,202 sq. ft.)

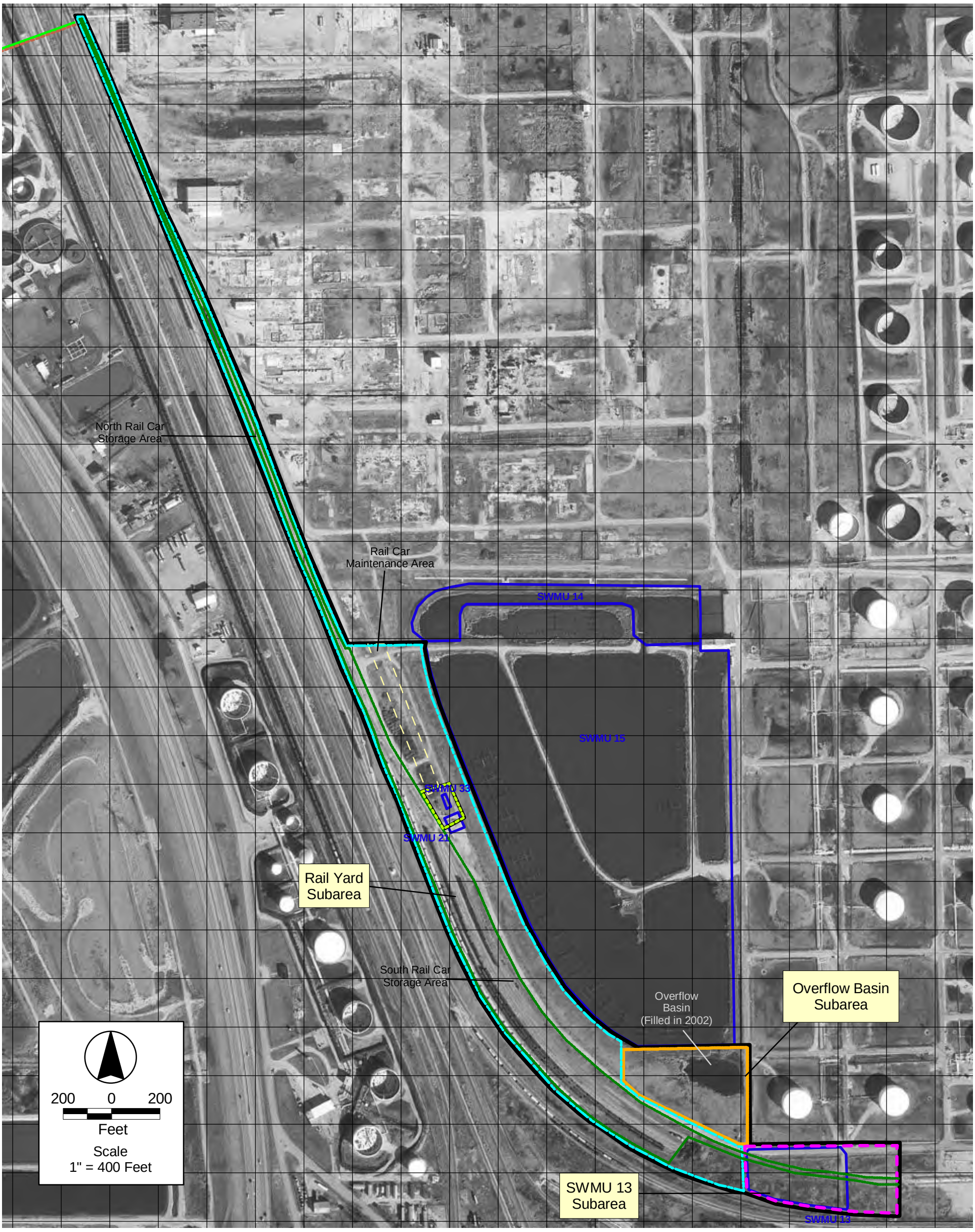
PIN NOS. 19-1-08-28-00-000-010
19-1-08-33-00-000-013
19-1-08-34-00-000-001
19-1-08-34-00-000-001.001

PIN NOS. 19-1-08-28-00-000-010
19-1-08-33-00-000-013
19-1-08-34-00-000-001
19-1-08-34-00-000-001.001

Area 4 ELUC
Exhibit C

Scaled Maps and tables showing:

A) **The legal boundary of the Property to which the ELUC applies;**
B) **The horizontal and vertical extent of contaminants of concern above applicable remediation objectives for soil and groundwater to which the ELUC applies;**
C) **Any physical features to which the ELUC applies (e.g. engineered barriers, monitoring wells, caps)**
D) **The nature, location of the source, and direction of movement of the contaminants of concern.**



Legend

- Rail Yard Subarea
- Overflow Basin Subarea
- SWMU 13 Subarea
- Extent of Rail Tracks
- Area 18 (South Flare Pit and Surrounding Area)
- Solid Waste Management Unit (SWMU)
- Area 4 Boundary

SWMU Descriptions

SWMU 13 Former API Separator Sludge Landfarm
SWMU 14 North Cell of Spray Pond 1
SWMU 15 Spray Ponds
SWMU 21 Former APAC Waste Transfer Area
SWMU 33 South Flare Pit

Notes:
1. Orthophotograph taken on February 27, 2000.
   - Source: Surdex Corporation
2. The western and southern boundaries of Area 4 are on the Main Plant Property boundaries.
3. The 200-foot grid interval is based on the Illinois State Plane Coordinate System (NAD83).

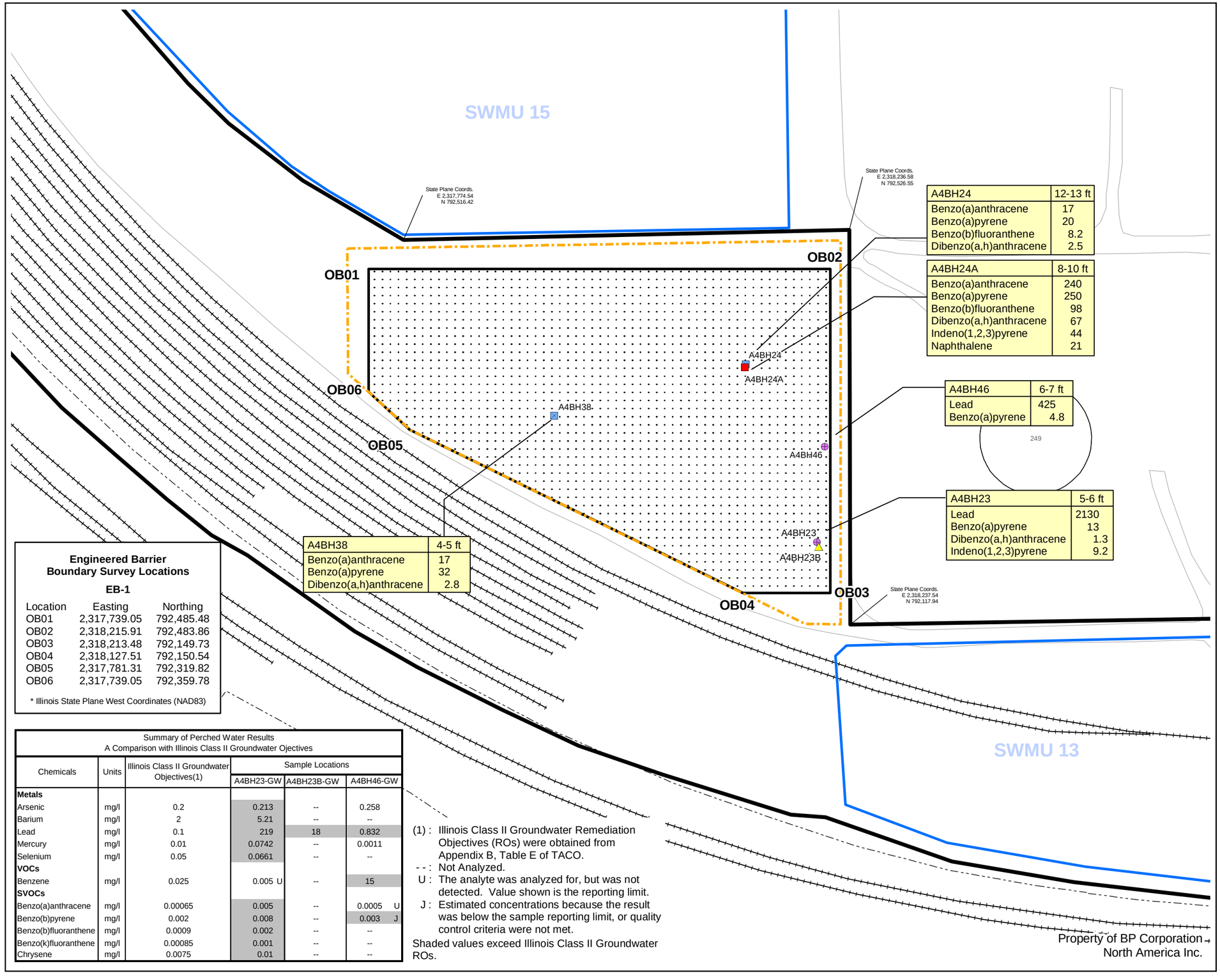
O:\DELIVERABLES_LIBRARY\BP\WOOD_RIVER\MAINPLANT AREA04\ELUC\FIGC-1_PROPERTY_BOUNDARY.PDF

URS
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603

AREA 4 PROPERTY BOUNDARY
ELUC EXHIBIT C
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

DESIGN: EF	CHK'D: LV	PROJECT NO.	FIG. NO.
DRAWN: MDC	DATE: 10/13/04	25365025	C-1

O:_PROJECTS_(APR-MXD)_A-F\BP\WOOD_RIVER\MAINPLANT\AREA04\MP_AREA_04.APR



A4BH24	12-13 ft
Benzo(a)anthracene	17
Benzo(a)pyrene	20
Benzo(b)fluoranthene	8.2
Dibenzo(a,h)anthracene	2.5

A4BH24A	8-10 ft
Benzo(a)anthracene	240
Benzo(a)pyrene	250
Benzo(b)fluoranthene	98
Dibenzo(a,h)anthracene	67
Indeno(1,2,3)pyrene	44
Naphthalene	21

A4BH46	6-7 ft
Lead	425
Benzo(a)pyrene	4.8

A4BH23	5-6 ft
Lead	2130
Benzo(a)pyrene	13
Dibenzo(a,h)anthracene	1.3
Indeno(1,2,3)pyrene	9.2

A4BH38	4-5 ft
Benzo(a)anthracene	17
Benzo(a)pyrene	32
Dibenzo(a,h)anthracene	2.8

Engineered Barrier Boundary Survey Locations

EB-1

Location	Easting	Northing
OB01	2,317,739.05	792,485.48
OB02	2,318,215.91	792,483.86
OB03	2,318,213.48	792,149.73
OB04	2,318,127.51	792,150.54
OB05	2,317,781.31	792,319.82
OB06	2,317,739.05	792,359.78

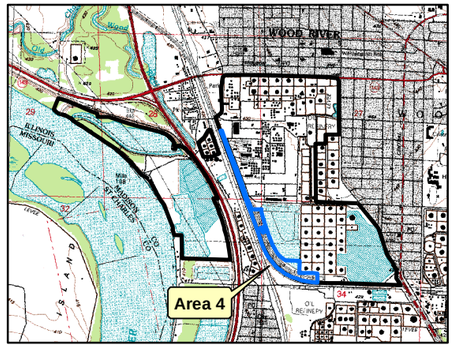
* Illinois State Plane West Coordinates (NAD83)

Summary of Perched Water Results
A Comparison with Illinois Class II Groundwater Ojectives

Chemicals	Units	Illinois Class II Groundwater Objectives(1)	Sample Locations		
			A4BH23-GW	A4BH23B-GW	A4BH46-GW
Metals					
Arsenic	mg/l	0.2	0.213	--	0.258
Barium	mg/l	2	5.21	--	--
Lead	mg/l	0.1	219	18	0.832
Mercury	mg/l	0.01	0.0742	--	0.0011
Selenium	mg/l	0.05	0.0661	--	--
VOCs					
Benzene	mg/l	0.025	0.005 U	--	15
SVOCs					
Benzo(a)anthracene	mg/l	0.00065	0.005	--	0.0005 U
Benzo(b)pyrene	mg/l	0.002	0.008	--	0.003 J
Benzo(b)fluoranthene	mg/l	0.0009	0.002	--	--
Benzo(k)fluoranthene	mg/l	0.00085	0.001	--	--
Chrysene	mg/l	0.0075	0.01	--	--

(1) : Illinois Class II Groundwater Remediation Objectives (ROs) were obtained from Appendix B, Table E of TACO.
- - : Not Analyzed.
U : The analyte was analyzed for, but was not detected. Value shown is the reporting limit.
J : Estimated concentrations because the result was below the sample reporting limit, or quality control criteria were not met.

Shaded values exceed Illinois Class II Groundwater ROs.



50 25 0 50 100
Feet

1 inch equals 100 feet

Legend

- Boring with Tier 1 Soil Ingestion Exceedance
- Boring with Tier 1 Soil Ingestion and Tier 2 Soil Inhalation Exceedance
- Boring with Tier 1 Soil Ingestion and Class II Groundwater Exceedance
- Boring with Class II Groundwater Exceedance
- Overflow Basin Subarea
- Area of Engineered Barrier (EB-1)
- Solid Waste Management Unit (SWMU)
- Area 4 Boundary

Soil Boring	Depth (ft)
Chemical	Concentration (mg/kg)

Basis for Institutional Controls
- An engineered barrier of approved specifications is required to be constructed and maintained in the Overflow Basin Subarea due to exceedances of TACO Tier 1 Ingestion Remediation Objectives (ROs) for Industrial/Commercial workers.
- A Health and Safety Plan is required to protect construction workers during excavation/construction activities due to: exceedances of Tier 1 Ingestion ROs; one exceedance of the Tier 2 Inhalation RO for naphthalene; and perched water exceedances of Class II groundwater ROs at two locations.

Notes:
1. All results are presented in mg/kg.
2. Naphthalene is the only constituent that exceeds a Tier 2 Inhalation RO and it exceeds only for Construction Workers.
3. No specific source areas were identified.
4. The occurence of perched water is sporadic and not vertically or laterally continuous; therefore, it is not possible to determine the extent of impacted perched water or direction of flow.
5. Figure is based on Attachment 4 of IEPA No Further Action letter, dated 8/22/03.

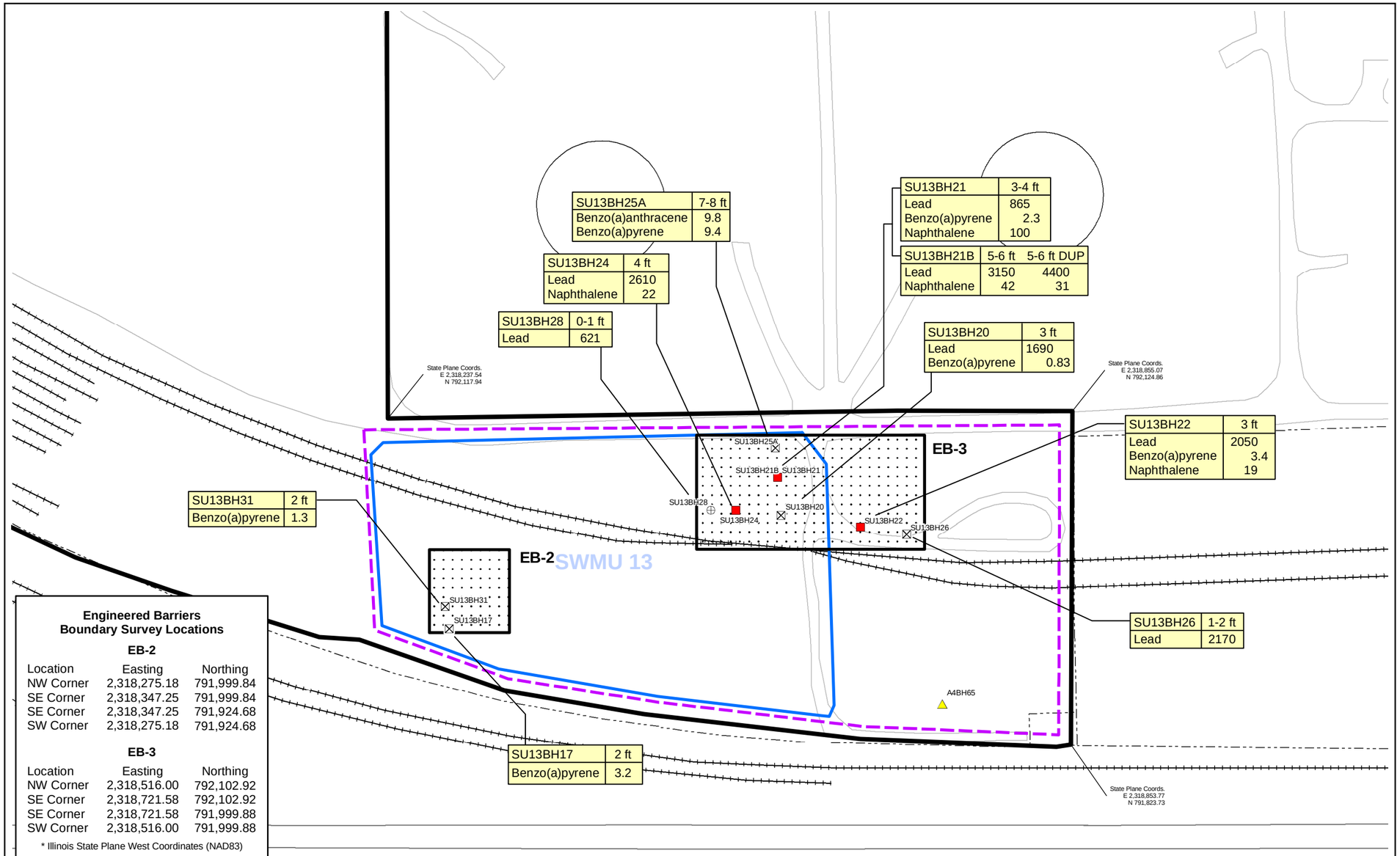
O:\DELIVERABLES_LIBRARY\BP\WOOD_RIVER\MAINPLANT\AREA04\ELUC\FIG-2_OVERFLOW_ICEB.PDF

URS
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603

AREA 4 OVERFLOW BASIN SUBAREA
ELUC EXHIBIT C
INSTITUTIONAL CONTROL/ENGINEERED BARRIER AREAS
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

DESIGN: EF	CHK'D: LV	PROJECT NO.	FIG NO.
DRAWN: MDC/KH	DATE: 10/13/04	25365025	C-2

O:_PROJECTS_(APR-MXD)\BP\WOOD_RIVER\MAINPLANT\AREA04\MP_AREA04_ELUC_BASIN.MXD



Engineered Barriers Boundary Survey Locations

EB-2

Location	Easting	Northing
NW Corner	2,318,275.18	791,999.84
SE Corner	2,318,347.25	791,999.84
SE Corner	2,318,347.25	791,924.68
SW Corner	2,318,275.18	791,924.68

EB-3

Location	Easting	Northing
NW Corner	2,318,516.00	792,102.92
SE Corner	2,318,721.58	792,102.92
SE Corner	2,318,721.58	791,999.88
SW Corner	2,318,516.00	791,999.88

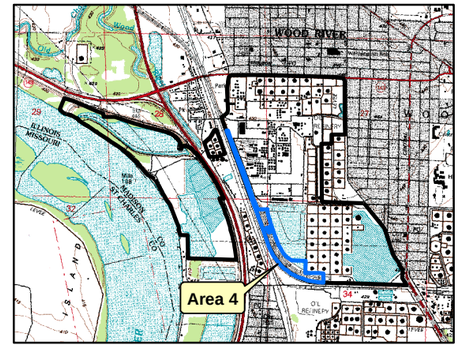
* Illinois State Plane West Coordinates (NAD83)

Summary of Perched Water Results
A Comparison with Illinois Tier I Class II Groundwater Remediation Ojectives

Chemicals	Units	Illinois Class II Groundwater Objectives(1)	Sample Locations	
			SU13BH28-GW	A4BH65-GW
Metals				
Lead	mg/l	0.1	0.314	0.86
SVOCs				
Benzo(a)anthracene	mg/l	0.00065	--	0.0033 J
Benzo(b)pyrene	mg/l	0.002	--	0.0041 J
Benzo(b)fluoranthene	mg/l	0.0009	--	0.0017 J
Benzo(k)fluoranthene	mg/l	0.00085	--	0.0009 J
Dibenzo(a,h)anthracene	mg/l	0.0015	--	0.0016 J
Indeno (1,2,3-cd)pyrene	mg/l	0.00215	--	0.0025 J

(1) : Illinois Class II Groundwater Remediation Objectives (ROs) were obtained from Appendix B, Table E of TACO.
- - : Not Analyzed.
J : Estimated concentrations because the result was below the sample reporting limit, or quality control criteria were not met.

Shaded values exceed Illinois Class II Groundwater ROs.



50 25 0 50 100
Feet
1 inch equals 100 feet

Legend

- Boring with Tier 1 Soil Ingestion Exceedance
- Boring with Tier 1 Soil Ingestion Exceedance and Tier 2 Soil Inhalation Exceedance
- Boring with Tier 1 Soil Ingestion and Class II Groundwater Exceedance
- Boring with Class II Groundwater Exceedance
- Overflow Basin Subarea
- Areas of Engineered Barriers
- Solid Waste Management Unit (SWMU)
- Area 4 Boundary

Soil Boring	Depth (ft)
Chemical	Concentration (mg/kg)

Basis for Institutional Controls
- An engineered barrier of approved specifications is required to be constructed and maintained in the SWMU13 Subarea due to exceedances of TACO Tier 1 Ingestion Remediation Objectives (ROs) for Industrial/Commercial workers.
- A Health and Safety Plan is required to protect construction workers during excavation/construction activities due to: exceedances of Tier 1 Ingestion ROs; exceedances of the Tier 2 Inhalation RO for naphthalene for construction workers; and perched water exceedances of Class II groundwater ROs at two locations.

Notes:
1. All results are presented in mg/kg.
2. Naphthalene is the only constituent that exceeds a Tier 2 Inhalation RO and it exceeds only for Construction Workers.
3. No specific source areas were identified.
4. The occurence of perched water is sporadic and not vertically or laterally continuous; therefore, it is not possible to determine the extent of impacted perched water or direction of flow.
5. Figure is based on Attachment 5 of IEPA No Further Action letter, dated 8/22/03.

Property of BP Corporation North America Inc.

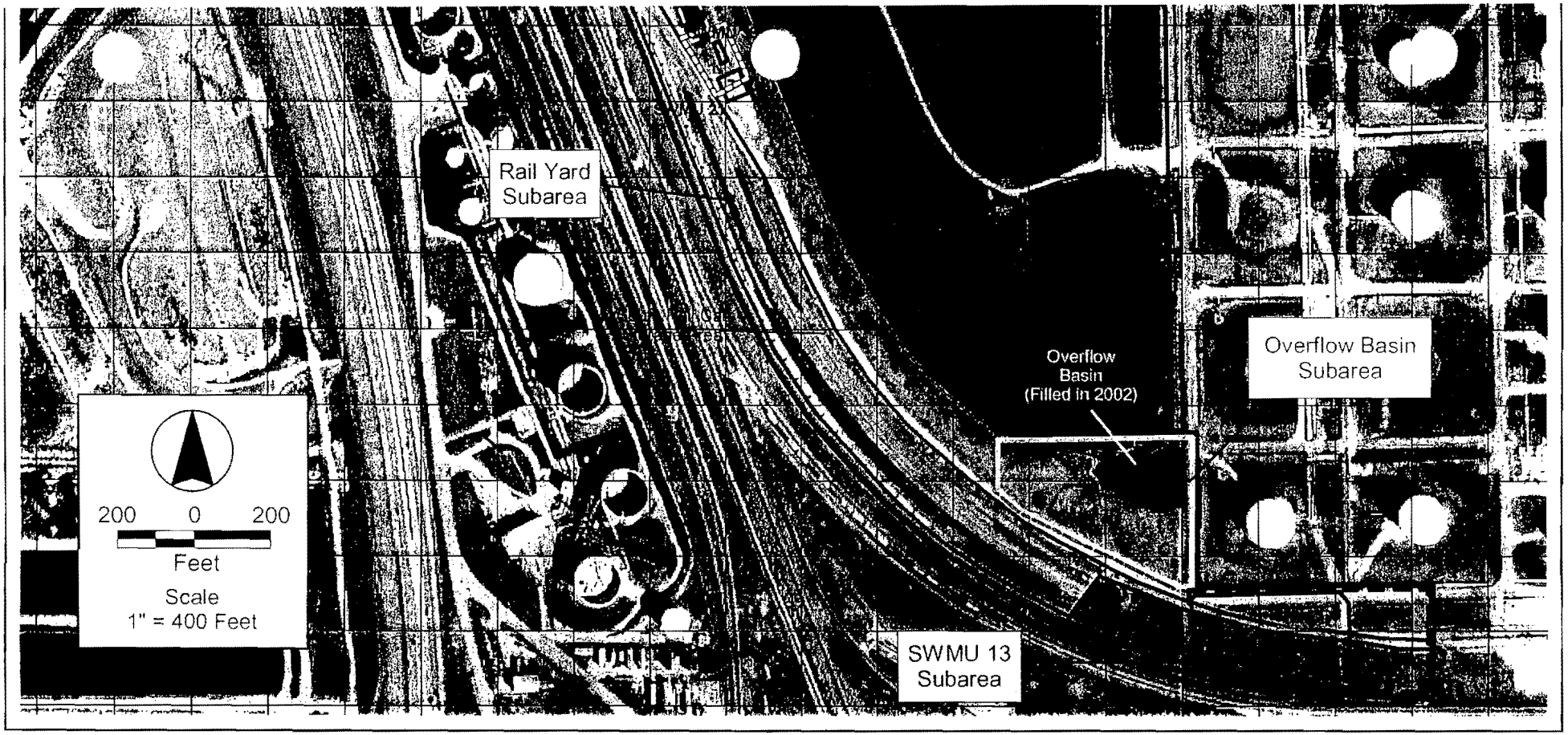
URS
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603

AREA 4 SWMU13 SUBAREA ELUC EXHIBIT C INSTITUTIONAL CONTROL/ENGINEERED BARRIER AREAS BP FORMER REFINERY WOOD RIVER, ILLINOIS

DESIGN: EF	CHK'D: LV	PROJECT NO. 25365025	FIG NO. C-3
DRAWN: MDC	DATE: 10/13/04		

O:\DELIVERABLES_LIBRARY\BP\WOOD_RIVER\MAINPLANT\AREA4\ELUC\FIGC-3_SWMU13_ICEB.PDF

O:_PROJECTS_(APR-MXD)\BP\WOOD_RIVER\MAINPLANT\AREA04\MP_AREA04_ELUC_SWMU13.MXD



Legend

- Rail Yard Subarea
- Overflow Basin Subarea
- SWMU 13 Subarea
- Extent of Rail Tracks
- Area 18 (South Flare Pit and Surrounding Area)
- Solid Waste Management Unit (SWMU)
- Area 4 Boundary

SWMU Descriptions

SWMU 13 Former API Separator Sludge Landfarm
SWMU 14 North Cell of Spray Pond 1
SWMU 15 Spray Ponds
SWMU 21 Former APAC Waste Transfer Area
SWMU 33 South Flare Pit

Notes:
1. Orthophotograph taken on February 27, 2000.
   - Source: Surdex Corporation
2. The western and southern boundaries of Area 4 are on the Main Plant Property boundaries.
3. The 200-foot grid interval is based on the Illinois State Plane Coordinate System (NAD83).

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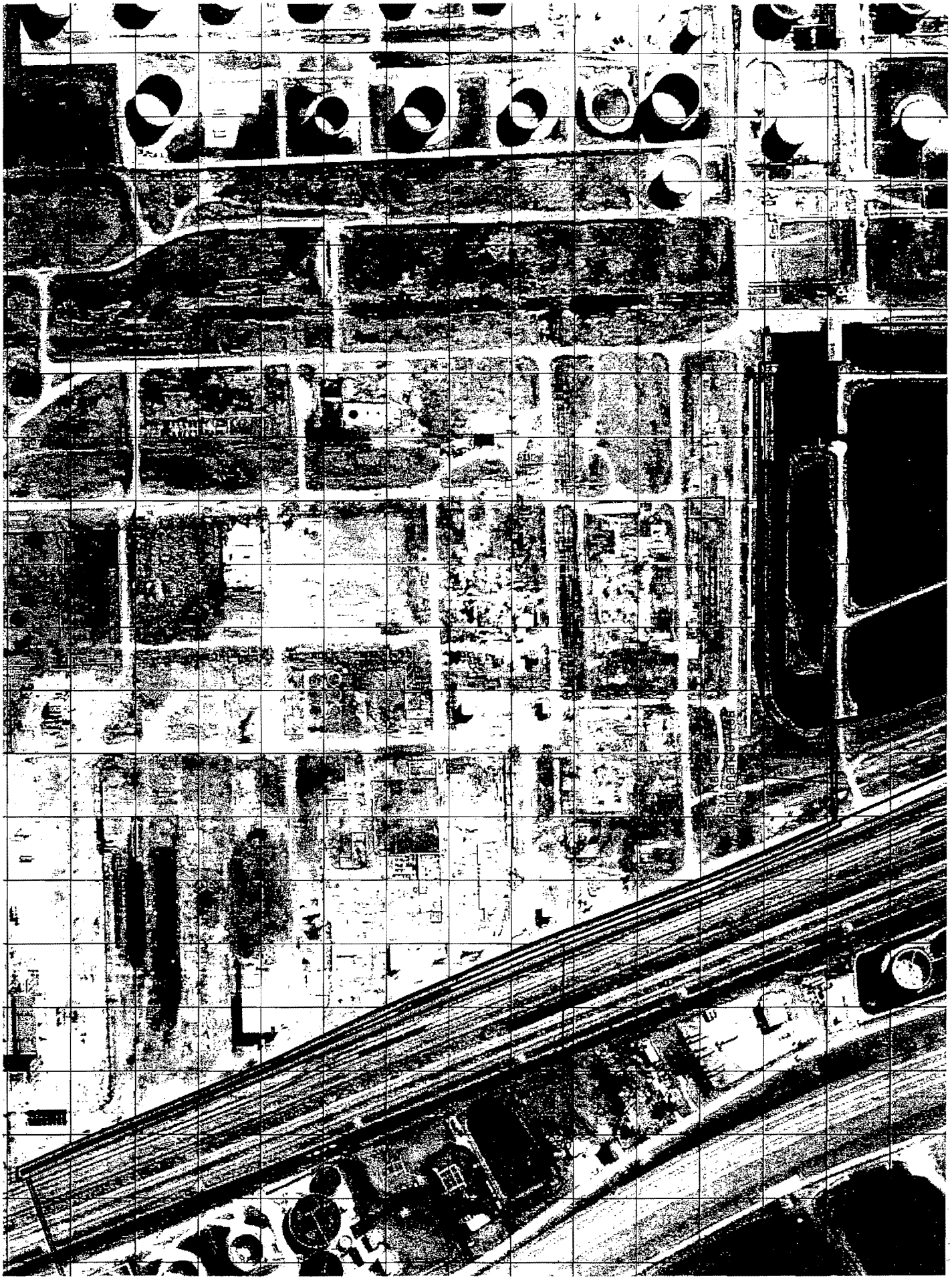
Chicago, Illinois 60603

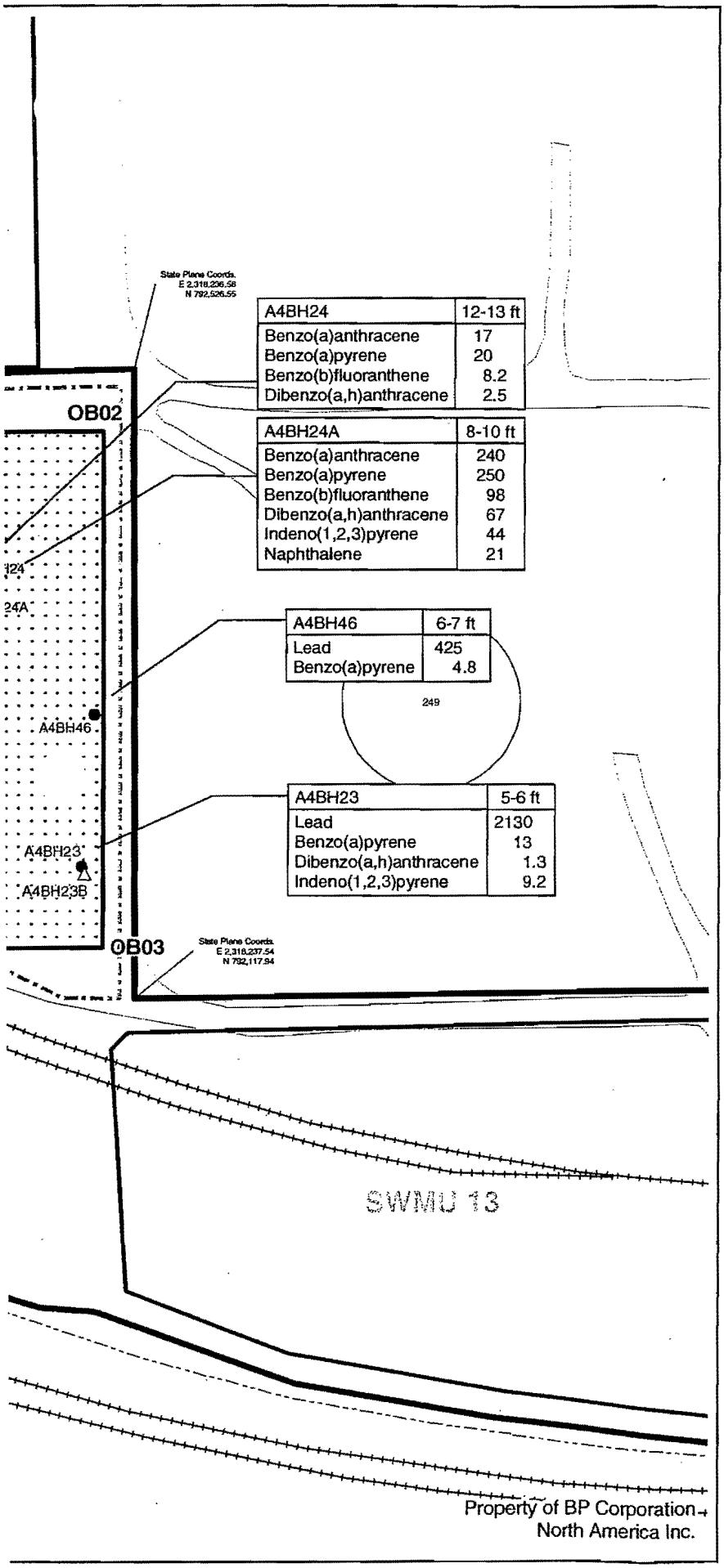
AREA 4 PROPERTY BOUNDARY
ELUC EXHIBIT C
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

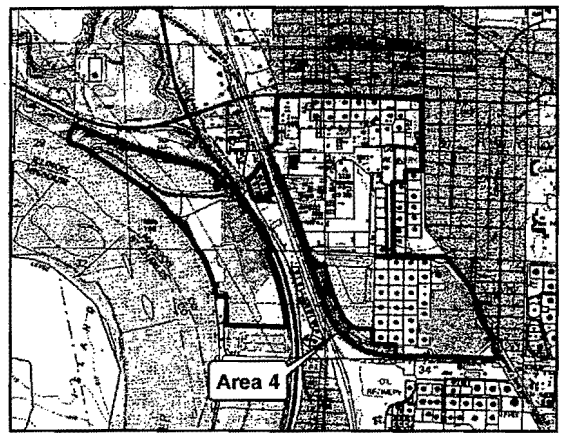
DESIGN: EF	CHK'D: LV	PROJECT NO.	FIG. NO.
DRAWN: MDC	DATE: 10/13/04	25365025	C-1

O:\DELIVERABLES_LIBRARY\BPWOOD_RIVER\MAINPLANT AREA4\ELUC\FIGC-1_PROPERTY_BOUNDARY.PDF

G:_PROJECTS_1\APR-MXD\A_F\BPWOOD_RIVER\MAINPLANT\AREA4.MXD AREA 4 ARTI







50 25 0 50 100

Feet

1 inch equals 100 feet

Legend

- Boring with Tier 1 Soil Ingestion Exceedance
- Boring with Tier 1 Soil Ingestion and Tier 2 Soil Inhalation Exceedance
- Boring with Tier 1 Soil Ingestion and Class II Groundwater Exceedance
- Boring with Class II Groundwater Exceedance
- Overflow Basin Subarea
- Area of Engineered Barrier (EB-1)
- Solid Waste Management Unit (SWMU)
- Area 4 Boundary

Soil Boring	Depth (ft)
Chemical	Concentration (mg/kg)

Basis for Institutional Controls

- An engineered barrier of approved specifications is required to be constructed and maintained in the Overflow Basin Subarea due to exceedances of TACO Tier 1 Ingestion Remediation Objectives (ROs) for Industrial/Commercial workers.
- A Health and Safety Plan is required to protect construction workers during excavation/construction activities due to: exceedances of Tier 1 Ingestion ROs; one exceedance of the Tier 2 Inhalation RO for naphthalene; and perched water exceedances of Class II groundwater ROs at two locations.

Notes:

1. All results are presented in mg/kg.
2. Naphthalene is the only constituent that exceeds a Tier 2 Inhalation RO and it exceeds only for Construction Workers.
3. No specific source areas were identified.
4. The occurence of perched water is sporadic and not vertically or laterally continuous; therefore, it is not possible to determine the extent of impacted perched water or direction of flow.
5. Figure is based on Attachment 4 of IEPA No Further Action letter, dated 8/22/03.

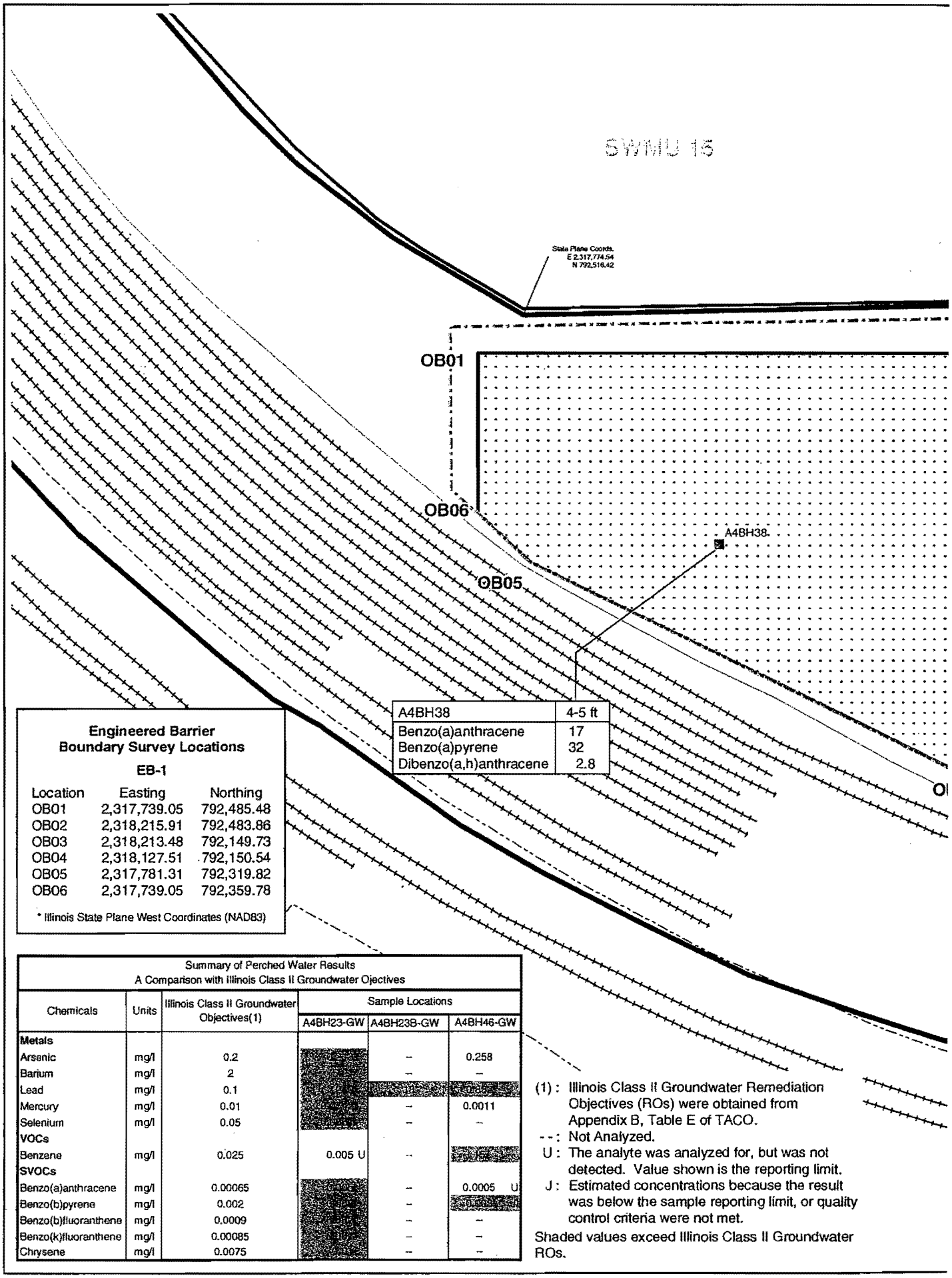
O:\DELIVERABLES_LIBRARY\BP\WOOD_RIVER\MAINPLANT\AREA04\ELUC\FIGC-2_OVERFLOW_ICEB.PDF

URS
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603

AREA 4 OVERFLOW BASIN SUBAREA ELUC EXHIBIT C INSTITUTIONAL CONTROL/ENGINEERED BARRIER AREAS BP FORMER REFINERY WOOD RIVER, ILLINOIS

DESIGN: EF	CHK'D: LV	PROJECT NO.	FIG NO.
DRAWN: MDC/KH	DATE: 10/13/04	25365025	C-2

O:_PROJECTS_(APR-MXD)\BP\WOOD_RIVER\MAINPLANT\AREA04\MP_AREA04_ELUC_BASIN.MXD



A4BH38	4-5 ft
Benzo(a)anthracene	17
Benzo(a)pyrene	32
Dibenzo(a,h)anthracene	2.8

Engineered Barrier Boundary Survey Locations

EB-1

Location	Easting	Northing
OB01	2,317,739.05	792,485.48
OB02	2,318,215.91	792,483.86
OB03	2,318,213.48	792,149.73
OB04	2,318,127.51	792,150.54
OB05	2,317,781.31	792,319.82
OB06	2,317,739.05	792,359.78

* Illinois State Plane West Coordinates (NAD83)

Summary of Perched Water Results
A Comparison with Illinois Class II Groundwater Ojectives

Chemicals	Units	Illinois Class II Groundwater Objectives(1)	Sample Locations		
			A4BH23-GW	A4BH23B-GW	A4BH46-GW
Metals					
Arsenic	mg/l	0.2		--	0.258
Barium	mg/l	2		--	--
Lead	mg/l	0.1			
Mercury	mg/l	0.01		--	0.0011
Selenium	mg/l	0.05		--	--
VOCs					
Benzene	mg/l	0.025	0.005 U	--	
SVOCs					
Benzo(a)anthracene	mg/l	0.00065		--	0.0005 U
Benzo(b)pyrene	mg/l	0.002		--	
Benzo(b)fluoranthene	mg/l	0.0009		--	--
Benzo(k)fluoranthene	mg/l	0.00085		--	--
Chrysene	mg/l	0.0075		--	--

(1) : Illinois Class II Groundwater Remediation Objectives (ROs) were obtained from Appendix B, Table E of TACO.

-- : Not Analyzed.

U : The analyte was analyzed for, but was not detected. Value shown is the reporting limit.

J : Estimated concentrations because the result was below the sample reporting limit, or quality control criteria were not met.

Shaded values exceed Illinois Class II Groundwater ROs.

SU13BH21	3-4 ft
Lead	865
Benzo(a)pyrene	2.3
Naphthalene	100

SU13BH21B	5-6 ft	5-6 ft DUP
Lead	3150	4400
Naphthalene	42	31

SU13BH20	3 ft
Lead	1690
Benzo(a)pyrene	0.83

State Plane Coords.
E 2,318,855.07
N 792,124.86

SU13BH22	3 ft
Lead	2050
Benzo(a)pyrene	3.4
Naphthalene	19

EB-3

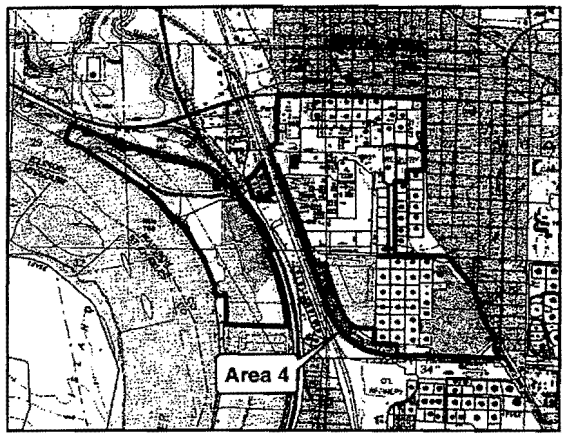
SU13BH26

SU13BH26	1-2 ft
Lead	2170

A4BH65

State Plane Coords.
E 2,318,853.77
N 791,823.73

Property of BP Corporation
North America Inc.



50 25 0 50 100
Feet
1 inch equals 100 feet

Legend

- Boring with Tier 1 Soil Ingestion Exceedance
- Boring with Tier 1 Soil Ingestion Exceedance and Tier 2 Soil Inhalation Exceedance
- Boring with Tier 1 Soil Ingestion and Class II Groundwater Exceedance
- Boring with Class II Groundwater Exceedance
- Overflow Basin Subarea
- Areas of Engineered Barriers
- Solid Waste Management Unit (SWMU)
- Area 4 Boundary

Soil Boring	Depth (ft)
Chemical	Concentration (mg/kg)

Basis for Institutional Controls

- An engineered barrier of approved specifications is required to be constructed and maintained in the SWMU13 Subarea due to exceedances of TACO Tier 1 Ingestion Remediation Objectives (ROs) for Industrial/Commercial workers.
- A Health and Safety Plan is required to protect construction workers during excavation/construction activities due to: exceedances of Tier 1 Ingestion ROs; exceedances of the Tier 2 Inhalation RO for naphthalene for construction workers; and perched water exceedances of Class II groundwater ROs at two locations.

Notes:

1. All results are presented in mg/kg.
2. Naphthalene is the only constituent that exceeds a Tier 2 Inhalation RO and it exceeds only for Construction Workers.
3. No specific source areas were identified.
4. The occurence of perched water is sporadic and not vertically or laterally continuous; therefore, it is not possible to determine the extent of impacted perched water or direction of flow.
5. Figure is based on Attachment 5 of IEPA No Further Action letter, dated 8/22/03.

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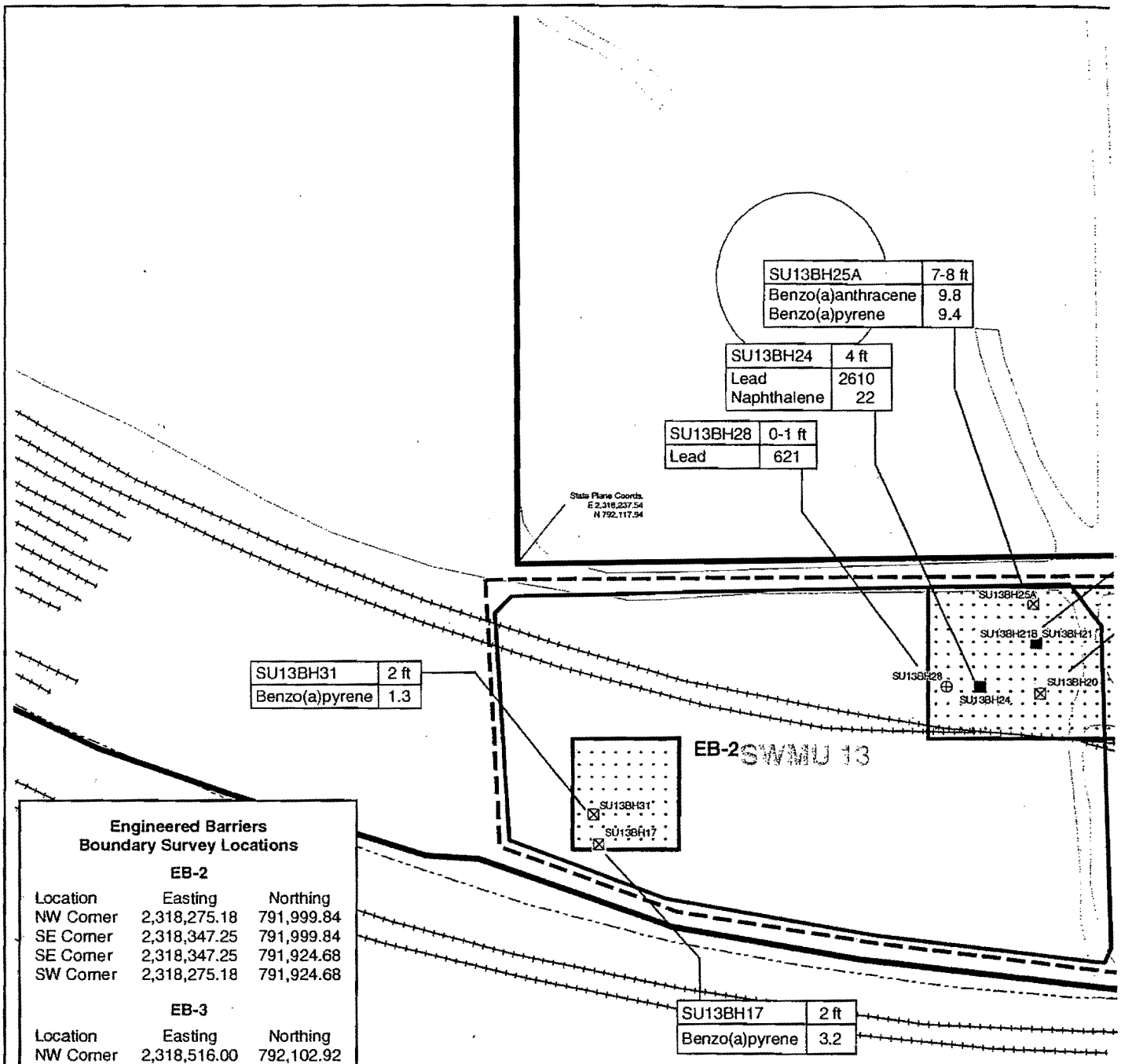
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603

AREA 4 SWMU13 SUBAREA
ELUC EXHIBIT C
INSTITUTIONAL CONTROL/ENGINEERED BARRIER AREAS
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

DESIGN: EF	CHK'D: LV	PROJECT NO.	FIG NO.
DRAWN: MDC	DATE: 10/13/04	25365025	C-3

O:\DELIVERABLES_LIBRARY\BP\WOOD_RIVER\MAINPLANT\AREA4\ELUC\FIGC-3_SWMU13_ICEB.PDF

O:_PROJECTS_(APR-MXD)\BP\WOOD_RIVER\MAINPLANT\AREA04\MP_AREA04_ELUC_SWMU13.MXD



Engineered Barriers
Boundary Survey Locations

EB-2

Location	Easting	Northing
NW Corner	2,318,275.18	791,999.84
SE Corner	2,318,347.25	791,999.84
SE Corner	2,318,347.25	791,924.68
SW Corner	2,318,275.18	791,924.68

EB-3

Location	Easting	Northing
NW Corner	2,318,516.00	792,102.92
SE Corner	2,318,721.58	792,102.92
SE Corner	2,318,721.58	791,999.88
SW Corner	2,318,516.00	791,999.88

* Illinois State Plane West Coordinates (NAD83)

Summary of Perched Water Results
A Comparison with Illinois Tier I Class II Groundwater Remediation Ojectives

Chemicals	Units	Illinois Class II Groundwater Objectives(1)	Sample Locations	
			SU13BH28-GW	A4BH65-GW
Metals				
Lead	mg/l	0.1		
SVOCs				
Benzo(a)anthracene	mg/l	0.00065	--	
Benzo(b)pyrene	mg/l	0.002	--	
Benzo(b)fluoranthene	mg/l	0.0009	--	
Benzo(k)fluoranthene	mg/l	0.00085	--	
Dibenzo(a,h)anthracene	mg/l	0.0015	--	
Indeno (1,2,3-cd)pyrene	mg/l	0.00215	--	

(1) : Illinois Class II Groundwater Remediation Objectives (ROs) were obtained from Appendix B, Table E of TACO.
-- : Not Analyzed.
J : Estimated concentrations because the result was below the sample reporting limit, or quality control criteria were not met.
Shaded values exceed Illinois Class II Groundwater ROs.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/524-3300

September 15, 2004

CERTIFIED MAIL
7002 3150 0000 1110 8001

Mr. Greg Jevyak
Environmental Business Manager
BP Products North America Inc.
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095

Re: 1191150001 -- Madison County
BP Products North America, Inc./Main Plant
ILD980700967
Log No. B-147-CA-44
Received: July 19, 2004
RCRA Permit

Dear Mr. Jevyak:

This is in response to a July 16, 2004 letter report submitted on your behalf by Mr. Ryan P. Hartley, P.E., of URS regarding certain activities performed within a parcel referred to as "Area 4" at the above-referenced facility (a drawing showing the location of Area 4 within the facility is attached). The subject facility is carrying out a corrective action program in accordance with Sections IV and VII of its RCRA permit (Log No. B-147 and associated modifications). Illinois EPA issued a No Further Action (NFA) letter for Area 4, subject to several conditions, on August 22, 2003 (Log No. B-147-CA-30).

Condition 7 of Illinois EPA's August 22, 2003 No Further Action letter for Area 4 required that soil containing high lead levels (greater than 5 mg/l TCLP lead) detected in the vicinity of sample location A4BH53 be addressed by removal/off-site disposal of contaminated soil followed by collection of soil verification samples. The subject submittal describes the soil removal activities required by Condition 7 of the August 22, 2003 letter. The completed activities included: (1) soil excavation and off-site disposal; and (2) collection of soil confirmation samples.

The subject submittal is hereby approved as a modification to the RCRA corrective action program required by the RCRA permit for the above-referenced facility, subject to the following conditions and modifications:

1. It appears that contaminated soil containing high lead levels present in the vicinity of sample location A4BH53 within Area 4 has been adequately removed.

2. The facility must continue to comply with the requirements of the August 22, 2003 NFA letter for Area 4. A draft institutional control as required by Condition 6 of the August 22, 2003 letter must be submitted for Illinois EPA's review and approval. This institutional control must contain the following restrictions (required by Conditions 1 through 5 of the August 22, 2003 NFA letter): (1) maintenance of engineered barriers over three areas; (2) implementation of a health and safety plan during any excavation/construction work; (3) proper management of any soil removed during construction activities; and (4) industrial/commercial use for Area 4.

3. Overall, corrective action activities at the subject facility must continue to be carried out in accordance with: (1) 35 Ill. Adm. Code 620, 724.201, and 742; and (2) the requirements set forth in its RCRA permit (Log No. B-147) and all the other associated modifications/letters issued thereafter by the Illinois EPA for this facility.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal 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 this matter, please contact Munib Ahmad, P.E., at 217/524-3300.

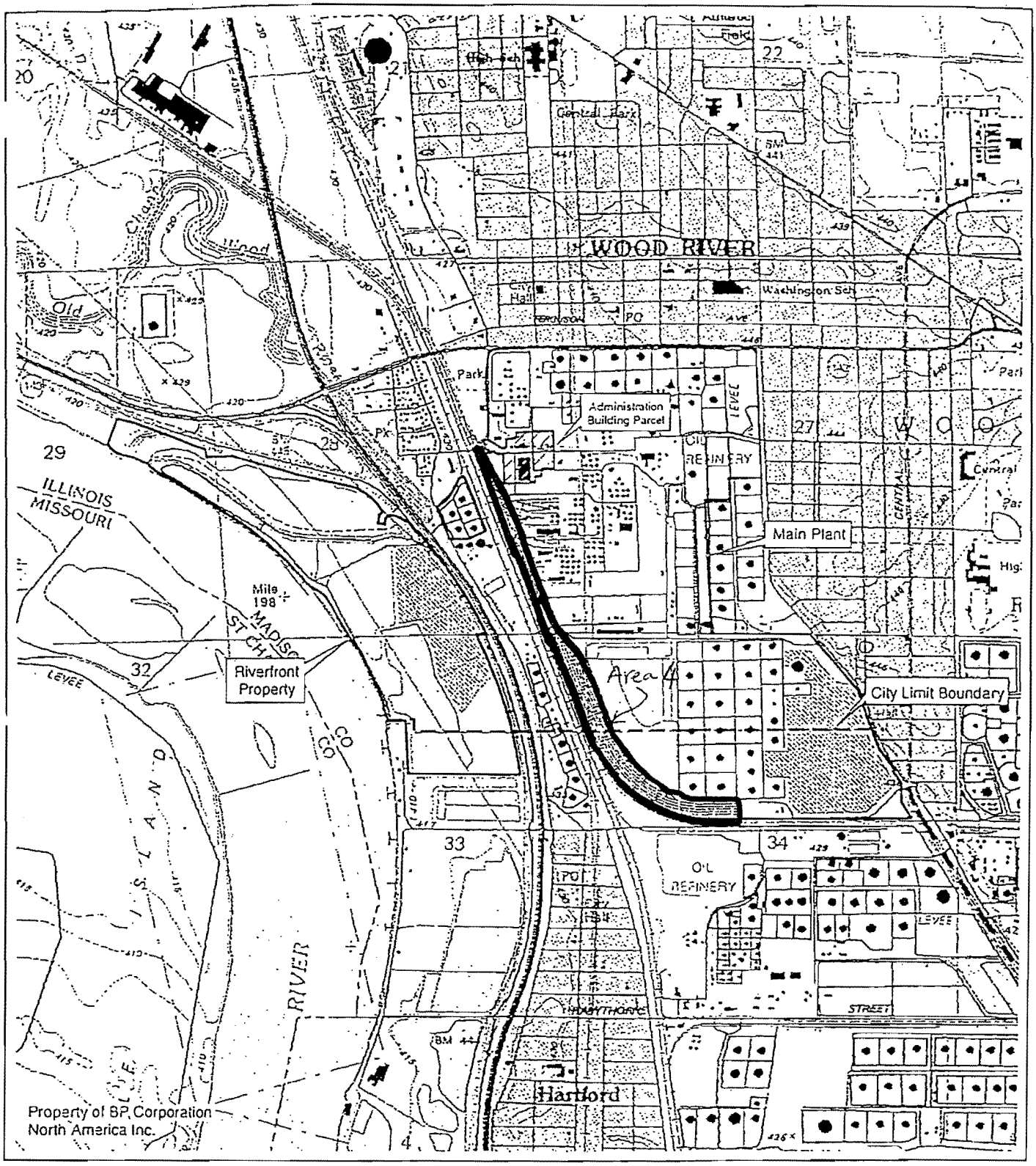
Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:MA:bjh\041153s.doc
JLM

Attachment: Site Map

cc: Ryan P. Hartley, URS



Source: USGS 7.5 Minutes Series
Topographic Map
Wood River, ILL.-MO., 1994.

Legend

- Boundary Between Wood River and Hartford
- BP Property
- Administration Building Parcel (Area 15)

1,000 500 0 1,000
Feet

1 inch equals 2,000 feet

URS 122 South Michigan Avenue Suite 1920 Chicago, Illinois 60603

TOPOGRAPHIC MAP
BP FORMER REFINERY
WOOD RIVER, ILLINOIS

PROJECT NO	FIG NO
83C054	1-1

EXHIBIT G

Remediation Management Services Company

150 West Warrenville Road
Naperville, IL 60563

Office: (312)809-3395
Mobile: (630)386-1784
Lori.Littrell@bp.com

December 31, 2015

Mr. Stephen F. Nightingale, P.E.
Illinois Environmental Protection Agency
Bureau of Land – Division of Land Pollution Control, Permit Section
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

RE: BP Products North America Inc. – Main Plant
South Flare Pit (Area 18)
1191150001 - Madison County, ILD980700967
RCRA Permit Log No. B-147R-7-M
Transmittal of Certified Recording of ELUC Pursuant to IEPA Letter Dated 10/27/2015

Dear Mr. Nightingale,

BP Products North America Inc. (BP) is submitting the attached certified copy of the environmental land-use control (ELUC) and IEPA approval letter (Log No. 147R-CA-43) dated 10/27/2015, along with the required RCRA Corrective Action Certification Form.

Item 4 of the Illinois Environmental Protection Agency's October 27, 2015, letter required recording of the aforementioned documents on the applicable property title by the county recorder of deeds within 45 days (by 12/11/2015). The document was recorded by the Madison County Recorder of Deeds on 12/10/2015. Item 5 of the October 27, 2015, letter required submittal of a certified true copy of the filed ELUC within 30 days of the recording (by 01/09/2015).

If you have any questions or concerns regarding the information provided, please contact me at (312) 809-3395 or Tom Tunnicliff at (618) 254-9074.

Sincerely,

Lori G. Littrell

Lori G. Littrell
Operations Project Manager, BP
Remediation Management Services Company
An affiliate of BP Products NA Inc.

cc: Frank Akers, Mayor of the City of Wood River
Michael J. Hoffman, P.E., Amec Foster Wheeler
Becky Raftery, Atlantic Richfield Company, A BP affiliated company (Enfos)
Paul M. Stevens, P.G., Amec Foster Wheeler
Thomas Tunnicliff, Atlantic Richfield Company, A BP affiliated company (Enfos)
Scott Ziegler, Atlantic Richfield Company, A BP affiliated company (Enfos)

Illinois Environmental Protection Agency

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

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 Facility Identification

Name: BP Wood River Main Plant Property (South Flare Pit)
County: Madison
Street Address: 301 Evans Avenue
Site No. (IEPA): 1191150001
City: Wood River
Site No. (USEPA): ILD980700967

2.0 Owner Information

Name: BP Products North America, Inc.
Mail Address: 301 Evans Avenue
City: Wood River
State: IL Zip Code: 62095
Contact Name: Lori Littrell
Contact Title: Operations Project Manager
Phone: 312.809.3395

3.0 Operator Information

Name: BP Products North America, Inc.
Mail Address: 301 Evans Avenue
City: Wood River
State: IL Zip Code: 62095
Contact Name: Lori Littrell
Contact Title: Operations Project Manager
Phone: 312.809.3395

4.0 Type of Submission (check applicable item and provide requested information, as applicable)

☐ RFI Phase I Workplan/Report
☐ RFI Phase II Workplan/Report
☐ CMP Report;
☑ Other (describe): Certified true copy of the ELUC filed by the Recorders Office

IEPA Permit Log No. B-147R-M-7
Date of Last IEPA Letter on Project: Oct 27, 2015
Log No. of Last IEPA Letter on Project: B-147R-CA-43

Does this submittal include groundwater information: ☑ Yes ☐ No

Date of Submittal: Dec 31, 2015

5.0 Description of Submittal: (briefly describe what is being submitted and its purpose)

Certified true copy of the ELUC filed by the Recorders Office is being submitted to IEPA in accordance with Item 5 of the IEPA Log No. B-147R-CA-43 letter dated 10/27/2015.

6.0 Documents Submitted (identify all documents in submittal, including cover letter; give dates of all documents)

RCRA Corrective Action Certification form, the Certified true copy of the ELUC filed by the Recorders Office (recorded 12/10/2015) and the Recorder's Certificate of Photocopy (dated 12/11/2015).

7.0 Certification Statement

(This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below). The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. 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.

7.1 Owner/Operator Certification

(Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used)

Owner Signature: _____ Date: 12/31/15

Title: Operations Project Manager

Operator Signature: _____ Date: 12/31/15

Title: Operations Project Manager

7.2 Professional Certification (if necessary)

Work carried out in this submittal 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. No one is relieved 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.

Any 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 5/44 (h))

Professional's Signature: _____ Date: _____

Professional's Name _____

Address _____ Professional's Seal:

City _____

State _____ Zip Code _____

Phone _____

7.3 Laboratory Certification (if necessary)

The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA.

Name of Laboratory _____

_____ Date: _____

Signature of Laboratory Responsible Officer

Mailing Address of Laboratory

Address _____ _____

City _____ Name and Title of Laboratory Responsible Officer

State _____ Zip Code _____

Recorder's Certificate of Photocopy

STATE OF ILLINOIS)
) SS
COUNTY OF MADISON)

I, Amy M. Meyer, the duly elected RECORDER in and for the County and State aforesaid, do hereby certify that the foregoing copy of a certain **Notice of Environmental Disclosure** is the true and correct photocopy of said **Notice of Environmental Disclosure** from **BP Products North America Inc. & Amoco Oil** to **Notice** including the Certificate of Acknowledgment bearing date the **9th** day of **December** A.D. **2015** as the same appears in the records of my office in Document # **2015R43169** recorded on the **10th** day of **December** A.D. **2015**.

GIVEN under my hand and OFFICIAL SEAL of the RECORDER at Edwardsville, Illinois, this **11th** day of **December**, A.D. **2015**.

RECORDER MADISON COUNTY ILLINOIS

Amy M. Meyer

Amy M. Meyer
RECORDER
in and for
MADISON COUNTY, ILLINOIS

8245612
Tx:4185250

2015R43169
STATE OF ILLINOIS
MADISON COUNTY
12/10/2015 3:34 PM
AMY M. MEYER, RECORDER
REC FEE: 52.00
CO STAMP FEE:
ST STAMP FEE:
FF FEE:
RHSPS FEE:
 # OF PAGES: 29

PREPARED BY:

Name: Thomas Tunnicliff
Operations Project Manager
Atlantic Richfield Company
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

RETURN TO:

Name: Thomas Tunnicliff
Operations Project Manager
Atlantic Richfield Company
Address: 301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

52.00 ck 1036

THE ABOVE SPACE FOR RECORDER'S OFFICE

Environmental Land Use Control For The South Flare Pit Portion of Area 18

THIS ENVIRONMENTAL LAND USE CONTROL ("ELUC"), is made this ___ day of Dec. 9 2015 ~~2012,~~ by BP Products North America Inc. f/k/a Amoco Oil Company, a Maryland corporation, ("Property Owner"), Property Owner of the real property located at 301 Evans Avenue, Wood River, Illinois. The property which is the subject on this ELUC is actually a 0.41 acre parcel within this real property.

WHEREAS, 35 Ill. Admin. Code 742 and 415 ILCS 5/58.17 provide for the use of an ELUC as an institutional control in order to impose land use limitations or requirements related to environmental contamination so that persons conducting remediation can obtain a No Further Action determination from the Illinois Environmental Protection Agency ("IEPA"). The reason for an ELUC is to ensure protection of human health and the environment. The limitations and requirements contained herein are necessary in order to protect against exposure to contaminated soil or groundwater or both that may be present on the property as a result of prior industrial activities. Under 35 Ill. Adm. Code 742, the use of risk-based, site specific remediation objectives may require the use of an ELUC on real property and the ELUC may apply to certain physical features (e.g., engineered barriers, monitoring wells, caps, etc.).

WHEREAS, Property Owner intends to request risk-based, site specific soil and groundwater remediation objectives from the IEPA under 35 Ill. Admin. Code Part 742 to obtain risk-based closure of a portion of the site, identified by Bureau of Land LPC number 1191150001, utilizing an ELUC.

NOW, THEREFORE, the recitals set forth above are incorporated by reference as if fully set forth herein and the Property Owner agrees as follows:

Section One. Property Owner does hereby establish an ELUC on the real estate, situated in the County of Madison, State of Illinois, and further described in Exhibit A attached hereto and incorporated herein by reference (the "Property"). This property is 0.41 acres in size; portions of this land are located in Parcel Index Numbers 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001 as identified in Exhibit A. The legal descriptions are presented in Exhibit A as described below:

- A-1: Legal Description of the entire South Flare Pit (SFP);
- A-2: Legal Description of the eastern portion of the SFP within PIN 19-1-08-33-00-000-013 and the Legal Description of the western portion of the SFP within PIN 19-1-08-34-00-000-001; and
- A-3: Legal Descriptions of PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001 for which the SFP is within.

Attached as Exhibit B are site maps that show the location of the 0.41 acre parcel within the facility located at 301 Evans Avenue, the legal boundary of the Property, the physical features to which the ELUC applies, the horizontal and vertical extent of the contaminants of concern above applicable remediation objectives for soil or groundwater or both, and the nature, location of the source, and direction of movement of the contaminants of concern, as required under 35 Ill. Admin. Code Part 742. Scaled maps showing the ELUC are presented in Exhibit B as described below:

- B-1: Location of 0.41 acre parcel within the Facility located at 301 Evans Avenue, Wood River, Illinois;
- B-2: Legal Boundary of the SFP that is within PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001; and
- B-3: Legal Boundary of PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001 for which the SFP is within.

Section Two. Property Owner represents and warrants that it is the current owner of the Property and has the authority to record this ELUC on the chain of title for the Property in the Office of the Recorder or Registrar of Titles in Madison County, Illinois.

Section Three. The Property Owner hereby agrees, for itself, and its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessees, possessor or user of the Property or the holder of any portion thereof interest therein, that:

a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property shall be handled in accordance with all applicable laws and regulations;

b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IL Admin. Code 742;

c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils and impacted perched groundwater on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by a site health and safety plan;

d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

e. Soils excavated during construction/demolition/excavation activities within the Property shall be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to field screening tests for volatile organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

(i) Field Screening. Soil shall be considered "potentially contaminated" if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings > 100 units) of VOCs in soil;

(ii) Laboratory Analysis. Soils exhibiting potential contamination based on visual discoloring or a field screening test for VOCs will either be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

(iii) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if: (1) laboratory analytical data indicates constituents in soil are less than the IEPA approved site specific industrial/commercial ROs developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e.(i) above.

(iv) Management of Non-Contaminated Soils. Soils that are considered not contaminated, as determined by field screening or laboratory results, may be reused as fill in other areas of the former BP Refinery Main Plant Facility. Soils may be transported off site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(v) Management of Contaminated Soils. If soils are found to be contaminated, they shall be sent off site for disposal in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(vi) Documentation. All of these activities must be documented in the facility's operating records.

Section Four. This ELUC is binding on the Property Owner, its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein. This ELUC shall apply in perpetuity against the Property and shall not be released until: (1) the IEPA determines there is no longer a need for the ELUC as an institutional control; (2) the IEPA, upon written request, issues to the Property that received the closure by removal determination a new closure by removal determination approving modification or removal of the limitation(s) or requirement(s); (3) the new closure by removal determination is filed on the chain of title of the Property subject to the closure by removal determination; and (4) a release or modification of the land use limitation or requirement is filed in the chain of title for the Property.

Section Five. Information regarding the remediation performed on the Property may be obtained from the IEPA through a request under the Freedom of Information Act (5 ILCS 140) and rules promulgated thereunder by providing the IEPA with the 10-digit LPC number listed above.

Section Six. The effective date of this ELUC shall be the date that it is officially recorded in the chain of title for the Property to which this ELUC applies.

WITNESS the following signature:

BP Products North America Inc.

By: Lisa Smith Attest: _____

Printed: LISA A SMITH Printed: _____

Its: VICE PRESIDENT Its: _____

Date: DEC 9, 2015 Date: _____

STATE OF ~~ILLINOIS~~ Texas)
) SS:
COUNTY OF ~~COOK~~ Harris)

I, Robyn A Whiteford the undersigned, a Notary Public for said County and State, DO HEREBY CERTIFY, that Lisa A. Smith and _____, personally known to me to be the Vice President and _____, respectively, of **BP Products North America Inc. f/k/a Amoco Oil Company**, a Maryland corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that in said capacities they signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

Given under my hand and official seal, this 9 day of December, 20~~12~~15.

Robyn A Whiteford
Notary Public

ROBYN A WHITEFORD
Notary ID # 1656540
My Commission Expires
December 12, 2016

List of Exhibits

Exhibit A: Legal Descriptions

A-1: Legal Description of the entire SFP

A-2: Legal Description of the eastern portion of the SFP within PIN 19-1-08-33-00-000-013 and the Legal Description of the western portion of the SFP within PIN 19-1-08-34-00-000-001

A-3: Legal Descriptions of PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001 for which the SFP is within

Exhibit B: Scaled Maps Showing ELUC

B-1: Location of 0.41 acre parcel within the Facility located at 301 Evans Avenue, Wood River, Illinois

B-2: Legal Boundary of the SFP that is within PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001

B-3: Legal Boundary of PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001 for which the SFP is within

PIN NOS. 19-1-08-33-00-000-013
19-1-08-34-00-000-001

Exhibit A

Legal Description

The subject property is located in the City of Wood River, Madison County, State of Illinois, commonly known as 301 Evans Avenue, Wood River, Illinois and more particularly described as:

LEGAL DESCRIPTION AND
REAL ESTATE TAX INDEX OR PARCEL #
(PURSUANT to 7421010(D)(2))

Exhibit A-1: Legal Description of the entire SFP

[See attached]

Description For
URS Corporation

South Flare Pit
0.41 Acre Tract

May 17, 2011

Part of Sections 33 and 34, all in Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the Northeast corner of said Section 33; thence South 02 degrees 53 minutes 03 seconds East, along the east line of said section 33, 326.91 feet; thence North 88 degrees 52 minutes 55 seconds East, 24.17 feet; thence South 02 degrees 44 minutes 50 seconds West, 101.28 feet; thence South 21 degrees 18 minutes 43 seconds East, 491.38 feet; thence South 73 degrees 19 minutes 36 seconds West, 81.06 feet to the POINT OF BEGINNING; thence South 23 degrees 19 minutes 21 seconds East, 152.91 feet; thence South 60 degrees 46 minutes 50 seconds West, 96.85 feet; thence North 30 degrees 21 minutes 05 seconds West, 177.97 feet; thence North 73 degrees 19 minutes 36 seconds East, 118.92 feet to the POINT OF BEGINNING containing 0.41 acres or 17,468 square feet.

SUBJECT TO covenants, conditions, restrictions, and easements of record.

PIN NOS. 19-1-08-33-00-000-013
19-1-08-34-00-000-001

Exhibit A

Exhibit A-2: Legal Description of the eastern portion of the SFP within PIN 19-1-08-33-00-000-013 and the Legal Description of the western portion of the SFP within PIN 19-1-08-34-00-000-001

[See attached]

Description For
URS Corporation

AREA 18 (SFP1) EAST
0.39 Acre Tract

September 6, 2011

Part of Section 34 in Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the Northwest corner of said Section 34; thence South 02 degrees 53 minutes 03 seconds East, along the west line of said section 34, 936.24 feet to the POINT OF BEGINNING; thence North 73 degrees 19 minutes 36 seconds East a distance of 93.51 feet; thence South 23 degrees 19 minutes 21 seconds East a distance of 152.91 feet; thence South 60 degrees 46 minutes 50 seconds West a distance of 96.85 feet; thence North 30 degrees 21 minutes 05 seconds West a distance of 124.48 feet to a point on said west line of section 34; thence North 02 degrees 53 minutes 03 seconds West, along said section line, a distance of 53.52 feet to the POINT OF BEGINNING, containing 0.39 acres or 16,988 square feet.

Description For
URS Corporation

AREA 18 (SFP1) WEST
0.02 Acre Tract

September 6, 2011

Part of Section 33 in Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the Northeast corner of said Section 33; thence South 02 degrees 53 minutes 03 seconds East, along the east line of said section 33, 936.24 feet to the POINT OF BEGINNING; thence South 02 degrees 53 minutes 03 seconds East, continuing along said east section line, a distance of 53.52 feet; thence North 30 degrees 21 minutes 05 seconds West a distance of 53.49 feet; thence North 73 degrees 19 minutes 36 seconds East a distance of 25.41 feet to the POINT OF BEGINNING, containing 0.02 acres or 660 square feet.

PIN NOS. 19-1-08-33-00-000-013
19-1-08-34-00-000-001

Exhibit A

Exhibit A-3: Legal Descriptions of PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001 for which the SFP is within

[See attached]

8155706
Tx:4116207

2015R09452
STATE OF ILLINOIS
MADISON COUNTY
03/30/2015 11:09 AM
AMY M. MEYER, RECORDER
REC FEE: 36.00
CO STAMP FEE:
ST STAMP FEE:
FF FEE:
RHSPS FEE: 9.00
OF PAGES: 5

This instrument was prepared by:
Paul Shadle, Esq.
DLA Piper LLP (US)
203 North LaSalle Street
Chicago, Illinois 60601

After recording return to:
Kim E. Murakawa
Counsel, Corporate Real Estate
BP America Inc.
501 Westlake Park Boulevard, WL 1
Houston, TX 77079

Fed Ex
Hilda Barbosa
First American Title
30 N. LaSalle St.
St. 2700
Chicago, Il.
60602

Mail tax bills to:
BP America Inc.
P.O. Box 3092
Houston, Texas 77253

EXEMPT PARA. E
35 ILCS 200/31-45

Date: MARCH 16, 2015

2148094A
1061 HH

QUIT CLAIM DEED

45.00 CK 908

The grantor, **AMERICAN OIL COMPANY**, a Delaware corporation ("Grantor"), whose address is c/o BP America Inc., 501 Westlake Park Boulevard, Houston, TX 77079 for and in consideration of the sum of Ten and no/100 Dollars ($10.00) and other good and valuable consideration in hand paid, CONVEYS AND QUIT CLAIMS to **BP PRODUCTS NORTH AMERICA INC.**, a Maryland corporation ("Grantee"), whose address is c/o BP America Inc., 501 Westlake Park Boulevard, Houston, TX 77079, all of grantor's interest in and to the following legally described real estate which is situated in the County of Madison in the State of Illinois:

See Exhibit A attached hereto and made a part hereof.

[*signature page follows*]

EAST\96248324.2

IN WITNESS WHEREOF, the grantor aforesaid has executed this Quit Claim Deed as of this 16th day of March, 2015.

AMERICAN OIL COMPANY,
a Delaware corporation

By: _____
Name: DANIEL R. FIDEN
Title: DIRECTOR PORTFOLIO & ASSETS

STATE OF ILLINOIS)
) SS.
COUNTY OF Cook)

I, the undersigned, a Notary Public in and for said County in the State aforesaid, do hereby certify that DANIEL R FIDEN, Authorized Signatory for **AMERICAN OIL COMPANY**, a Delaware corporation, being the Grantor in the foregoing instrument, personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that she/he signed and delivered such instrument as her/his own free and voluntary act and as the free and voluntary act of the Grantor, all for the uses and purposes set forth therein.

GIVEN under my hand and notarial seal this 16th day of March, 2015.

_____
Notary Public

My Commission expires:

_____

OFFICIAL SEAL
SUZANNE L. LEIGH
Notary Public - State of Illinois
My Commission Expires Aug 17, 2015

THIS INSTRUMENT FILED FOR RECORD BY FIRST AMERICAN TITLE INSURANCE CO. AS AN ACCOMMODATION ONLY. IT HAS NOT BEEN EXAMINED AS TO ITS EXECUTION OR AS TO ITS EFFECT UPON TITLE

EAST\96248324.2

EXHIBIT A

LEGAL DESCRIPTION

Part of Sections 27, 28, 33 and 34 of Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois and being more particularly described as follows:

Commencing at the corner common to said Sections 27, 28, 33 and 34; thence westerly along the Section line between Sections 28 and 33 on an assumed bearing of North 88 degrees 21 minutes 31 seconds West a distance of 467.91 feet to the point of intersection with the northeasterly line of the 110 foot wide Illinois Terminal Railroad, said point also being the point of beginning of the parcel herein described; thence continuing North 88 degrees 21 minutes 31 seconds West along said section line between Sections 28 and 33 a distance of 37.56 feet to the point of intersection with the northeasterly line of the 75 foot wide Illinois Terminal Railroad; thence North 19 degrees 37 minutes 23 seconds West along said northeasterly line of the 75 foot wide Illinois Terminal Railroad a distance of 1,496.26 feet to the point of intersection with the northerly line of the South half of the Southeast Quarter of said Section 28; thence North 89 degrees 21 minutes 08 seconds West along said northerly line of the South half of the Southeast Quarter of Section 28 a distance of 26.65 feet to the point of intersection with the northeasterly line of the 50 foot wide Illinois Terminal Railroad; thence North 19 degrees 37 minutes 23 seconds West along said northeasterly line of the 50 foot wide Illinois Terminal Railroad, a distance of 1,397.11 feet to the point of intersection with the southeasterly line of the 60 foot wide Alton-St. Louis Road; thence North 51 degrees 41 minutes 18 seconds East along said southeasterly line of the 60 foot wide Alton-St. Louis Road a distance of 257.64 feet to a point; thence North 08 degrees 07 minutes 19 seconds East and continuing along said southeasterly and easterly line of the 60 foot wide Alton-St. Louis Road a distance of 110.97 feet to a point; thence North 01 degrees 43 minutes 06 seconds West and continuing along said southeasterly and easterly line of the 60 foot wide Alton-St. Louis Road a distance of 706.98 feet to a point; thence North 06 degrees 30 minutes 37 seconds East and continuing along said easterly line of the 60 foot wide Alton-St. Louis Road a distance of 175.81 feet to a point; thence North 13 degrees 21 minutes 11 seconds East and continuing along the easterly line of the transitional width Alton-St. Louis Road, wherein the width of said Alton-St. Louis Road transitions from 60 feet wide to 66 feet wide, a distance of 50.36 feet to a point in the easterly line of the 66 foot wide Alton-St. Louis Road; thence North 06 degrees 30 minutes 37 seconds East along the easterly line of the 66 foot wide Alton-St. Louis Road a distance of 102.97 feet to a point in the southeasterly line of F.A. Route 789, marked Illinois Route 143 and Madison Avenue; thence North 18 degrees 28 minutes 37 seconds East along said southeasterly line of F.A. Route 789 a distance of 72.16 feet to a point; thence North 54 degrees 30 minutes 50 seconds East and continuing along said southeasterly line of F.A. Route 789 a distance of 48.71 feet to a point; thence North 74 degrees 14 minutes 40 seconds East along said southeasterly line of F.A. Route 789 a distance of 45.06 feet to a point in the southerly line of said F.A. Route 789, said point also being 60.00 feet southerly of the northerly line of the Southeast Quarter of the Northeast Quarter of said Section 28; thence North 89 degrees 25 minutes 05 seconds East along said southerly line of F.A. Route 789, said southerly line of F.A. Route 789 being 60.00 feet southerly of and parallel to said northerly line of the Southeast Quarter of the Northeast Quarter of Section 28, a distance of 1,105.01 feet to a point; thence South 88 degrees 13 minutes 21 seconds East and continuing along said southerly line of F.A. Route 789, said continuation of the southerly line of F.A. Route 789 being 60.00 feet southerly of the northerly line of the Southwest Quarter of the Northwest Quarter of said Section 27 and the Southeast Quarter of the Northwest Quarter of said Section 27, a distance of 2,410.77 feet to a point; thence South 73 degrees 53 minutes 06 seconds East and continuing along the southerly and southwesterly line of F.A. Route 789 a distance of 103.38 feet to a point, thence South 84 degrees 54 minutes 03 seconds East and continuing along said southwesterly line of F.A.. Route 789 a distance of 100.13 feet to a point; thence South 33 degrees 47 minutes 40 seconds East and continuing along said southwesterly line of F.A. Route 789 a distance of 83.60 feet to the point of intersection with the westerly line of the 60 foot wide Sixth Street, also known as the Alton-Edwardsville Road, said point also being 60.00 feet westerly of the easterly line of the aforesaid Southeast Quarter of the Northwest Quarter of Section 27; thence South 00 degrees 41 minutes 06 seconds East along said westerly line of the 60 foot wide Alton-Edwardsville Road, said westerly line of the Alton-Edwardsville Road being 60.00 feet westerly of and parallel to the easterly line of the aforesaid Southeast Quarter of the Northwest Quarter of Section 27, a distance of 1,245.87 feet to a point; thence South 00 degrees 11 minutes 08 seconds East and continuing along said westerly line of the 60 foot wide Alton-Edwardsville Road, said continuation of the Alton-Edwardsville Road being 60.00 feet westerly of and parallel to the easterly line of the Southwest Quarter of said Section 27, a distance of 560.42 feet to a point; thence South 89 degrees 48 minutes 52 seconds West

a distance of 453.48 feet to a point; thence South 00 degrees 02 minutes 23 seconds East a distance of 233.93 feet to a point; thence South 00 degrees 00 minutes 18 seconds East a distance of 67.40 feet to a point; thence South 89 degrees 37 minutes 43 seconds West a distance of 336.16 feet to a point; thence South 00 degrees 11 minutes 35 seconds East a distance of 60.00 feet to a point; thence South 00 degrees 37 minutes 43 seconds East a distance of 1,879.00 feet to the point of intersection with the northerly line of the Northwest Quarter of the aforesaid Section 34; thence South 87 degrees 51 minutes 07 seconds East along said northerly line of the Northwest Quarter of Section 34 a distance of 836.60 feet to the northeasterly corner of said Northwest Quarter, said point also being the northwesterly corner of the Northeast quarter of the aforesaid Section 34; thence South 88 degrees 07 minutes 52 seconds East along the northerly line of said Northeast Quarter of Section 34 a distance of 564.42 feet to the point of intersection with the westerly line of the aforesaid 60 foot wide Alton-Edwardsville Road; thence South 37 degrees 41 minutes 28 seconds East along said Westerly line of the 60 foot Alton-Edwardsville Road a distance of 50.36 feet to a point; thence South 39 degrees 12 minutes 17 seconds East and continuing along said westerly line of the 60 foot wide Alton-Edwardsville Road a distance of 1,034.23 feet to a point; thence South 18 degrees 18 minutes 01 seconds East and continuing along said westerly line of the 60 foot wide Alton-Edwardsville Road a distance of 917.06 feet to a point; thence South 34 degrees 37 minutes 23 seconds East and continuing along said westerly line of the 60 foot wide Alton-Edwardsville Road a distance of 388.26 feet to the point of intersection with the northwesterly line of F.A. Route 132, marked Illinois Route 111; thence South 55 degrees 22 minutes 37 seconds West along said northwesterly line of F.A. Route 132 a distance of 30.00 feet to a point; thence South 34 degrees 37 minutes 23 seconds East along the southwesterly line of said F.A. Route 132 a distance of 212.48 feet to a point; thence South 01 degree 56 minutes 50 seconds West and continuing along said southwesterly line of F.A. Route 132 a distance of 275.69 feet to a point; thence South 30 degrees 41 minutes 10 seconds East and continuing along said southwesterly line of F.A. Route 132 a distance of 276.16 feet to the point of intersection with the northerly line of the 60 foot wide Illinois Terminal Railroad; thence North 88 degrees 02 minutes 23 seconds West along said northerly line of the 60 foot wide Illinois Terminal Railroad a distance of 1,973.48 feet to a point; thence North 88 degrees 12 minutes 30 seconds West and continuing along said northerly line of the 60 foot wide Illinois Terminal Railroad a distance of 890.71 feet to the point of curvature of the northerly and northeasterly line of the variable width Illinois Terminal Railroad; thence continuing along said northerly and northeasterly line of the variable width Illinois Terminal Railroad to the point of tangency with the aforesaid northeasterly line of the 110 foot wide Illinois Terminal Railroad, said northerly and northeasterly line of the variable width Illinois Terminal Railroad being a curve to the right having a radius of 1,910.00 feet and an arc length of 2,286.34 feet; thence North 19 degrees 37 minutes 23 seconds West and continuing along sad northeasterly line of the 110 foot wide Illinois Terminal Railroad a distance of 1,598.81 feet to the point of beginning.

PINS:
19-1-08-27-09-101-001
19-1-08-27-10-101-001 (Affects a portion of the Property)
19-1-08-27-13-301-001 (Affects a portion of the Property)
19-1-08-27-14-301-001 (Affects a portion of the Property)
19-1-08-27-17-301-001 (Affects a portion of the Property)
19-1-08-27-18-301-001 (Affects a portion of the Property)
19-1-08-28-12-201-001 (Affects a portion of the Property)
19-1-08-28-00-000-010 (Affects a portion of the Property)
19-1-08-33-00-000-013 (Affects a portion of the Property) ← ✱
19-1-08-34-00-000-001 (Affects a portion of the Property) ← ✱
19-1-08-28-12-201-001.001 (Affects a portion of the Property)
19-1-08-34-00-000-001.001 (Affects a portion of the Property)
19-1-08-34-00-000-001.002 (Affects a portion of the Property)
19-1-08-34-00-000-001.003 (Affects a portion of the Property)
19-1-08-27-10-101-001.001 (Affects a portion of the Property)
19-1-08-27-14-301-001.001 (Affects a portion of the Property)
19-1-08-27-14-301-001.002 (Affects a portion of the Property)
19-1-08-28-00-000-010.001 (Affects a portion of the Property)

AFFIDAVIT FOR PURPOSE OF PLAT ACT REQUIREMENTS (765 ILCS 205)
THIS IS A LEGAL DOCUMENT – CONSULT YOUR PRIVATE ATTORNEY
(County Zoning & Subdivision Ordinances May Also Apply)

ORIGINAL AFFIDAVIT REQUIRED FOR RECORDING, COPIES *WILL NOT* BE ACCEPTED

Affiant is the Grantor or is the Grantors authorized representative in a deed transferring interest in the real estate described in the accompanying deed. Affiant further states this transfer is exempt from the Illinois Plat Act because it is:

(Please check all that apply)
(X) A. NOT A DIVISION OF LAND (parcel lines unchanged) ( ) C. DIVISION FOR TAXING PURPOSES ONLY (parcel lines change)

( ) B. A DIVISION OF LAND THAT MEETS ONE OF THE FOLLOWING EXCEPTIONS TO THE PLAT ACT:

____ 1. A division or subdivision of land into tracts of five (5) acres or more not involving new streets or easements of access with a minimum of five (5) acres residue or Grandfathered under prior approved plat by Land Use Committee.

____ 2. A division of lots or blocks of less than one (1) acre in a recorded subdivision not involving new streets or easements of access.

____ 3. A sale or exchange of land between owners of adjoining and contiguous land.

____ 4. A conveyance of land for use as a right-of-way for public utilities and other pipelines not involving new streets or easements of access.

____ 5. A conveyance of land owned by a public utility not involving new streets or easements of access.

____ 6. A conveyance of land for highway or other public purpose or relating to a dedication of land or for vacation of land subject to a public use.

____ 7. A conveyance made to correct a description in prior conveyance.

____ 8. The sale or exchange of parcels of land following the division into no more than two (2) parts of a parcel existing on July 17, 1959, and not involving any new streets or easements of access.

____ 9. The sale of a single lot/tract less than five (5) acres from a larger tract. (Exception only applies to the 1st tract conveyed from a larger tract as it existed on October 1, 1973.) (The single tract of less than five (5) acres must have been surveyed by an Illinois Registered Land Surveyor whose survey must accompany the deed)

IF A IS MARKED ABOVE, APPROVAL BY THE MAPS & PLATS GIS DIVISION IS NOT REQUIRED.
IF B OR C IS MARKED ABOVE, APPROVAL BY THE MAPS & PLATS GIS DIVISION IS REQUIRED.

Under the penalties of perjury I swear that the statements contained here are true and correct.

NAME: DANIEL REDEN (Please Print) SIGNATURE: [signature] DATE: MARCH 16, 2015

Subscribed and sworn to before me this 16th day of March, 2015

OFFICIAL SEAL
SUZANNE L LEIGH
Notary Public - State of Illinois
My Commission Expires Aug 17, 2015

[signature]
Notary Public

All divisions of less than 2 acres within the County jurisdiction must be reviewed by the Madison County Planning and Development Department

This affidavit only ensures the Recorder's Office compliance with the State Plat Act. If the property is located within a municipality or within 1.5 miles of a municipality, local ordinances may apply. *If exception 9 is used,* it is required that this land division be reviewed & approved by the participating municipality. Each municipality has five (5) business days to review deed(s) and return. If the five day limit expires, Maps & Plats will process the deed upon proof of date submitted to municipality.

Date Submitted to Municipality (s) _____ (Please check one) ( ) Municipality Jurisdiction ( ) County Jurisdiction

Municipality (s) with Jurisdiction: _____

Municipal Planning Official's Signature	*Print Name*	*Date*
Municipal Planning Official's Signature	*Print Name*	*Date*

(Revised 8/11)

Madison County Maps & Plats GIS Division, 157 North Main Street, Suite 229, Edwardsville, IL. 62025-1964; Ph (618) 692-7040 ext. 4586; Fax (618) 692-8298

END OF DOCUMENT

DEED POCKET NO. 0
WOOD RIVER

QUITCLAIM DEED

15-2312

BOOK 2361 PAGE 539

THE GRANTOR, STANDARD OIL COMPANY, an Indiana corporation, having its principal office in the City of Chicago, County of Cook and State of Illinois, for the consideration of TEN DOLLARS ($10.00) and other good and valuable consideration, conveys and quitclaims to THE AMERICAN OIL COMPANY, a Maryland corporation, having its principal office in the City of Chicago, County of Cook, State of Illinois, all interest in the following described real estate, to-wit:

All that part of the Northwest Quarter (NW 1/4) of Section Number Thirty-four (34) Township Number Five (5) North, Range Number Nine (9) West of the Third Principal Meridian, (3rd P.M.), lying East of the right of way of the Illinois Terminal Railroad Company as the same appeared of record on March 1, 1917, and lying North of the East and West Half Section line of said Section Number Thirty-four (34), subject to right of way for public highway.

Also all that part of the West one half (W 1/2) of the Northeast Quarter (NE 1/4) of Section Number Thirty-four (34), Township Number Five (5) North, Range Number Nine (9) West of the Third Principal Meridian (3rd P.M.), lying North of the East and West Half Section line of said Section Number Thirty-four (34), excepting and reserving however that portion of said last described tract, that lies East of the center of Alton and Edwardsville Wagon Road as travelled on March 1, 1917 consisting of Seven (7) acres more or less, subject to right of way for public highway.

Parcel# 19-1-08-34-00-000-001

Parcel# 19-1-08-33-00-000-013

And also a tract of land bounded by a line beginning at the corner of Sections Numbered Twenty-seven (27), Twenty-eight (28), Thirty-three (33) and Thirty-four (34), in Township Number Five (5) North, Range Number Nine (9) West of the Third Principal Meridian (3rd P.M.); thence from said beginning point West along the North line of said Section Number Thirty-three (33) to the Northeasterly line of the right of way of the Illinois Terminal Railroad Company as established on March 1, 1917; thence Southeasterly along said Northeasterly line of said right of way to the South line of the North one half (N 1/2) of the Northeast Quarter (NE 1/4) of said Section Number Thirty-three (33); thence East along said South line, to the East line of said Section Number Thirty-three (33); thence

BOOK 2061 PAGE 546

North along said East Line of said Section, to the place of beginning, containing Nine and sixty-eight hundredths (9.68) acres, and also -

A tract of land beginning at a point in the East line of said Section Number Thirty-three (33), and distant Fourteen Hundred and Nine feet (1409') from the North line of said Section Number Thirty-three (33); thence South along said East line of said Section Number Thirty-three (33), One Hundred and Eighty-five and nine-tenths feet (185.9') to the point of intersection of said East line with the Northeasterly line of the right of way of the Illinois Terminal Railroad Company; thence in a Northwesterly direction along said right of way line One Hundred and Ninety-five and sixty-six hundredths feet (195.66') to a point; thence East, Sixty and nine-tenths feet (60.9') to the place of beginning, containing thirteen-hundredths (.13) of an acre and all situated in the Northeast Quarter (NE 1/4) of said Section Number Thirty-three (33).

Expressly subject to, and together, with all rights, titles and interests of said Grantor in, to, and under, a certain Indenture dated April 30, 1920 from said Grantor to the Illinois Terminal Railroad Company; Dedication of Right of Way for Public Road purposes dated June 22, 1953 from said Grantor to the People of the State of Illinois.

situated in the County of MADISON, in the State of Illinois.

PIN NOS. 19-1-08-33-00-000-013
19-1-08-34-00-000-001

Exhibit B

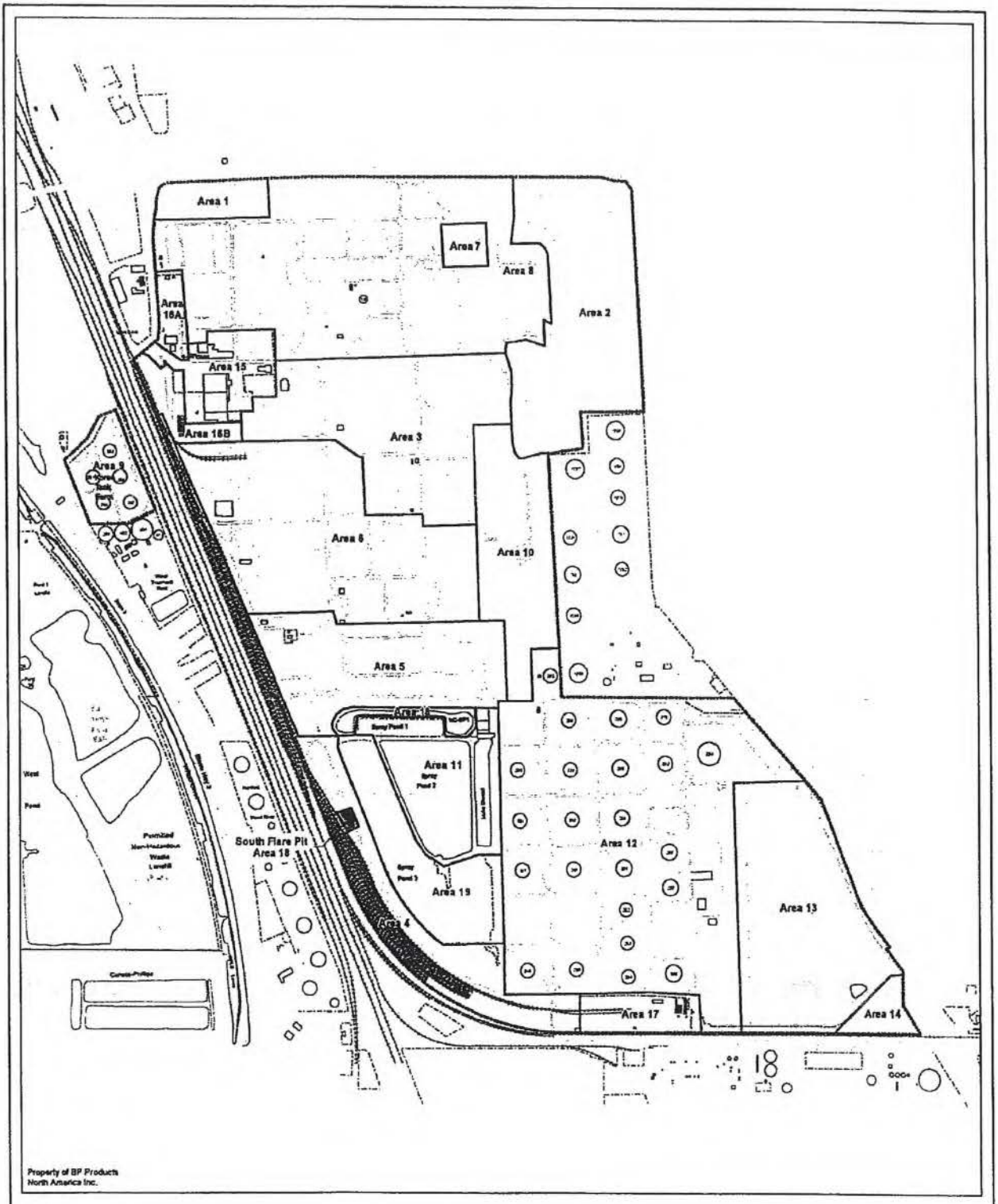
Scaled Maps showing:

A) The legal boundary of the property to which the ELUC applies (*see Exhibits B-1, B-2, and B-3*);
B) The horizontal and vertical extent of contaminants of concern above applicable remediation objectives for soil and groundwater to which the ELUC applies *(this does not apply to the SFP);*
C) Any physical features to which an ELUC applies (e.g., engineered barriers, monitoring wells, caps – *there are no physical features at the SFP);* and
D) The nature, location of the source, and direction of movement of the contaminants of concern *(this does not apply to the SFP).*

Maps Contained in Exhibit B

Exhibit B-1: South Flare Pit Portion of Area 18, Exhibit B Parts A/B/C/D (shows location of 0.41 acre parcel within Facility located at 301 Evans Avenue, Wood River, Illinois)
Exhibit B-2: South Flare Pit Portion of Area 18, Exhibit B Parts A/B/C/D (shows the legal boundary of the SFP)
Exhibit B-3: South Flare Pit Portion of Area 18, Exhibit B Parts A/B/C/D (shows the legal boundaries for PINs 19-1-08-33-00-000-013 and 19-1-08-34-00-000-001 for which the SFP is within)

[See attached]



Legend

Main Plant RCRA Part B Boundary

Location of South Flare Pit Portion of Area 18, 0.41 Acre Parcel, within Facility located at 301 Evans Avenue, Wood River, Illinois

N

500 250 0 500

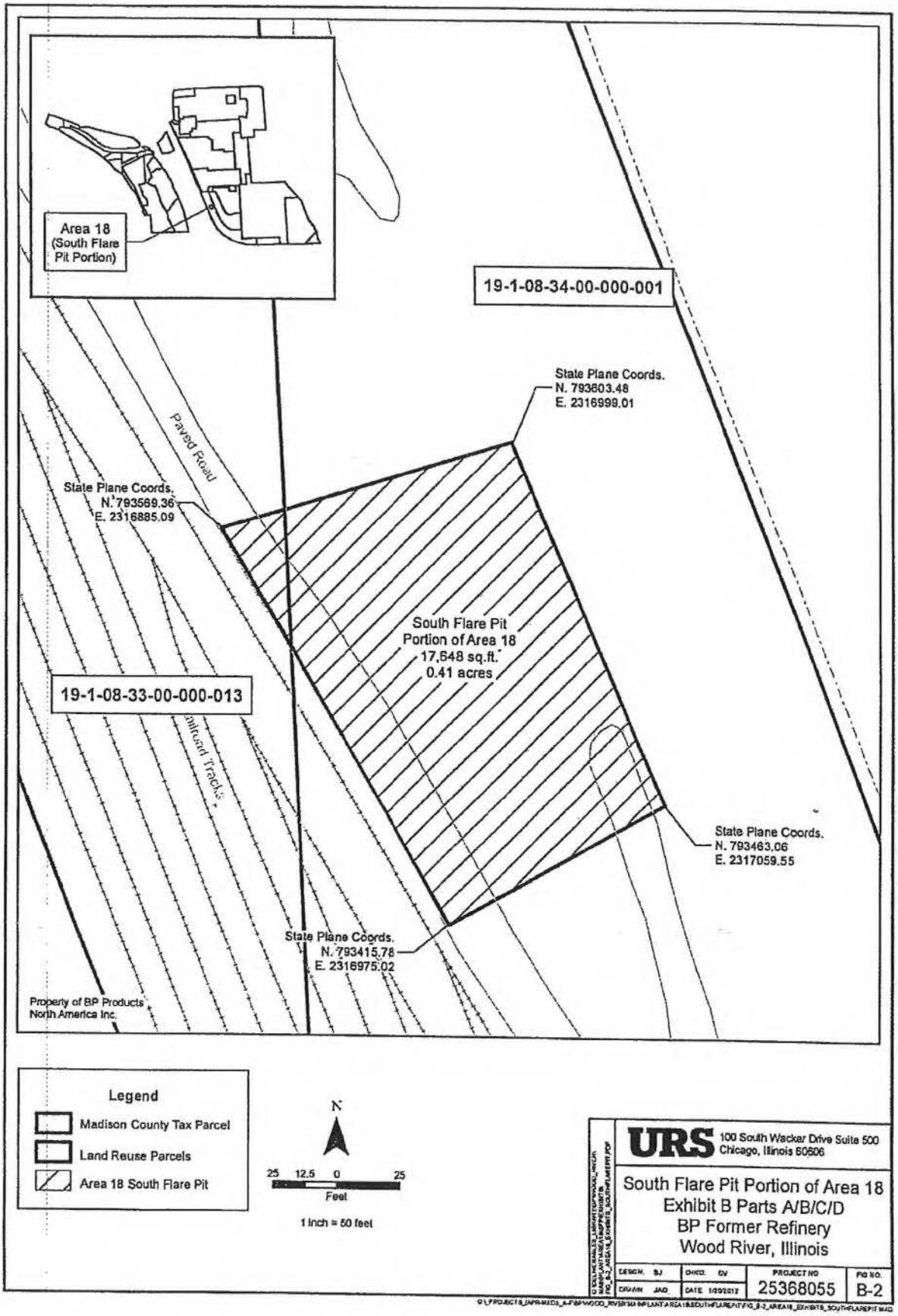
Feet

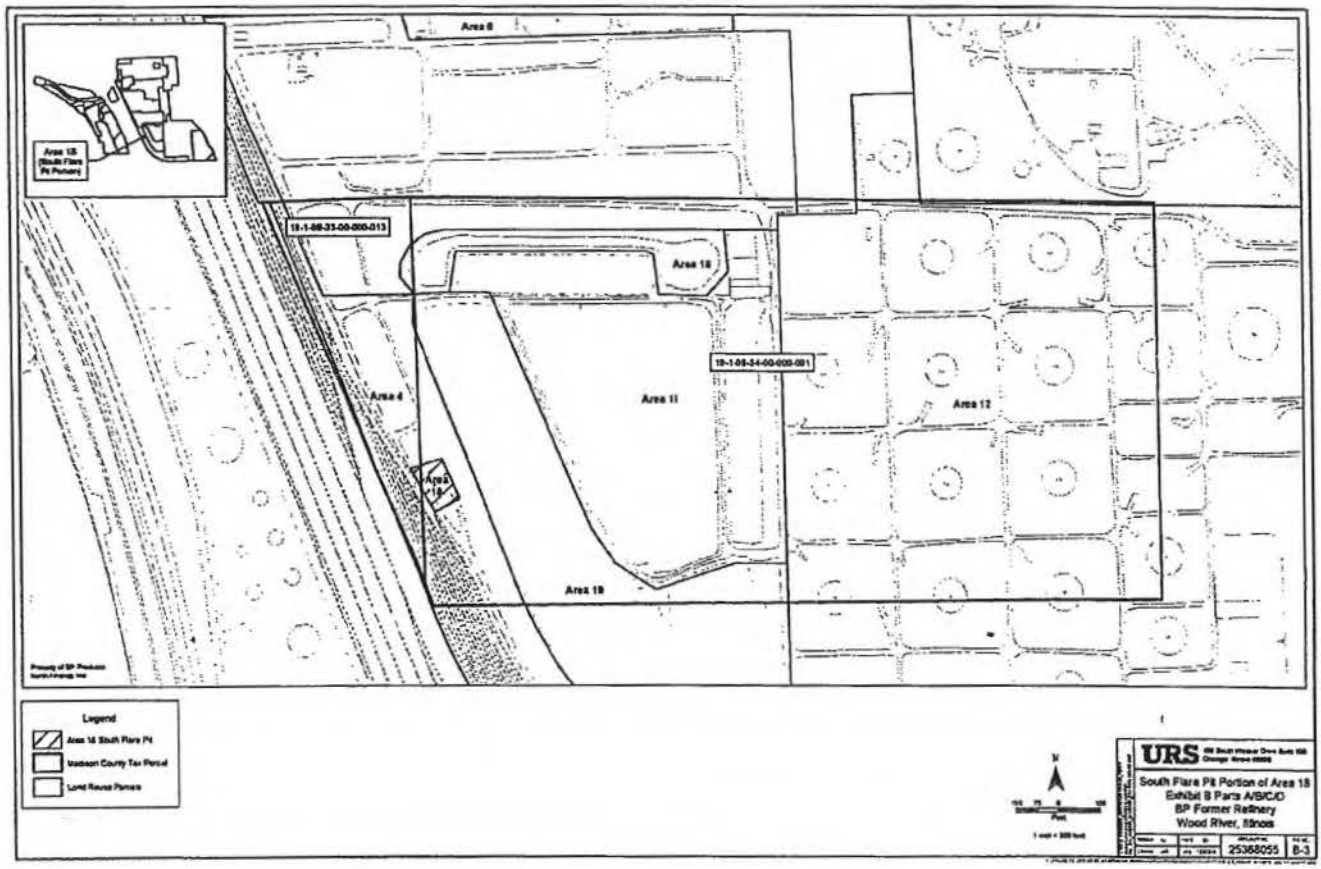
1 inch = 500 feet

URS 100 South Wacker Drive Suite 500 Chicago, Illinois 60606

South Flare Pit Portion of Area 18
Exhibit B Parts A/B/C/D
BP Former Refinery
Wood River, Illinois

DESIGN RW	OWNER -	PROJECT NO	FIG NO
DRAWN JO	DATE 10/30/2013	25368055	B-1


Area 18
(South Flare
Pit Portion)
19-1-08-34-00-000-001
State Plane Coords.
N. 793603.48
E. 2316999.01
Paved Road
State Plane Coords.
N. 793569.36
E. 2316885.09
South Flare Pit
Portion of Area 18
17,648 sq.ft.
0.41 acres
19-1-08-33-00-000-013
Railroad Tracks
State Plane Coords.
N. 793463.06
E. 2317059.55
State Plane Coords.
N. 793415.78
E. 2316975.02
Property of BP Products
North America Inc.
Legend
Madison County Tax Parcel
Land Reuse Parcels
Area 18 South Flare Pit
N
25 12.5 0 25
Feet
1 Inch = 50 feet
URS
100 South Wacker Drive Suite 500
Chicago, Illinois 60606
South Flare Pit Portion of Area 18
Exhibit B Parts A/B/C/D
BP Former Refinery
Wood River, Illinois
DESIGN SJ
CHKD. CV
DRAWN JAD
DATE 1/20/2012
PROJECT NO
25368055
FIG NO.
B-2


Area 8
Area 18 (South Flare Pit Portion)
19-1-08-33-00-000-013
Area 18
19-1-08-34-00-000-001
Area 4
Area 11
Area 12
Area 2 of 18
Area 19
Property of BP Products North America Inc
Legend
Area 18 South Flare Pit
Madison County Tax Parcel
Land Reuse Parcel
N
URS
South Flare Pit Portion of Area 18
Exhibit B Parts A/B/C/D
BP Former Refinery
Wood River, Illinois
25368055
B-3

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR LISA BONNETT, DIRECTOR

217/524-3300

October 27, 2015

CERTIFIED MAIL
7012 0470 0001 2976 8279

BP Products North America, Inc.
Attn: Mr. Thomas G. Tunnicliff
Environmental Business Manager
301 Evans Avenue
P. O. Box 167
Wood River, Illinois 62095

Re: 1191150001- -Madison County
BP Products North America Inc. –Main Plant
ILD 980700967
Log No. B-147R-CA-43
Received: July 17, 2015
RCRA Permit
Permit CA

Dear Mr. Tunnicliff:

This is in response to your July 16, 2015 submittal regarding corrective action activities at the above-referenced RCRA-permitted facility. One of the units addressed in Section IV (Corrective Action) of the facility's RCRA permit issued on March 4, 2011 is referred to as the South Flare Pit (a drawing showing the location of this unit within the facility is attached). Condition IV.C.1.b of the facility's RCRA permit indicated that a closure by removal demonstration would be completed and no further action would be necessary at the South Flare Pit once an Environmental Land Use Control (ELUC) is established which places certain restrictions on future activities at the unit.

BP Products North America, Inc. previously submitted a draft Environmental Land Use Control for the South Flare Pit which was approved by Illinois EPA August 11, 2014. However, it was found that the draft document needed minor revisions to reflect the current ownership of the land where the South Flare Pit is located. Your July 15, 2015 submittal contained a revised draft ELUC for the South Flare Pit. Illinois EPA has completed its review of this submittal and hereby approves it subject to the following conditions and modifications:

1. This letter shall supersede Illinois EPA's August 11, 1014 letter mentioned above. This letter approves a draft of the required ELUC for the South Flare Pit and shall constitute the Illinois EPA's no further action determination instrument for the South Flare Pit. A copy of this letter must be filed with the ELUC approved herein.

4302 N. Main St., Rockford, IL 61103 (815) 987-7760
595 S. State, Elgin, IL 60123 (847) 608-3131
2125 S. First St., Champaign, IL 61820 (217) 278-5800
2009 Mall St., Collinsville, IL 62234 (618) 346-5120
9511 Harrison St., Des Plaines, IL 60016 (847) 294-4000
412 SW Washington St., Suite D, Peoria, IL 61602 (309) 671-3022
2309 W. Main St., Suite 116, Marion, IL 62959 (618) 993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601

2. For purposes of this letter, "Property" refers to the South Flare Pit, a 0.41 acre parcel, 0.39 acres of which are in Parcel No. 19-1-08-33-00-013 and 0.02 acres are in Parcel No. 19-1-08-34-00-000-001. A scaled drawing showing the Illinois State Plane Coordinates of the corners of the South Flare Pit and the line dividing Parcel 19-08-33-00-000-013 from 19-1-08-34-00-000-001 is attached.

3. The proposed draft Environmental Land Use submitted on July 16, 2015 for the South Flare Pit is hereby approved and places the following restrictions on the subject property:

   a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil within the property that removed, excavated, or disturbed shall be handled in accordance with all applicable laws and regulations;

   b. The property shall not be used for Residential use. The property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 Ill. Adm. Code742;

   c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils and impacted perched groundwater on the property, and all construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

   d. The soil within the property shall remain in place, except where necessary to remove it for construction activities;

   e. Soil excavated during construction/demolition/excavation activities within the Property shall be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to field screening tests for volatile organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

      (1) Field Screening. Soil shall be considered "potentially contaminated" if: (a) there is visual discoloring of the soil indicative of hydrocarbon product; or (b) a field screening test for VOCs detects the presence (i.e., PID readings > 100 units) of VOCs in soil;

      (2) Laboratory Analysis. Soils exhibiting potential contamination based on visual discoloring or a field screening test for VOCs must be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

      (3) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if: (a) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific industrial/commercial ROs developed for the Property; or

(b) visual inspection or field screening indicates soils are below the threshold levels given in Condition 3.e.1 above.

f. Management of Non-Contaminated Soils. Soils that are considered not contaminated, as determined by field screening or laboratory results, may be reused as clean fill in other areas of the former BP Refinery Main Plant facility. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

g. Management of Contaminated Soils. If soils are found to be contaminated, they shall be sent off-site for disposal in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

h. Documentation. All of these activities must be documented in the facility's operating records.

4. Within 45 days of the date of this letter, the ELUC approved herein must be executed, notarized and recorded in the chain of title for the subject property of the Recorder or Registrar of Titles for Madison County; a copy of this letter must be attached to the filed ELUC. The approved ELUC will not become effective until officially recorded in the chain of title for the subject property.

5. Within 30 days after filing the approved ELUC in accordance with Condition 3 above, a certified true copy of the filed ELUC, along with certification for the Office of the Recorder or Registrar of Titles for Madison County that the ELUC was properly filed, must be submitted to Illinois EPA.

6. Failure to comply with the limitations or requirements of an ELUC may result in voidance of an Agency no further remediation determination in accordance with the program under which the determination was made. The failure to comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Illinois Environmental Protection Act.

7. The limitations or requirements of the ELUC apply in perpetuity until:

a. The Illinois EPA issues a new no further action determination approving modification or removal of the limitation/requirement; and

b. A release or modification of the land use limitation is filed on the chain of title for the property that is subject of the ELUC.

8. At no time shall this site be used in a manner inconsistent with the land use limitations established in the approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved, and (2) a new no further action determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 Ill. Adm. Code 742.

a. Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a request to amend the certification of closure. Sufficient information must be

provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC 742.

b. Any final approval by Illinois EPA of a request to release or modify an ELUC must be filed with the chain of title for the subject facility.

9. Overall, RCRA corrective action activities at the subject facility shall be carried out in accordance with: (1) its RCRA permit; (2) Ill. Admin. Code 620, 724 and 742; and (3) Illinois EPA letters regarding these activities.

Work required by this letter, your submittal, or the regulation 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 definition 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.

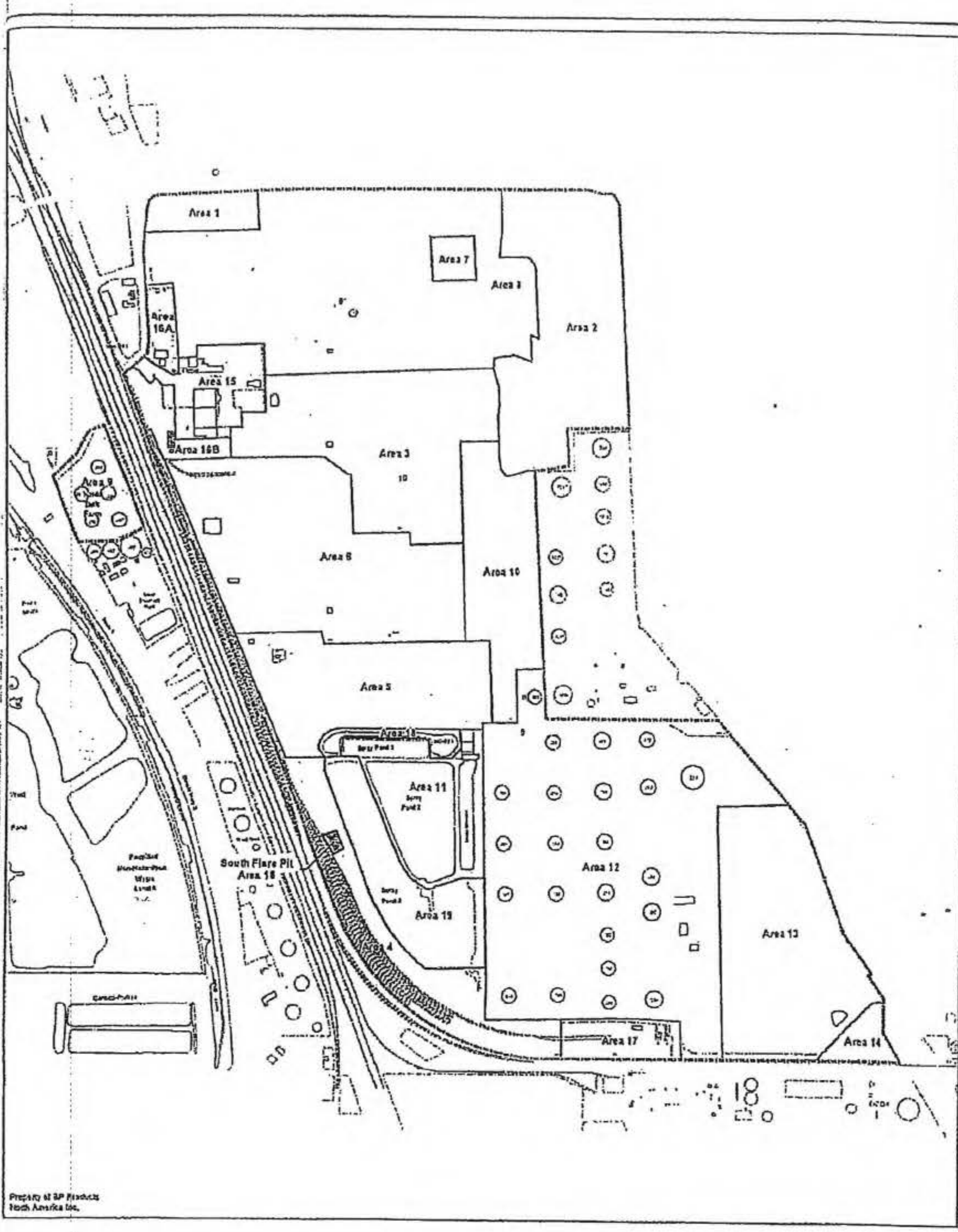
Should you have any questions regarding this matter, please contact William T. Sinnott, II at 217/524-3310.

Sincerely,

Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land

1191150001-RCRA-B147R-CA-43-Approval

Attachments: Site Layout Map
Drawing Showing the State Plane Coordinates of the Corners of the South Flare Pit



Legend

Main Plant RCRA Part B Boundary

Location of South Flare Pit Portion of Area 18, 0.41 Acre Parcel, within Facility located at 301 Evans Avenue, Wood River, Illinois

N

500 250 0 500

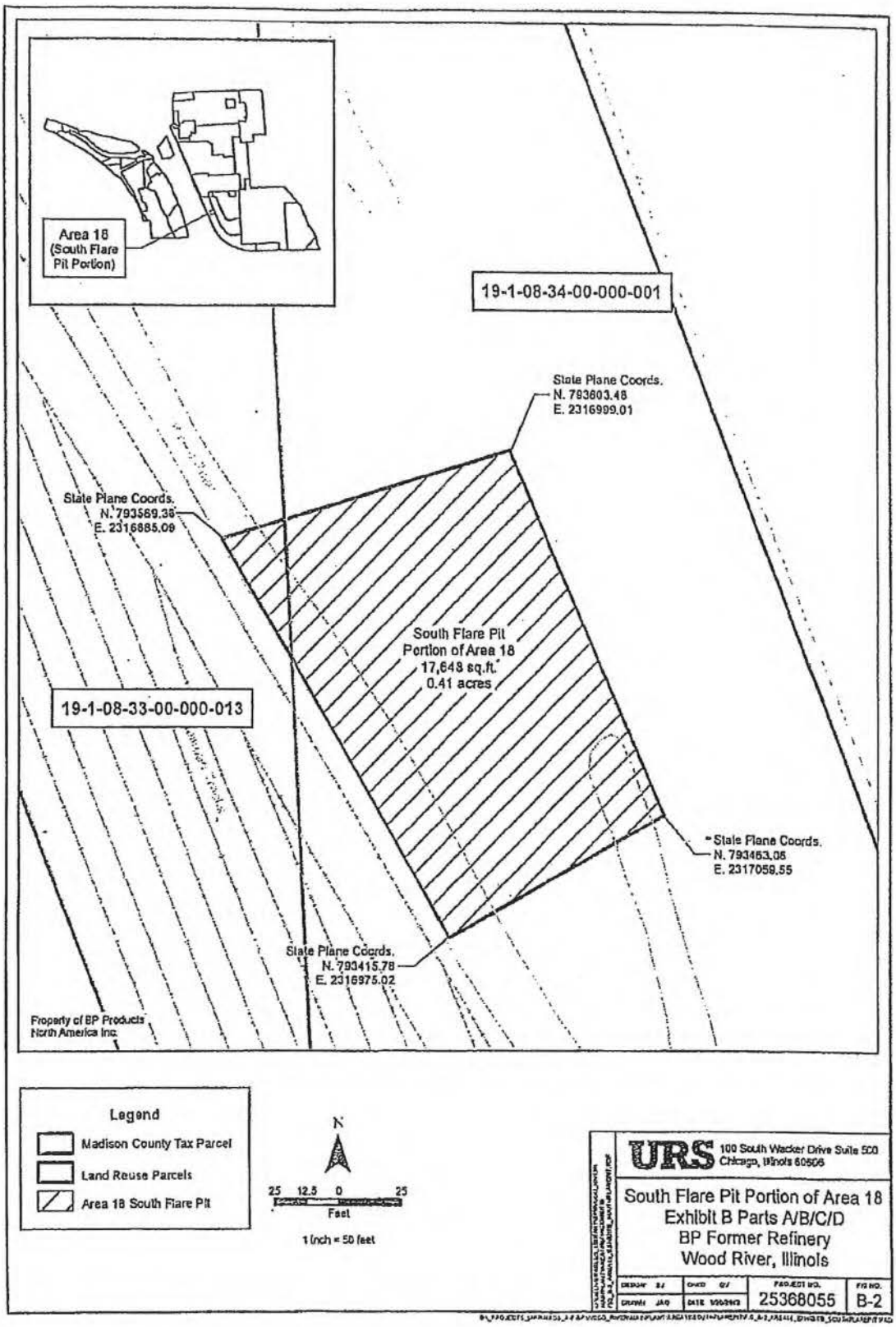
Feet

1 inch = 500 feet

URS 100 South Wacker Drive Suite 500 Chicago, Illinois 60606

South Flare Pit Portion of Area 18
Exhibit B Parts A/B/C/D
BP Former Refinery
Wood River, Illinois

25368055 B-1



END OF DOCUMENT

EXHIBIT H

Remediation Management Services Company

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

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

May 1, 2024

Jacqueline M. Cooperider, P.E.
Illinois Environmental Protection Agency
Bureau of Land, Division of Land Pollution Control
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

Re: 1191150001 - Madison County
BP Products North America Inc. – Main Plant Property
USEPA ILD980700967
RCRA Permit Log No. B-147R-CA-80
Area 2 – Police Station Donation Parcel II and BP Retained Parcel
Certified True Copy of ELUC Recordings 2017R18528 and 2017R18529

Dear Ms. Cooperider:

On behalf of BP Products North America Inc. (bp), Remediation Management Services Company (RMSC) is submitting one original certified true copy of each of two environmental land use control (ELUCs) as requested by the Illinois Environmental Protection Agency (Illinois EPA or Agency). Electronic copies of this letter are being submitted directly to Ms. Amy Butler, Mr. Omar Faruk, and the Illinois EPA Collinsville Field Operations Section (Mr. Ali Al-Janabi). Enclosed with this letter is an Illinois EPA RCRA Corrective Action Certification Form (LPC 632).

In email correspondence dated April 12, 2024, Illinois EPA notified bp that certified ELUCs received by the Agency on June 22, 2017 (Log No. B-147R-CA-80) were officially missing/lost, and a new certified copy from Madison County is required. Based on the Illinois EPA receipt date, bp identified the missing ELUCs as follows:

Date of Original Submittal	Title of Original Submittal	RCRA Log No. Listed on Original Submittal
6/21/2017	Main Plant Facility – Area 2 – Police Station Donation Parcel II Certified True Copy of ELUC Recording 2017R18528	B-147R-CA-77
6/21/2017	Main Plant Facility – Area 2 – BP Retained Parcel Certified True Copy of ELUC Recording 2017R18529	B-147R-CA-78

Area 2 – Police Station Donation Parcel II: The original certified true copy of ELUC Recording 2017R18528 was submitted to the Agency to document that requirements under Items 8 and 9 of the Illinois EPA letter dated May 4, 2017 (Log No. B-147R-CA-77) were properly completed. Item 8 required recording of the aforementioned documents on the applicable property title by the county recorder of deeds within 45 days of that letter. The ELUC was recorded by the Madison County Recorder of Deeds on June 5, 2017. Item 9 required submittal of a certified true copy of the filed ELUC within 30 days of the recording. The original certified true copy submitted in the above-referenced bp letter dated June 21, 2017, fulfilled that requirement.

Area 2 – BP Retained Parcel: The original certified true copy of ELUC Recording 2017R18529 was submitted to the Agency to document that requirements under Items 9 and 10 of the Illinois EPA letter dated April 21, 2017 (Log No. B-147R-CA-78) were properly completed. Item 9 required recording of the aforementioned documents on the applicable property title by the county recorder of deeds within 45 days of that letter. The ELUC was recorded by the Madison County Recorder of Deeds on June 5, 2017. Item 10 required submittal of a certified true copy of the filed ELUC within 30 days of the recording. The original certified true copy submitted in the above-referenced bp letter dated June 21, 2017, fulfilled that requirement.

One certified true copy of each of the two above-referenced ELUCs is enclosed.

Should you have questions regarding the information provided, please contact me at (847) 346-7112.

Sincerely,

Michelle Knapp
Liability Manager
Remediation Management Services Company

Enclosures: Illinois EPA RCRA Corrective Action Certification Form (LPC 632)
Certified True Copy of ELUC Recordings 2017R18528 and 2017R18529

cc: Amy Butler, Illinois EPA
Curtis Samson, Illinois EPA
Takako Halteman, Illinois EPA
Omar Faruk, Illinois EPA
Ali Al-Janabi, Illinois EPA
Tom Stalcup, Mayor of the City of Wood River
Michael J. Hoffman, P.E., WSP USA Environment & Infrastructure
Kevin Wheeler, Sovereign Consulting

Return to: (Fed Ex Env.)
FATIC
30 N. LaSalle St 96 17
Ste 2700
Chicago, IL 3/4
60602

PREPARED BY:

Name: Lori G. Littrell
Operations Project Manager
BP Products North America Inc.
Address: 150 West Warrenville
Naperville, IL 60563

8435106
Tx:4335443

2017R18528
STATE OF ILLINOIS
MADISON COUNTY
06/05/2017 4:13 PM
AMY M. MEYER, RECORDER
REC FEE: 76.00
CO STAMP FEE:
ST STAMP FEE:
FF FEE:
RHSPS FEE: 9.00
 # OF PAGES: 51

RETURN TO:

Name: Lori G. Littrell
Operations Project Manager
BP Products North America Inc.
Address: 150 West Warrenville
Naperville, IL 60563

85.00 CK
6395

THE ABOVE SPACE FOR RECORDER'S OFFICE

Environmental Land Use Control For Police Station Donation Parcel II Within Area 2
Parcel Index No. 19-2-08-27-10-101-002

THIS ENVIRONMENTAL LAND USE CONTROL ("ELUC"), is made as of this 22 day of May, 2017, by BP Products North America Inc., a Maryland corporation, ("Property Owner"), of the real property located at 301 Evans Avenue, Wood River, Illinois (referred to as the "Main Plant Facility"), which includes the 7.5 acre tract of land having Parcel Index No. 19-2-08-27-10-101-002 (this tract of land is the "Property" which is the subject of this ELUC.

WHEREAS, 35 Il. Admin. Code 742 and 415 ILCS 5/58.17 provide for the use of an ELUC as an institutional control in order to impose land use limitations or requirements related to environmental contamination so that persons conducting remediation can obtain a No Further Action determination from the Illinois Environmental Protection Agency ("IEPA"). Such determination has been obtained for a portion of the Main Plant Facility known as "Area 2" on August 13, 2002 and is attached hereto as Exhibit C; the Property which is the subject of this ELUC is located in Area 2. In addition, on August 22, 2016, a no further determination was made for the indoor inhalation exposure route for the property which is the subject of this ELUC; a copy of this letter is attached hereto in Exhibit C. The relative layout of the Main Plant Facility, Area 2, and the Property which is subject of this ELUC is shown on Exhibit B-1. The reason for an ELUC is to ensure protection of human health and the environment. The limitations and requirements contained herein are necessary in order to protect against potential exposure to contaminated soil or groundwater or both that may be present on the Property as a result of prior industrial activities. Under 35 Il. Adm. Code 742, the use of risk-based, site specific remediation objectives may require the use of an ELUC on real property and the ELUC may apply to certain physical features (e.g., engineered barriers, monitoring wells, caps, etc.).

WHEREAS, Property Owner intends to request risk-based, site specific soil and groundwater remediation objectives from the IEPA under 35 Il. Admin. Code Part 742 to obtain risk-based closure for the Property, which is a portion of the Main Plant Facility ("Site"), identified by Bureau of Land LPC number 1191150001, utilizing an ELUC.

NOW, THEREFORE, the recitals set forth above are incorporated by reference as if fully set forth herein and the Property Owner agrees as follows:

Section One. Property Owner does hereby establish an ELUC on the real estate, situated in the County of Madison, State of Illinois, and further described in Exhibit A attached hereto and incorporated herein by reference (the "Property").

Attached as Exhibits B-1, B-2, and B-3 are maps that show the boundary of the Property, the physical features to which the ELUC applies, the horizontal and vertical extent of the contaminants of concern above applicable remediation objectives for soil or groundwater or both, and the nature, location of the source, and direction of the contaminants of concern, as required under 35 Il. Admin. Code Part 742.

a. The parcel covered by this ELUC is 7.50 acres in size; its Parcel Index Number (PIN) is 19-2-08-27-10-101-002 and it extends from the ground surface down to the horizontal plane at elevation 428 feet above mean sea level [MSL] (approximately 15 feet in thickness).

b. Exhibit B-1 shows the relative boundaries of the Main Plant Facility, Area 2 and the Property covered by this ELUC.

c. Exhibit B-2 is the Final Plat of the Property covered by this ELUC.

d. Exhibit B-3 shows the location where soil contamination above 35 Il. Admin. Code 742, Subpart E (Tier 1) Remediation Objectives is located and the boundaries of the engineered barrier which must be maintained within the Property covered by this ELUC.

Section Two. Property Owner represents and warrants that it is the current owner of the Property and has the authority to record this ELUC on the chain of title for the Property in the Office of the Recorder or Registrar of Titles in Madison County, Illinois.

Section Three. The Property Owner hereby agrees, for itself, and its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessees, possessor or user of the Property or the holder of any portion thereof interest therein, that:

a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IL Admin. Code 742;

c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

e. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

(i) Field Screening. Soil shall be considered "potentially contaminated" if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., Photoionization Detector ("PID") readings > 100 parts per million ("ppm") of VOCs in soil.

(ii) Laboratory Analysis. Soils exhibiting potential contamination based on the visual discoloring or a field screening test for VOCs will either be sampled for: benzene, toluene (ethylbenzene), and xylenes ("BTEX"); and polycyclic aromatic hydrocarbons ("PAHs") by laboratory analysis, or considered contaminated without analytical testing.

(iii) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if: (1) laboratory analytical data indicates constituents in soil are less than the IEPA approved site specific remediation objectives ("ROs") developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e.(i) above.

(iv) Management of Non-Contaminated Soils. Soils that are considered to be not contaminated, as determined by field screening or laboratory results, may be reused as fill in other areas of the former BP Refinery Main Plant Facility. Soils may be transported off site as clean fill if laboratory data indicates constituents are less than Tiered Approach to Corrective Action Objectives ("TACO") residential standards.

(v) Management of Contaminated Soils. If the soil is found to be contaminated, then it must be sent off-site for disposal as a special

waste in accordance with 35 Il. Adm. Code, Subtitle G: Waste Disposal.

(vi) Documentation. All of these activities must be documented in the facility's operating records.

f. The area designated "EB 2B" of the Property, which is identified on Exhibit B-3 of the ELUC, requires an engineered barrier to restrict potential exposure to soils beneath the barrier. Ten (10) feet of the existing soil in place over the contaminated soil (or a comparable designed engineered control) shall be used as the engineered barrier and must remain in place over the contaminated soils. Prior to commencement of any future excavation and/or construction in or near the areas containing the engineered barriers, a safety plan for these areas is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations; and other U.S. EPA guidance as provided. At a minimum, the plan should address potential worker exposure if future excavation and construction activities occur within the contaminated soil. Any contaminated soil removed, or excavated from, or disturbed at the areas containing the engineered barrier must be handled in accordance with all applicable laws and regulations.

g. The soil within the Property has met the remediation objectives set forth for the vapor intrusion exposure route in Il. Admin. Code 742, Appendix B, Table H. All future building constructed on this parcel must have a basement with concrete wall and floors, be of concrete slab-on-grade construction, or some combination thereof. BP has also specified the use of additional building control technologies (vapor membrane and contingency sub-slab vapor collection control system) for this donation parcel that are suitable pursuant to 35 Il. Admin. Code 742, Subpart L.

h. BP is allowed access to the Property for any groundwater monitoring or remediation efforts.

Section Four. This ELUC is binding on the Property Owner, its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein. This ELUC shall apply in perpetuity against the Property and shall not be released until: (1) the IEPA determines there is no longer a need for the ELUC as an institutional control; (2) the IEPA, upon written request, issues to the Property that received the no further remediation determination a new no further remediation determination approving modification or removal of the limitation(s) or requirement(s); (3) the new no further remediation determination is filed on the chain of title of the Property subject to the no further remediation determination; and (4) a release or modification of the land use limitation or requirement is filed in the chain of title for the Property.

Section Five. Information regarding the remediation performed on the Property may be obtained from the IEPA through a request under the Freedom of Information Act (5 ILCS 140) and rules promulgated thereunder by providing the IEPA with the 10-digit LPC number listed above.

Section Six. The effective date of this ELUC shall be the date that it is officially recorded in the chain of title for the Property to which this ELUC applies. Once filed, this ELUC will supersede the ELUC filed on February 5, 2003, as Document No. 2003R08605 for the Property described in Exhibit A.

WITNESS the following signature:

BP Products North America Inc.

By: Lisa Smith Attest: Allison Crane

Printed: LISA A SMITH Printed: Allison Crane

Its: VICE PRESIDENT Its: Liability Business manager

Date: Date:

STATE OF TEXAS)
) SS:
COUNTY OF HARRIS)

I, Mary J. Heinitz the undersigned, a Notary Public for said County and State, DO HEREBY CERTIFY, that Lisa A. Smith and Allison Crane, personally known to me to be the Vice President and Liability Business Manager respectively, of **BP Products North America Inc.**, a Maryland corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that in said capacities they signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

Given under my hand and official seal, this 15th day of May, 2017.

Mary J. Heinitz
Notary Public

MARY J. HEINITZ
Notary Public, State of Texas
Comm. Expires 04-06-2020
Notary ID 1086666

List of Exhibits

Exhibit A: Legal Descriptions and Parcel IDs

Exhibit B: Scaled Maps

B-1: Site Layout Map
B-2: Police Station Donation Parcel Survey/Legal Description Map
B-3: Area 2 ELUC Map

Exhibit C: Copies of NFA letters related to the Donation Parcel

Exhibit A

Legal Description and Parcel ID of the "Property" covered by this ELUC

The subject property is located in the City of Wood River, Madison County, State of Illinois, commonly known as 301 Evans Avenue, Wood River, Illinois and more particularly described as:

REAL ESTATE TAX INDEX #19-2-08-27-10-101-002
LEGAL DESCRIPTION

This ELUC applies to that portion of the following described tract of land which extends from the ground surface down to a horizontal plane at elevation 428 feet above mean sea level. The approximate "thickness" of this property is 15 feet.

A tract of land situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Northwest Quarter: thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet to the Point of Beginning of the herein described tract; thence continuing South 87 degrees 18 minutes 50 seconds West 515.95 feet; thence North 00 degrees 31 minutes 55 seconds East 688.58 feet; thence North 89 degrees 46 minutes 35 seconds East 254.98 feet; thence South 02 degrees 59 minutes 38 seconds East 36.32 feet; thence South 88 degrees 59 minutes 38 seconds East 218.92 feet; thence South 03 degrees 02 minutes 32 seconds East 626.13 feet to the Point of Beginning, containing 326,702 square feet or 7.50 acres, more or less.

Subject to:
A 100 feet wide easement for ingress, egress and utility purposes situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Northwest Quarter; thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois .State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet; thence North 03 degrees 02 minutes 32 seconds West 335.44 feet to the Point of Beginning of the

herein described easement; thence continuing North 03 degrees 02 minutes 32 seconds West 100.00 feet; thence North 87 degrees 18 minutes 50 seconds East 86.75 feet to said right of way line; thence along said right of way line South 02 degrees 41 minutes 10 seconds East 100.00 feet; thence deporting said right of way line South 87 degrees 18 minutes 50 seconds West 86.13 feet to the Point of Beginning.

Exhibit B

Scaled Maps showing:

A) The legal boundary of the property to which the ELUC applies;
B) The horizontal and vertical extent of contaminants of concern above applicable remediation objectives for soil and groundwater to which the ELUC applies;
C) Any physical features to which an ELUC applies; and
D) The nature, location of the source, and direction of movement of the contaminants of concern.

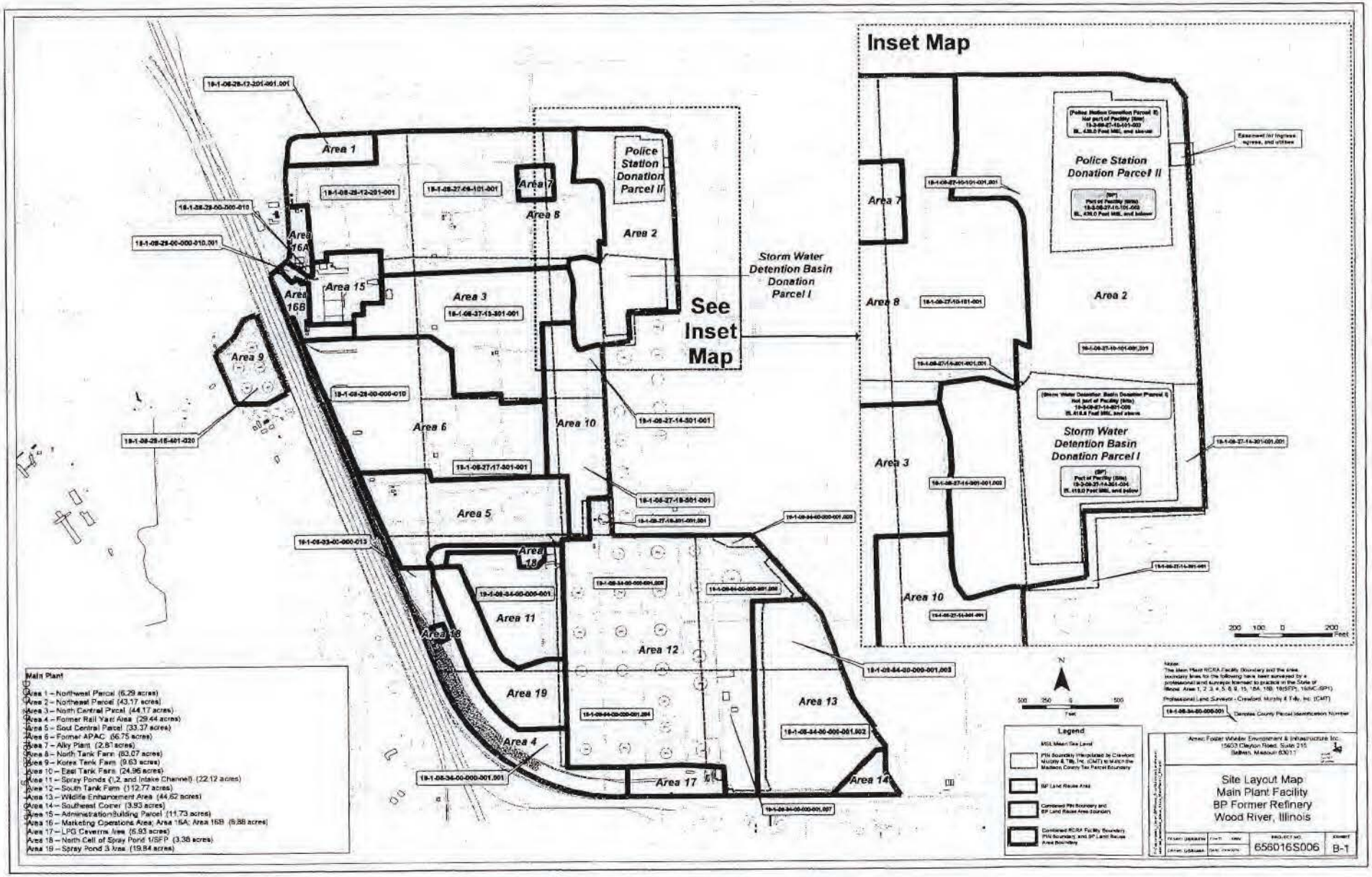
Maps Contained in Exhibit B

Exhibit B:

B-1: Site Layout Map
B-2: Police Station Donation Parcel Survey/Legal Description Map
B-3: Area 2 ELUC Map

PIN: 19-2-08-27-10-101-002

[See attached]


Inset Map
See Inset Map
Police Station Donation Parcel II
Storm Water Detention Basin Donation Parcel I
Area 1
Area 2
Area 3
Area 4
Area 5
Area 6
Area 7
Area 8
Area 9
Area 10
Area 11
Area 12
Area 13
Area 14
Area 15
Area 16A
Area 16B
Area 17
Area 18
Area 19
Main Plant
Area 1 – Northwest Parcel (6.29 acres)
Area 2 – Northeast Parcel (43.17 acres)
Area 3 – North Central Parcel (44.17 acres)
Area 4 – Former Rail Yard Area (29.44 acres)
Area 5 – Sout Central Parcel (33.37 acres)
Area 6 – Former APAC (56.75 acres)
Area 7 – Alky Plant (2.81 acres)
Area 8 – North Tank Farm (82.07 acres)
Area 9 – Korea Tank Farm (9.63 acres)
Area 10 – East Tank Farm (24.96 acres)
Area 11 – Spray Ponds (1,2, and Intake Channel) (22.12 acres)
Area 12 – South Tank Farm (112.77 acres)
Area 13 – Wildlife Enhancement Area (44.62 acres)
Area 14 – Southeast Corner (3.93 acres)
Area 15 – Administration/Building Parcel (11.73 acres)
Area 16 – Marketing Operations Area; Area 16A; Area 16B (6.88 acres)
Area 17 – LPG Cavems Area (6.93 acres)
Area 18 – North Cell of Spray Pond 1/SFP (3.38 acres)
Area 19 – Spray Pond 3 Area (19.84 acres)
Legend
MSL Mean Sea Level
BP Land Reuse Area
Combined RCRA Facility Boundary PIN Boundary and BP Land Reuse Area Boundary
Easement for ingress, egress, and utilities
Storm Water Detention Basin Donation Parcel I
Police Station Donation Parcel II
Area 7
Area 8
Area 2
Area 3
Area 10
200 100 0 200 Feet
500 250 0 500 Feet
Amec Foster Wheeler Environment & Infrastructure Inc.
15453 Clayton Road, Suite 215
Ballwin, Missouri 63011
Site Layout Map
Main Plant Facility
BP Former Refinery
Wood River, Illinois
656016S006
B-1

BP DONATION PARCEL II

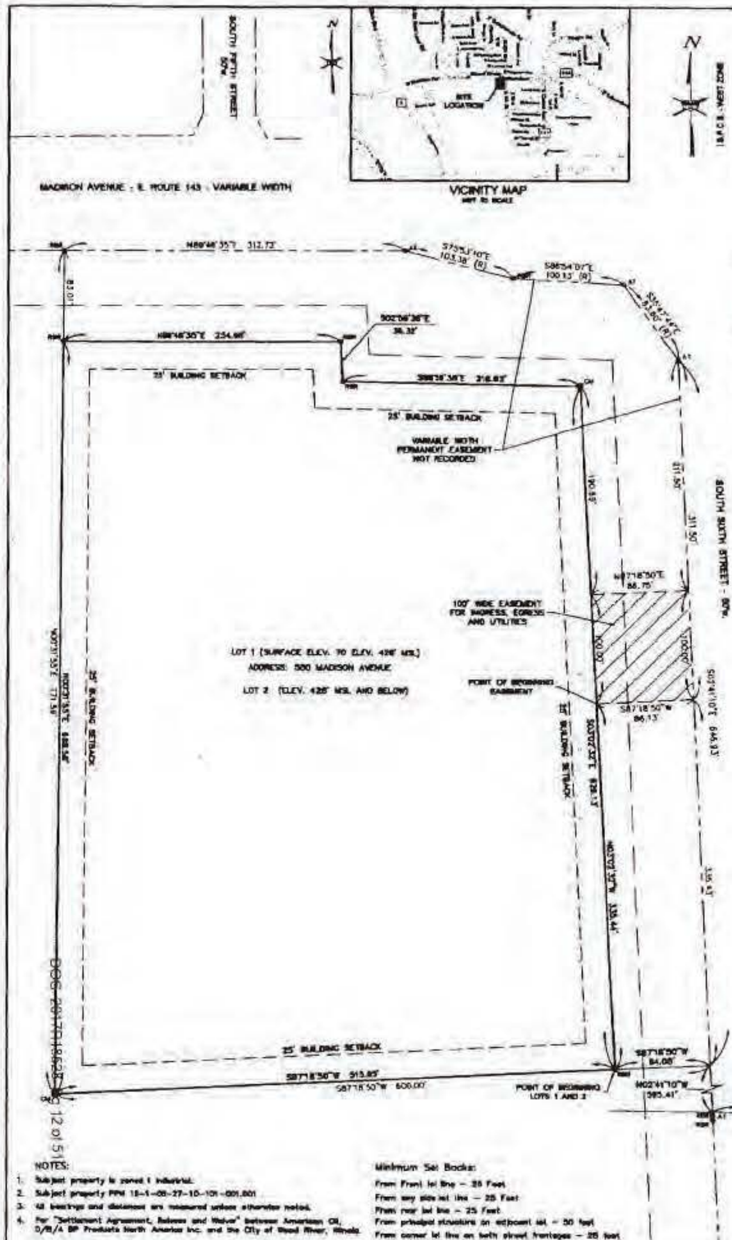
FINAL PLAT

A SUBDIVISION IN THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 5 NORTH, RANGE 9 WEST OF THE 3RD PRINCIPAL MERIDIAN, CITY OF WOOD RIVER, MADISON COUNTY, ILLINOIS

PROJECT NO. 488003.1 JANUARY, 2015

SMS Sheppard, Morgan & Schwaab, Inc.

SCALE IN FEET



AREA CALCULATIONS

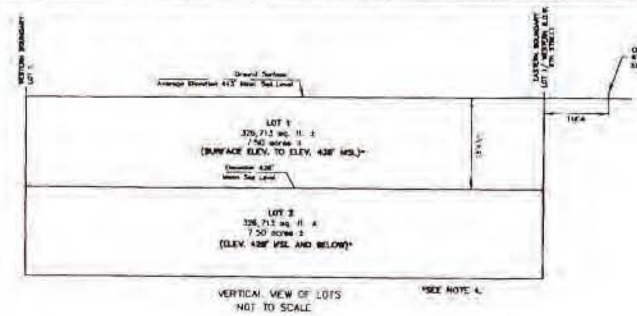
LOT 1 (SURFACE ELEV. TO ELEV. 428' MSL) 326,702 sq. ft. ± / 7.50 acres ±

LOT 2 (ELEV. 428' MSL AND BELOW) 326,702 sq. ft. ± / 7.50 acres ±

OVERALL PARCEL 326,702 sq. ft. ± / 7.50 acres ±

LEGEND

- REBAR FOUND – ○
- ALUMINUM TAG FOUND – ○
- CONCRETE MONUMENT SET – ■
- REBAR SET – ●
- RECORDED BEARING/DISTANCE – (R)
- EXISTING RIGHT-OF-WAY
- EXISTING SECTION LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED SETBACK



OWNER'S CERTIFICATE

NOTARY PUBLIC'S CERTIFICATE

SURVEYOR'S CERTIFICATE

1-20-15

ZONING AND PLATTING APPROVAL

CITY CLERK'S CERTIFICATE

CITY PLAN COMMISSION CERTIFICATE

911 COORDINATOR'S CERTIFICATE

1-20-15

COUNTY CLERK'S CERTIFICATE

ILLINOIS DEPARTMENT OF TRANSPORTATION CERTIFICATE

NOTES:

1. Subject property is zoned I Industrial.
2. Subject property PPN 15-1-08-27-10-101-001.001
3. All bearings and distances are measured unless otherwise noted.
4. For "Settlement Agreement, Release and Waiver" between American Oil, D/B/A BP Products North America Inc. and the City of Wood River, Illinois.

Minimum Set Backs:

- From Front lot line – 25 Feet
- From any side lot line – 25 Feet
- From rear lot line – 25 Feet
- From principal structure on adjacent lot – 50 feet
- From corner lot line on both street frontages – 25 feet

Exhibit B-2

DWG. NO. WR-848	
SCALE: 1" = 80'	
SHEET 1 OF 1	

SUBMITTED BY SMS

12 of 51

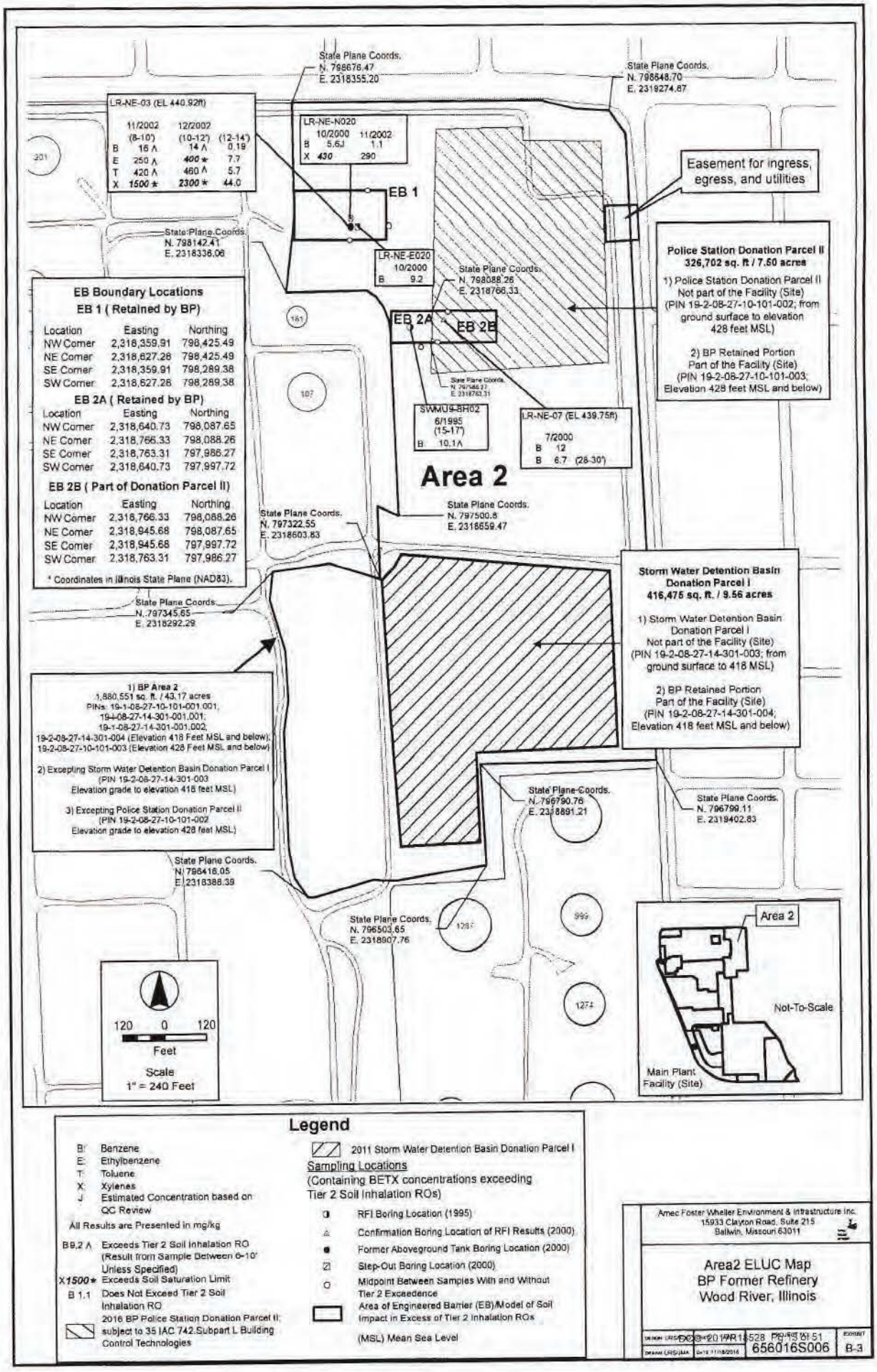

State Plane Coords.
N. 798676.47
E. 2318355.20
State Plane Coords.
N. 798648.70
E. 2319274.87
LR-NE-03 (EL 440.92ft)
11/2002 12/2002
(8-10') (10-12') (12-14')
B 16 ^ 14 ^ 0.19
E 250 ^ 400 * 7.7
T 420 ^ 460 ^ 5.7
X 1500 * 2300 * 44.0
LR-NE-N020
10/2000 11/2002
B 5.6J 1.1
X 430 290
EB 1
Easement for ingress, egress, and utilities
State Plane Coords.
N. 798142.41
E. 2318336.06
LR-NE-E020
10/2000
B 9.2
State Plane Coords.
N. 798088.26
E. 2318766.33
Police Station Donation Parcel II
326,702 sq. ft / 7.50 acres
1) Police Station Donation Parcel II
Not part of the Facility (Site)
(PIN 19-2-08-27-10-101-002; from ground surface to elevation 428 feet MSL)
2) BP Retained Portion
Part of the Facility (Site)
(PIN 19-2-08-27-10-101-003; Elevation 428 feet MSL and below)
EB Boundary Locations
EB 1 (Retained by BP)
Location Easting Northing
NW Corner 2,318,359.91 798,425.49
NE Corner 2,318,627.26 798,425.49
SE Corner 2,318,359.91 798,289.38
SW Corner 2,318,627.26 798,289.38
EB 2A (Retained by BP)
Location Easting Northing
NW Corner 2,318,640.73 798,087.65
NE Corner 2,318,766.33 798,088.26
SE Corner 2,318,763.31 797,986.27
SW Corner 2,318,640.73 797,997.72
EB 2B (Part of Donation Parcel II)
Location Easting Northing
NW Corner 2,318,766.33 798,088.26
NE Corner 2,318,945.68 798,087.65
SE Corner 2,318,945.68 797,997.72
SW Corner 2,318,763.31 797,986.27
* Coordinates in Illinois State Plane (NAD83).
EB 2A
EB 2B
State Plane Coords.
N. 797986.27
E. 2318763.31
SWMU9-SH02
6/1995
(15-17')
B 10.1^
LR-NE-07 (EL 439.75ft)
7/2000
B 12
B 6.7 (28-30')
Area 2
State Plane Coords.
N. 797322.55
E. 2318603.83
State Plane Coords.
N. 797500.8
E. 2318659.47
Storm Water Detention Basin Donation Parcel I
416,475 sq. ft. / 9.56 acres
1) Storm Water Detention Basin Donation Parcel I
Not part of the Facility (Site)
(PIN 19-2-08-27-14-301-003; from ground surface to 418 MSL)
2) BP Retained Portion
Part of the Facility (Site)
(PIN 19-2-08-27-14-301-004; Elevation 418 feet MSL and below)
State Plane Coords.
N. 797345.65
E. 2318292.29
1) BP Area 2
1,880,551 sq. ft. / 43.17 acres
PINs: 19-1-08-27-10-101-001.001;
19-1-08-27-14-301-001.001;
19-1-08-27-14-301-001.002;
19-2-08-27-14-301-004 (Elevation 418 Feet MSL and below);
19-2-08-27-10-101-003 (Elevation 428 Feet MSL and below)
2) Excepting Storm Water Detention Basin Donation Parcel I
(PIN 19-2-08-27-14-301-003
Elevation grade to elevation 418 feet MSL)
3) Excepting Police Station Donation Parcel II
(PIN 19-2-08-27-10-101-002
Elevation grade to elevation 428 feet MSL)
State Plane Coords.
N. 796790.76
E. 2318891.21
State Plane Coords.
N. 796799.11
E. 2319402.83
State Plane Coords.
N. 796416.05
E. 2318388.39
State Plane Coords.
N. 796503.65
E. 2318907.76
120 0 120
Feet
Scale
1" = 240 Feet
Area 2
Not-To-Scale
Main Plant
Facility (Site)
Legend
B: Benzene
E: Ethylbenzene
T: Toluene
X: Xylenes
J Estimated Concentration based on QC Review
All Results are Presented in mg/kg
B9.2 ^ Exceeds Tier 2 Soil Inhalation RO (Result from Sample Between 6-10' Unless Specified)
X1500* Exceeds Soil Saturation Limit
B 1.1 Does Not Exceed Tier 2 Soil Inhalation RO
2016 BP Police Station Donation Parcel II; subject to 35 IAC 742.Subpart L Building Control Technologies
2011 Storm Water Detention Basin Donation Parcel I
Sampling Locations
(Containing BETX concentrations exceeding Tier 2 Soil Inhalation ROs)
RFI Boring Location (1995)
Confirmation Boring Location of RFI Results (2000)
Former Aboveground Tank Boring Location (2000)
Step-Out Boring Location (2000)
Midpoint Between Samples With and Without Tier 2 Exceedence
Area of Engineered Barrier (EB)/Model of Soil Impact in Excess of Tier 2 Inhalation ROs
(MSL) Mean Sea Level
Amec Foster Wheeler Environment & Infrastructure Inc.
15933 Clayton Road, Suite 215
Ballwin, Missouri 63011
Area2 ELUC Map
BP Former Refinery
Wood River, Illinois
656016S006
B-3

Exhibit C

Copies of NFA letters related to the Donation Parcel

1191150001 – Madison County
BP Products North America Inc. – Wood River Former Refinery
ILD980700967
Log No. B-147-CA-14
RCRA Permit

[See attached]

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

RENEE CIPRIANO, DIRECTOR

217/524-3300

August 13, 2002

CERTIFIED MAIL
7001 2510 0002 3279 8113

Gregory S. Jevyak, Environmental Business Manager
Global Environmental Management Business Company
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095

Re: 1191150001 – Madison County
BP Products North America Inc. - Wood River Refinery
ILD980700967
Log No. B-147-CA-14
RCRA Permit

Dear Mr. Jevyak:

This is in response to several recent submittals regarding RCRA corrective action activities at an area known as the "Northeast Corner Parcel (Area 2)" at the above-referenced facility (a list of these submittals is provided in Attachment 1 to this letter). A site layout map showing this area within the facility and the parcel's legal description, are provided as Attachments 2 and 3 respectively. Overall, the corrective action activities at the subject facility are being conducted in accordance with a RCRA permit issued to the facility (Log No. B-147 and associated modifications).

The submittals identified in Attachment 1 to this letter contain information regarding the investigative and remedial activities completed to date in Area 2. Illinois EPA had previously approved plans for conducting these activities for all recognized environmental conditions in Area 2 on August 15, 2000. Based on a review of the information, Illinois EPA has determined that no further action is necessary in Area 2 provided the following requirements are met:

1. Two areas within Area 2 require an engineered barrier and associated institutional control meeting the requirements of 35 Ill. Adm. Code 742 to restrict exposure to the soils beneath the barrier. The institutional control must require maintenance of the engineered barrier, implementation of a site safety plan to protect construction workers during construction activities associated with these two areas, and proper management of any soil removed from beneath the engineered barrier. A plan view of Area 2 delineating the two areas where an engineered barrier must be established is presented in Attachment 4 to this letter.

2. Any excavation and subsurface construction work in Area 2 shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils in Area 2 and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan.

3. The soil within Area 2 shall remain in place, except where necessary to remove it for construction activities.

4. Soil excavated during construction/demolition/excavation activities within Area 2 must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds (VOCs). Soil shall be considered "contaminated" if (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) the field screening test detects the presence (i.e. PID readings >100 units) of VOCs in soil. Soils exhibiting potential contamination based on the visual or field screening will either be sampled for VOC and SVOC analysis or considered contaminated. If laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives (ROs) developed for the parcel then the soils will be considered to be not contaminated for reuse on the Main Plant property. If the soils are less than the site specific ROs but greater than residential standards they will be considered contaminated if transported offsite.

   (1) If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

   (2) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as clean fill in other areas of the former refinery facility. However, procedures must be in place to ensure that this material remains on the former refinery facility and is not be transported off-site, unless it is transported off-site as a special waste in accordance with 35 Ill. Adm. Code Subtitle G: Waste Disposal or unless such material is shown to not be a special waste to the satisfaction of Illinois EPA.

   (3) Documentation of all these activities must be placed in the facility's operating records.

5. Future use of Area 2 must remain commercial/industrial.

6. Appropriate institutional controls meeting the requirements of 35 Ill. Adm. Code, Part 742, Subpart J must be established and recorded to ensure the requirements in Conditions 1, 2, 3, 4, 5, 7 and 8 will be met in the future.

7. Contaminated soil present at the following sample locations is properly managed via engineered barriers or SWMU9-BH02 addressed to achieve remediation objectives developed in accordance with 35 Ill. Adm. Code 742:

LR-NE-03	LR-NE-03-N020
LR-NE-03-E020	LR-NE-07

8. The groundwater beneath the facility is being and must continue to be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications. Groundwater activities associated with the uppermost aquifer are subject to the following conditions:

   a. The groundwater within the Parcel must still be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications;

   b. The March 28, 2002 letter from the Illinois EPA approved the City of Wood River Ordinance 02-01 and Memorandum of Understanding (MOU) between the City and the Illinois EPA for use as an institutional control. This approved institutional control meets the criteria found in 35 Ill. Adm. Code 742.925, to exclude the groundwater ingestion exposure route, established in accordance with 35 Ill. Adm. Code Part 742, Subpart J. Therefore, no further action is required with respect to the groundwater at the Parcel, except as required by Condition 8(a) above; and

   c. In an Illinois EPA letter dated March 13, 2002, the Groundwater Management Zone (GMZ) for the uppermost aquifer at the facility was revised to include the areas where constituent concentrations in groundwater exceed Class I groundwater standards. Following Illinois EPA's review of the associated permit modification request dated May 10, 2002 for the revised GMZ, the Illinois EPA will modify the RCRA Part B permit to incorporate the revision to the GMZ.

9. Prior to completion of a corrective action associated with a GMZ the groundwater quality standards (Class I or Class II) are not applicable while the GMZ is being monitored and maintained. As stated in Condition 8 of the February 5, 2002 letter from the Illinois EPA to BP, a GMZ may not be used to restrict the use of groundwater in the vicinity of the subject property. A GMZ does not prohibit the use of groundwater within its boundary,

and therefore does not meet the definition of an institutional control as found in 35 Ill. Adm. Code 742.1000(c).

10. Additional field duplicates must be collected in future groundwater sampling events. One (1) field duplicate must be collected for every ten (10) samples collected.

11. Overall, corrective action activities at the former refinery facility must continue to be implemented in accordance with: (1) this letter, (2) 35 Ill. Adm. Code 620, 724.201, and 742; and (3) the requirements set forth in its RCRA Part B permit (Log No. B-147) and all other associated modifications or other comparable mechanism issued thereafter by the Illinois EPA for this facility.

12. A completed RCRA Corrective Action Certification form (copy enclosed) must accompany all submittals made to Illinois EPA regarding RCRA corrective action activities at this facility.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal 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 concerning groundwater-related aspects of this letter, please contact Ryan Bennett at (217) 558-2150. Questions about any other aspects of this letter should be directed to James K. Moore, P.E. at 217/524-3295.

Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:JKM:bjh\20021582s.doc

Attachments:
1. List of Area 2 Submittals
2. Topographic Map/Site Layout Map
3. Legal Description of Area 2
4. Portions of Area 2 Requiring an Engineered Barrier
5. Corrective Action Certification Form

Attachment 1
Log No. B-147-CA-14
Information Submitted by Facility

This document identifies the information received and reviewed by Illinois EPA as it evaluated a request for No Further Action in Area 2 of the Amoco/Main Plant Facility (Illinois EPA ID No 1191150001; USEPA ID No. ILD980700967). This information was assigned Log No. B-147-CA-14 by Illinois EPA.

1. A September 21, 2001 submittal from Frederick W. Johnson, URS, and Gregory S. Jevyak, BP which included a document entitled "Northeast Corner (Area 2) Land Reuse Investigation and Status Report."

2. A October 12, 2002 submittal from Keith T. Wilcoxson, URS, containing revised tables in response to comments received from Harry Chappel.

3. A December 20, 2001 submittal from Frederick W. Johnson, URS which included a document entitled "Addendum 1—Northeast Corner (Area 2) Land Reuse Investigation and Status Report."

4. A January 22, 2002 submittal from Gregory S. Jevyak, BP America, Inc., which included a document entitled "Addendum 2—Northeast Corner (Area 2) Land Reuse and Investigation Report

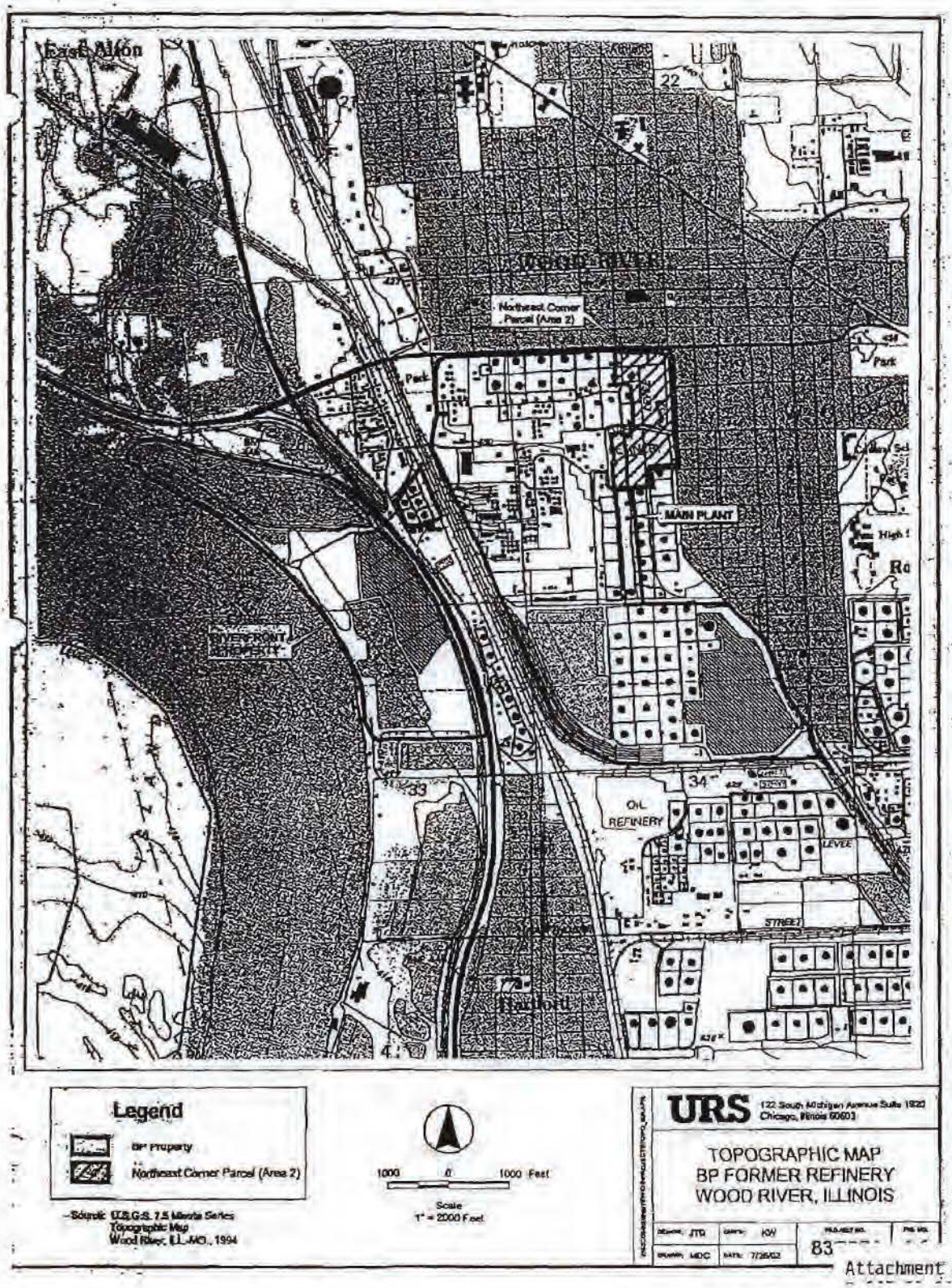
5. An April 5, 2002 submittal from Dennis A. Kasner and Frederick W. Johnson, URS which included a document entitled "Addendum 3—Northeast Corner (Area 2) Land Reuse Investigation and Status Report."

6. A May 16, 2002 letter report from Dennis A. Kasner and Frederick W. Johnson, URS which served as Addendum 4 to the Northeast Corner (Area 2) Land Reuse Investigation and Status Report.

7. A July 26, 2002 letter report from Dennis A. Kasner and Frederick W. Johnson, PE., URS, which contained additional information regarding issues addressed in Addendum 3.

8. A July 26, 2002 submittal from John Dennison, URS, which contained drawings of Area 2 and the legal description for Area 2.

att 1 b-147-ca-14



Attachment 2

Attachment 3
B-147-CA-14

This document contains the legal description for that portion of the former BP refinery in Wood River, Illinois (Illinois EPA Site No. 1191150001; USEPA ID No. ILD980700967) referred to as the "Northeast Corner" or "Area 2." Area 2 is 43.17 acres and is composed of two tracts (a 36.91 acre tract referred to as "Leased Tract 2" and a 6.26 acre tract referred to as "Leased Tract 3"). A legal description of each of these individual tracts is provided on the following pages.

att2 b-147-ca-14

M. B. CORLEW & ASSOCIATES, INC.

ENGINEERS & SURVEYORS
707 NORTH MAIN STREET - P. O. BOX 597
EDWARDSVILLE, ILLINOIS 62025-0597

Telephone: (618) 656-0470 • FAX (618) 656-0922

CIVIL
STRUCTURAL
SURVEYING
TRANSPORTATION
LAND PLANNING
DRAINAGE

Description For
Triad Industries

Leased Tract 2
See Corlew Plat CC 2051A

(36.91 Acres in the Northeast Corner of Amoco Main Plant in Wood River, IL)

April 18, 2000
Revised October 1, 2001

A tract of land in the Southeast Quarter of the Northwest Quarter and in the Northeast Quarter of the Southwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the southeast corner of the Southeast Quarter of the Northwest Quarter of Section 27, Township 5 North, Range 9 West; thence North 87° 13' 15" West, along the south line of said Quarter Quarter Section, a distance of 60.11 feet to the west right of way line of Sixth Street (Old Alton-Edwardsville Road, 60 feet wide), the POINT OF BEGINNING of the tract herein described; thence South 00° 41' 06" West, along said west right of way line, a distance of 3.37 feet; thence South 00° 11' 08" East, continuing along said west right of way line, a distance of 537.69 feet; thence North 88° 55' 51" West a distance of 511.68 feet; thence South 01° 17' 38" East a distance of 287.59 feet; thence South 82° 51' 37" West a distance of 267.69 feet; thence North 00° 37' 37" West a distance of 862.36 feet; thence North 00° 23' 02" East a distance of 205.96 feet; thence South 63° 47' 13" East a distance of 67.39 feet; thence North 00° 18' 42" West a distance of 533.37 feet; thence North 07° 12' 26" West a distance of 32.06 feet; thence North 20° 48' 32" West a distance of 36.49 feet; thence North 33° 45' 54" West a distance of 36.12 feet; thence North 54° 50' 03" West a distance of 33.22 feet; thence North 88° 59' 50" West a distance of 233.69 feet; thence North 08° 34' 18" East a distance of 210.75 feet; thence North 01° 07' 40" East a distance of 324.73 feet; thence South 88° 13' 21" East a distance of 719.43 feet; thence South 73° 53' 06" East a distance of 103.38

feet; thence South 84° 54' 03" East a distance of 100.13 feet; thence South 33° 47' 40" East a distance of 83.60 feet; thence South 00° 41' 06" East a distance of 1242.50 feet to the point of beginning, containing 36.91 acres.

I, the undersigned Registered Illinois Land Surveyor, do hereby declare that the above is a legal description made under my supervision.

(Seal)
Larry L. Stahlhut, RLS #2214
My License Expires 11/30/2002

M. B. CORLEW & ASSOCIATES, INC.

ENGINEERS & SURVEYORS
707 NORTH MAIN STREET • P. O. BOX 507
EDWARDSVILLE, ILLINOIS 62025-0597

Telephone: (618) 656-0470 • FAX (618) 656-0922

CIVIL
STRUCTURAL
SURVEYING
TRANSPORTATION
LAND PLANNING
DRAINAGE

Description For
Triad Industries

Leased Tract 3
See Corlew Plat CC 2051A

(6.26 Acres in the Northeast Corner of Amoco Main Plant in Wood River, Illinois)

April 18, 2000
Revised October 1, 2001

A tract of land in the Southeast Quarter of the Northwest Quarter and in the Northeast Quarter of the Southwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the southeast corner of the Southeast Quarter of the Northwest Quarter of Section 27, Township 5 North, Range 9 West; thence North 87° 13' 15" West, along the south line of said Quarter Quarter Section, a distance of 60.11 feet to the west right of way line of Sixth Street (Old Alton-Edwardsville Road, 60 feet wide); thence South 00° 41' 06" West, along said west right of way line, a distance of 3.37 feet; thence South 00 ° 11' 08" East, continuing along said west right of way line, a distance of 537.69 feet; thence North 88° 55' 51" West a distance of 511.68 feet; thence South 01° 17' 38" East a distance of 287.59 feet; thence South 82° 51' 37" West a distance of 267.69 feet to the POINT OF BEGINNING of the tract herein described; thence North 85 ° 28' 20" West a distance of 66.31 feet; thence South 76 ° 05' 07" West a distance of 176.24 feet; thence North 86° 57' 09" West a distance of 19.35 feet; thence North 32 ° 52' 02" West a distance of 68.25 feet; thence North 09 ° 08' 23" West a distance of 79.65 feet; thence North 00 ° 01' 05" West a distance of 331.70 feet; thence North 10° 17' 24" East a distance of 94.49 feet; thence North 01 ° 16' 11" West a distance of 140.22 feet; thence North 14° 34' 25" West a distance of 157.07 feet; thence North 08° 34' 56" East a distance of

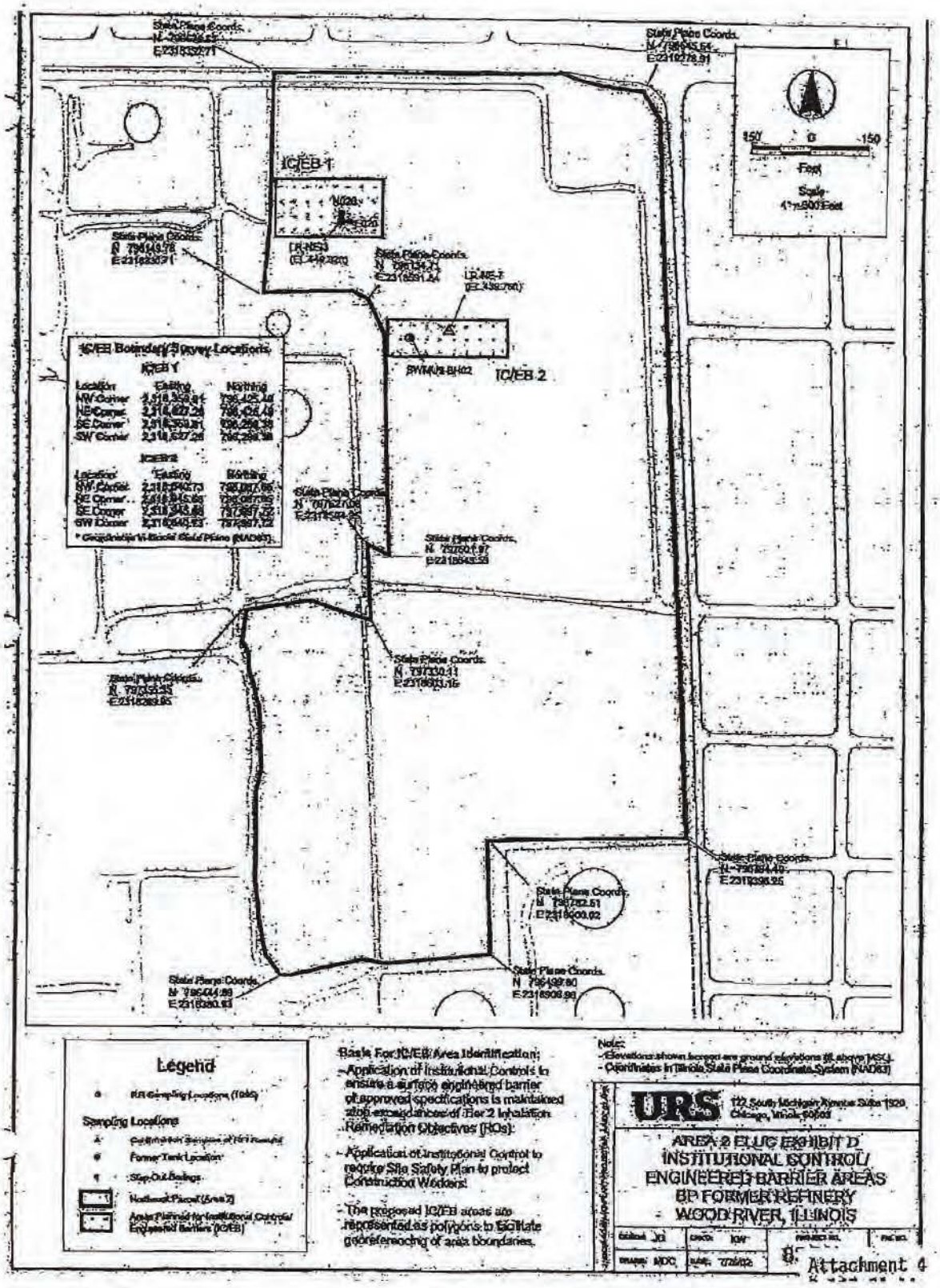
80.46 feet; thence North 83° 50' 58" East a distance of 167.06 feet; thence South 70° 15' 17" East a distance of 153.53 feet; thence South 00° 37' 37" East a distance of 862.36 feet to the point of beginning, containing 6.26 acres.

I, the undersigned Registered Illinois Land Surveyor, do hereby declare that the above is a legal description made under my supervision.

STATE OF ILLINOIS
LARRY L. STAHLHUT
35-2214
REGISTERED LAND SURVEYOR

Larry L. Stahlhut, RLS #2214 (Seal)
My License Expires 11/30/2002

MBC 99-168


IC/EB-1
IC/EB-2
IC/EB Boundary Survey Locations
IC/EB 1
IC/EB 2
Legend
Sampling Locations
Former Tank Location
Step Out Borings
Basis For IC/EB Area Identification:
- Application of Institutional Controls to ensure a surface engineered barrier of approved specifications is maintained to prevent exceedances of Tier 2 Inhalation Remediation Objectives (IROs).
- Application of Institutional Control to require Site Safety Plan to protect Construction Workers.
- The proposed IC/EB areas are represented as polygons to facilitate georeferencing of area boundaries.
Note:
- Elevations shown (except are ground elevations ft. above MSL).
- Coordinates in Illinois State Plane Coordinate System (NAD83)
URS
122 South Michigan Avenue Suite 1920
Chicago, Illinois 60603
AREA 2 ELUC EXHIBIT D
INSTITUTIONAL CONTROL
ENGINEERED BARRIER AREAS
BP FORMER REFINERY
WOOD RIVER, ILLINOIS
Attachment 4

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 - (217) 782-2829
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, ILLINOIS 60601 - (312) 814-6026

PAT QUINN, GOVERNOR LISA BONNETT, INTERIM DIRECTOR

217/524-3300

November 3, 2011

CERTIFIED MAIL
7009 3410 0002 3751 3834

Mr. Tom Tunnicliff
Environmental Business Manager
Atlantic Richfield Company
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

Re: 1191150001 – Madison County
BP Products North America – Main Plant
ILD980700967
Log No. B-147R-CA-12
Received: August 12, 2011
RCRA Permit

Dear Mr. Tunnicliff:

This is in response to an August 11, 2011 submittal made on behalf of BP Products North America by George Valera and Ryan P. Hartley, P.E., URS Corporation regarding certain RCRA corrective action activities at the above-referenced facility. The RCRA corrective action program set forth in the subject facility's RCRA permit broke the facility up into several areas and required that each area be adequately remediated.

One of the areas being addressed by the RCRA corrective action program at this facility is referred to as "Area 2" which is located in the northeastern corner of the facility. A drawing showing the location of Area 2 within the facility is provided in Attachment 1 to this letter. On August 13, 2002, Illinois EPA issued a letter indicating that, subject to certain conditions and modifications, No Further Action was necessary at Area 2. One of the conditions of this letter required BP to establish an institutional control to place certain restrictions on future activities in this area. Illinois EPA approved a draft letter of the required institutional control, an Environmental Land Use Control (ELUC) on January 29, 2003 and BP then filed the ELUC with the Madison County Recorder on February 5, 2003 as Document No. 2003R08605.

A revision of the Area 2 ELUC has become necessary as BP is donating a certain portion of Area 2 to the City of Wood River for use as a storm water basin (a drawing showing the location of this parcel of land is provided as Attachment 2 to this letter). The August 11, 2011 submittal mentioned above contained a proposed ELUC which would be established for the 9.56 acre parcel of land being donated to the city; it must be noted that this parcel only extends from the ground surface to an elevation depth of 418 mean sea level (approximately 25 feet below ground surface).

Illinois EPA has reviewed the draft ELUC for the parcel of land within Area 2 at the BP Products North America Inc. facility at 301 Evans Avenue in Wood River, Illinois which is to be donated to the City of Wood River and hereby approves it subject to the following conditions and modifications:

1. A legal description of the portion of Area 2 of the facility covered by the ELUC being approved herein is provided in Attachment 3. According to information provided by Mr. Valera, the PIN for this parcel is 19-2-08-27-14-301-003.

2. The recorded ELUC will supersede the ELUC recorded on February 5, 2003 for this property as Document No. 2003R08605.

3. The final ELUC filed with the Office of the Recorder or Registrar of Titles for Madison County must include a dated and notarized signature of the property owner.

4. The proposed ELUC places the following restrictions on the subject property:

   a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

   b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 Ill. Adm. Code 742;

   c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

   d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

   e. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

(i) Field Screening. Soil shall be considered "potentially contaminated "if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings >100 units) of VOCs in soil.

(ii) Laboratory Analysis. Soils exhibiting potential contamination based on the visual discoloring or a field screening test for VOCs will either be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

(iii) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if; (1) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives ("ROs") developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e (i) above.

(iv) Management of Non-Contaminated Soils. Soils that are considered to be not contaminated, as determined by field screening or laboratory results, may be reused as fill in other areas of the former BP Refinery Main Plant Facility. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(v) Management of Contaminated Soils. If the soil is found to be contaminated, then it must be sent off site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(vi) Documentation. All of these activities must be documented in the facility's operating records.

5. Within forty-five days of the date of the this letter, the ELUC approved herein must be fully executed, notarized and recorded in the chain of title for the subject property in the Office of the Recorder or Registrar of Titles for Madison County, along with this letter. The approved ELUC will not become effective until officially recorded in the chain of custody for the subject property.

6. Within 30 days after filing the approved ELUC in accordance with Condition 3 above, a certified true copy of the filed ELUC, along with certification for the Office of the Recorder or Registrar of Titles for Madison County that the ELUC was properly filed, must be submitted to Illinois EPA.

7. Failure to comply with the limitations or requirements of an ELUC may result in voidance of an Agency no further remediation determination in accordance with the program under which the determination was made. The failure to comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Illinois Environmental Protection Act.

8. The limitations or requirements of the ELUC apply in perpetuity or until:

   a. The Illinois EPA issues a new no further remediation determination approving modification or removal of the limitation/requirement; and

   b. A release or modification of the land use limitation is filed on the chain of title for the property that is the subject of the ELUC.

9. At no time shall this site be used in a manner inconsistent with the land use limitations established in the approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved, and (2) a new no further action determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 Ill. Adm. Code 742. Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a: (1) request to amend the certification of closure; or (2) a permit modification request. Sufficient information must be provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC 742.

10. The original and two (2) copies of all certifications, logs, or reports which are required to be submitted to the Illinois EPA by the facility should be mailed to the following address:

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

11. Overall, corrective action activities at the subject facility must continue to be carried out in accordance with: (1) 35 Ill. Adm. Code 620, 724, and 742; and (2) the requirements set forth in its RCRA permit (Log No. B-147R) and all the other associated modifications/letters issued thereafter by the Illinois EPA for this facility.

This action shall constitute Illinois EPA's final action on the subject submittal. Within 35 days after the date of mailing of Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of Illinois EPA. The 35-day period for petitioning for a hearing may be extended for a period of time not to exceed 90 days

by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal(s) 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 this matter, please contact Karen Nachtwey at 217/524-3233 of my staff.

Sincerely,

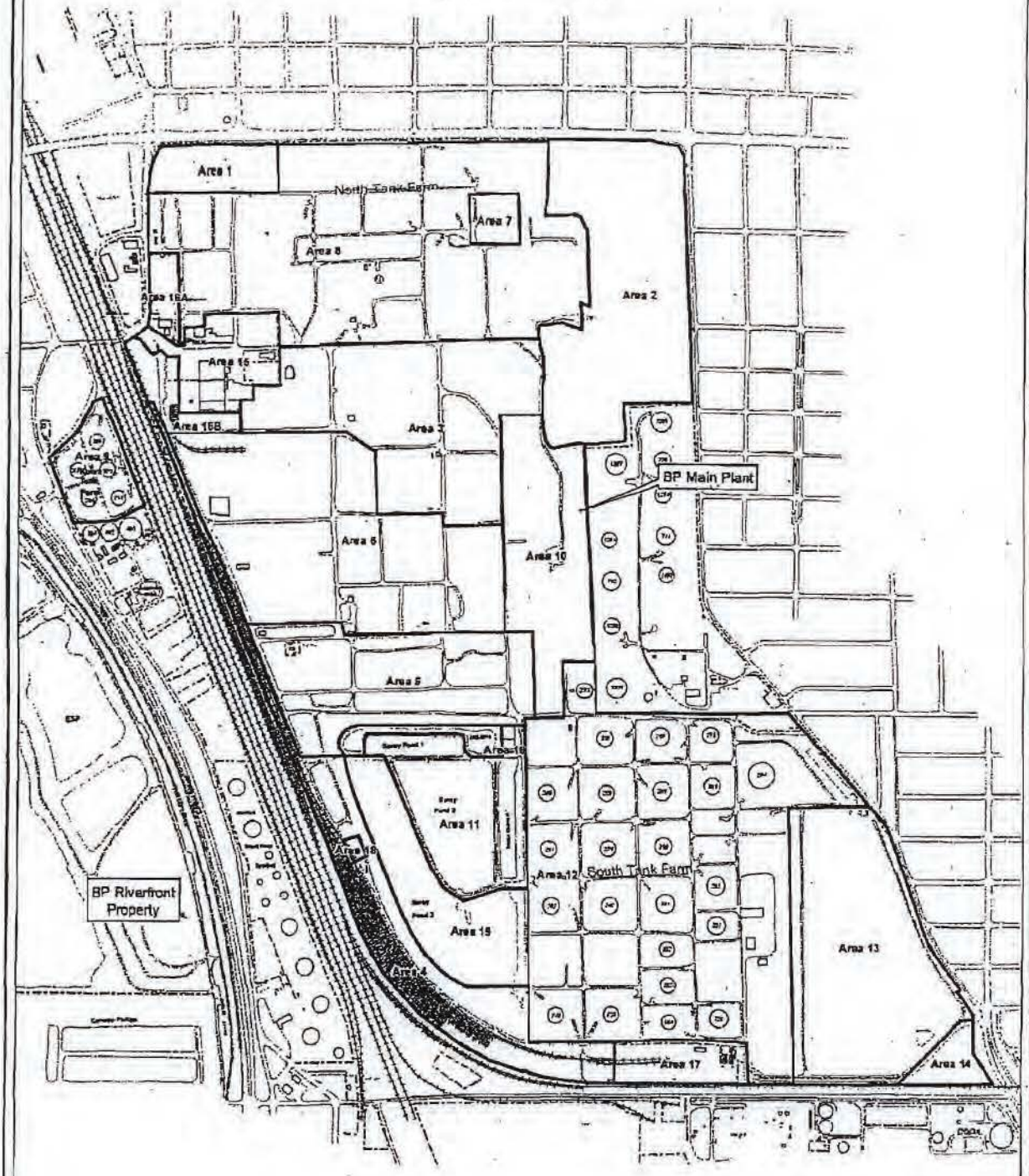
Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land

SFN:KEN:bjh\111636s.doc
JCH

Attachment 1 – Site Layout Map
Attachment 2 - Map Showing Donated Parcel within Area 2
Attachment 3 – Legal Description of Donated Parcel

cc: Ryan P. Hartley, URS Corporation

Attachment 1



Main Plant Land Reuse Parcels

Area 1 - Northwest Parcel*	Area 11 - Spray Ponds (1, 2, and Intake Channel)
Area 2 - Northeast Parcel*	Area 12 - South Tank Farm
Area 3 - North Central Parcel	Area 13 - Wildlife Enhancement Area
Area 4 - Rail Yard Area	Area 14 - Southeast Corner
Area 5 - South Central Parcel	Area 15 - Administration Building Parcel
Area 6 - Former APAC	Area 16 - Marketing Operation Area
Area 7 - Alky Plant	Area 17 - LPG Caverns Area
Area 8 - North Tank Farm	Area 18 - North Cell of Spray Pond 1 and South Flare Pit and Surrounding Area
Area 9 - Korea Tank Farm	
Area 10 - East Tank Farm	Area 19 - Spray Pond 3 Area

N

325 0 325

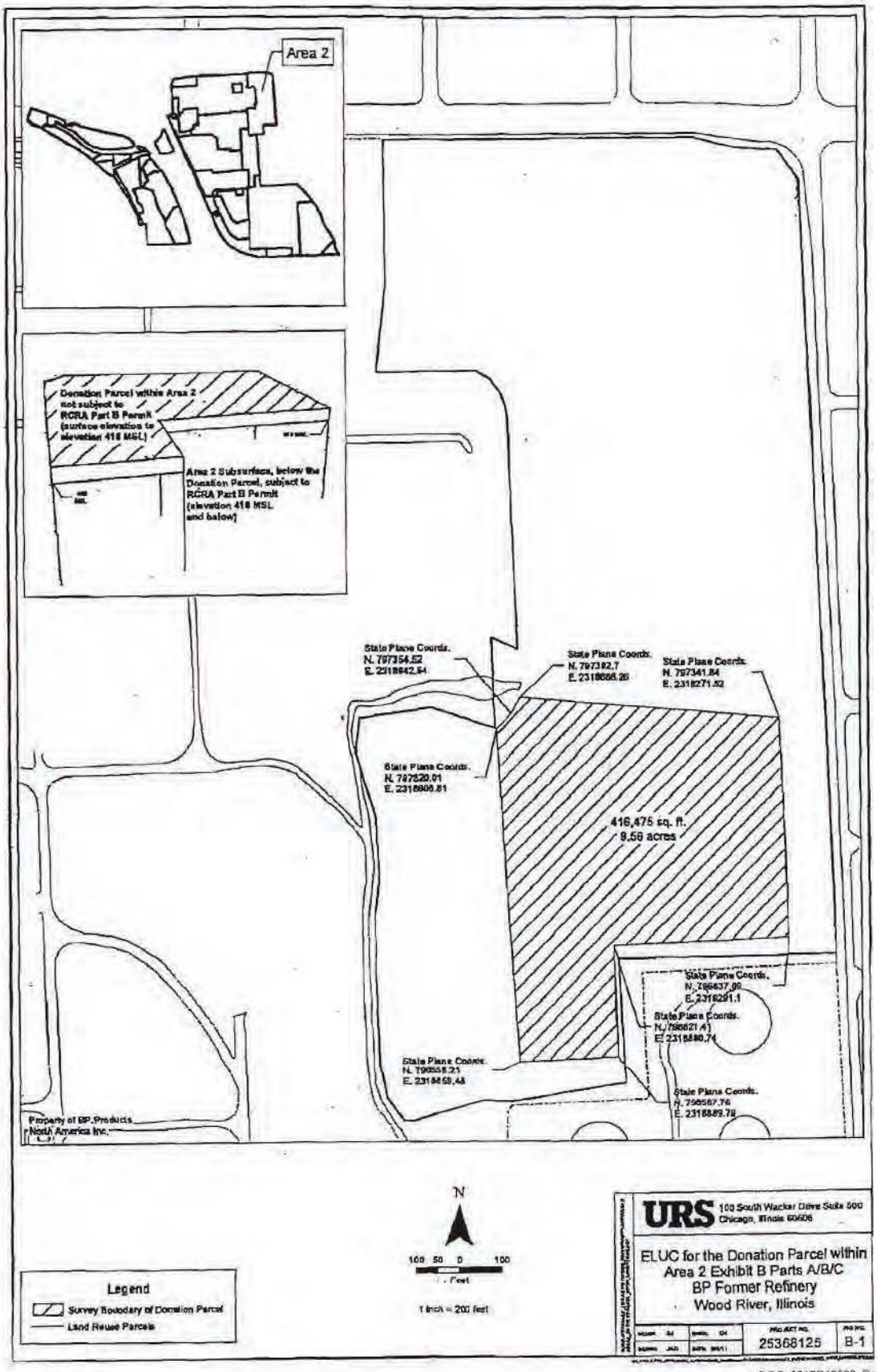
Feet

1 inch equals 750 feet

URS 100 South Wacker Drive Suite 500 Chicago, Illinois 60606

Main Plant Property
Land Reuse Parcels
BP Former Refinery
Wood River, Illinois

B-147R-CA-12
Attachment 2



B-147R-Ch-12
Attachment 3

Exhibit A

Legal Description

The portion of the following described property located above the elevation of 418 feet above mean sea level. The approximate "thickness" of the Donation Parcel is 23 feet.

Part of the West Half of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the northeast corner of the Southwest Quarter of said Section 27; thence North 89 degrees 13 minutes 29 seconds West, 60.11 feet to the westerly right of way of Sixth Street, formerly known as Old Alton and Edwardsville Road; thence South 02 degrees 41 minutes 19 seconds East, along said right of way, 3.38 feet; thence South 02 degrees 11 minutes 21 seconds East, 3.90 feet; thence North 85 degrees 11 minutes 49 seconds West, 111.30 feet to the Point Of Beginning; thence South 02 degrees 13 minutes 17 seconds East, 505.12 feet; thence South 87 degrees 48 minutes 39 seconds West, 410.66 feet; thence South 02 degrees 02 minutes 36 seconds East 253.81 feet; thence South 87 degrees 37 minutes 30 seconds West, 230.51 feet; thence North 04 degrees 15 minutes 04 seconds West, 273.85 feet; thence North 04 degrees 10 minutes 26 seconds West, 133.01 feet; thence North 03 degrees 19 minutes 34 seconds West, 356.65 feet; thence North 44 degrees 20 minutes 55 seconds East, 48.26 feet; thence North 32 degrees 50 minutes 39 seconds East, 35.75 feet; thence North 27 degrees 57 minutes 32 seconds East, 9.22 feet; thence South 85 degrees 11 minutes 49 seconds East, 607.40 feet to the Point of Beginning, containing 9.56 acres or 416,475 square feet.

PIN NO. 19-2-08-27-14-301.003

Atlantic Richfield Company

Memorandum

DATE: December 1, 2011

TO: Madison County Recorder's Office, Edwardsville, Illinois - File

FROM: Thomas G. Tunnicliff, BP Products North America Inc.

SUBJECT: Minor Corrections to the Approved Donation Parcel within Area 2 ELUC dated November 3, 2011

The Illinois Environmental Protection Agency (Illinois EPA) approved the Environmental Land Use Control (ELUC) for the Donation Parcel within Area 2 on November 3, 2011. After review of this document, the following inconsistencies were identified:

Donation Parcel within Area 2 ELUC

- First page, last sentence, last paragraph - a reference to the approximate depth of the donation parcel indicates 25 feet. This should be 23 feet as stated in the August 11, 2011 submittal.
- Section 3.f of the Draft ELUC states the following: "BP is allowed access to the property for any groundwater monitoring or remediation efforts". This was not mentioned in the Illinois EPA letter. However, the Illinois EPA approved the Draft ELUC with this language and will be recorded as such.
- The PIN No. found in Attachment 3 needs to be changed from 19-2-08-27-14-301.003 to 19-2-08-27-14-301-003 which is changing the "." to "-".

Distribution
Stephen F. Nightingale, Illinois EPA
Ryan Hartley, URS Corporation

END OF DOCUMENT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, ACTING DIRECTOR

217/524-3300

August 22, 2016

CERTIFIED MAIL
7014 2120 0002 3289 3646

BP Products North America, Inc.
Attention: Lori G. Littrell, Operations Project Manager
180 West Warrensville Road
Naperville, Illinois 60563

RE: 1191150001—Madison County
BP Products North America, Inc. (BP/Main Plant)
ILD980700967
Log No. B-147R-CA-57 and CA-59
RCRA Permit

Dear Ms. Littrell:

This is in response to your December 2, 2015 and February 25, 2016 submittals regarding certain aspects of the corrective action program being carried out at the BP/Main Plant facility in Wood River, Illinois. This facility has a RCRA permit (Log No. B-147R and associated modifications) which, among other things, requires BP to properly remediate the site.

One of the portions of the BP/Main Plant facility being addressed under the RCRA corrective action provisions under its RCRA permit is referred to as "Area 2." BP has investigated, and as necessary, remediated this area in accordance with plans approved by Illinois EPA. Illinois EPA issued a no further action letter for the soils in this area on August 13, 2002; this determination was subsequently modified on February 27, 2012 to reflect the fact that the boundaries of Area 2 had been modified as a 9.56 acre parcel of land in the area had been donated to the City of Wood River for the construction of a storm water basin. A drawing showing the location of Area 2 within the subject facility is attached.

Your December 2, 2015 and February 25, 2016 submittals contained information regarding a 7.5 acre parcel of land in the northeast corner of Area 2; a drawing showing the location of this parcel within Area 2 is attached. This parcel of land is to be donated to the City of Wood River who will in turn construct a new police station within the parcel. Your December 2, 2015 submittal contained the legal description of the parcel of land being donated to the City of Wood River while your February 25, 2016 submittal contained the results of an investigation effort recently carried out at the facility to address the indoor air inhalation exposure route in accordance with 35 Ill. Admin. Code 742 (the regulations in 35 Ill. Admin. Code 742 regarding the indoor air inhalation exposure route did not become effective until July 15, 2013). Illinois EPA approved a plan to conduct this investigation effort on October 24, 2014.

Illinois EPA reviewed your December 2, 2015 and February 25, 2016 submittals as requests to modify the approved the RCRA corrective action program for the BP/Main Plant facility in Wood River, Illinois. Based on the results of this review, these submittals are hereby approved subject to the following conditions and modifications:

1. The boundaries of the proposed 7.5 acre parcel of land to be donated to the City of Wood River, as set forth in the December 2, 2015 submittal, are acceptable to Illinois EPA. As such, Parcel Identification Numbers should be obtained from the Madison County Recorder's Office for the portions of the parcel which:

   a. Extend from ground surface (average elevation 443' above mean sea level) downward to a subsurface plane which has an elevation of 428' above mean sea level; and

   b. Exist below a sub-surface plane which has an elevation of 428' above mean sea level.

2. The results of the analyses conducted on the samples collected during a soil gas investigation in the 7.5 acre parcel of land mentioned above met the remediation objectives set forth in 35 Ill. Admin. Code 742, Appendix B, Table H. An Environmental Land Use Control (ELUC) meeting the requirements of 35 Ill. Admin. Code 742.1010 must be established for this parcel of land which requires that all future buildings constructed on this parcel:

   a. Have a basement with concrete wall and floors:

   b. Be of concrete slab on grade construction; or

   c. Some combination of (a) and (b).

3. The donation of the 7.5 acre parcel of land mentioned above to the City of Wood River will modify the boundaries of Area 2 which is subject to an ELUC filed as Document 2011R45887 with the Madison County Recorder on December 7, 2011. In addition, this 7.5 acre parcel of land must be removed from the terms and conditions of the subject facility's RCRA permit (so that its ownership can be transferred to another entity). Thus, the following must be submitted to Illinois EPA for review and approval in support of these actions:

   a. A draft ELUC for the portion of Area 2 being retained by BP. This draft ELUC should be very similar to the one filed with the Madison County Recorder on December 7, 2011 modified as appropriate to reflect the new boundaries of Area 2 which result from the donation of the 7.5 acre parcel of land mentioned above to the City of Wood River.

   b. A draft ELUC developed for the 7.5 acre donation parcel in accordance with Condition 2 above and which also: (1) allows BP access to that parcel in the future for any groundwater monitoring or remediation efforts; and (2) contains any other restrictions on the parcel as set forth in the existing ELUC for Area 2.

   c. A request to modify the permit in accordance with 35 Ill. Admin. Code 703, Subpart G to remove the 7.5 acre parcel of land mentioned above from the definition of the facility covered by the BP/Main Plant facility's RCRA permit. Such a request would appear to be a Class 3 modification request. Thus, BP must submit the subject request in accordance with the procedures set forth in 35 Ill. Admin. Code 703.283 or it may request a determination by Illinois EPA that the request be viewed as a Class 1 or Class 2 modification request. If BP requests that the modification be classified as a Class 1 or Class 2 request, then the modification request must contain the necessary information to support the proposed classification. This modification request should not be submitted until

such time as the ELUCs described in this letter have been properly filed with the Madison County Recorder's office and certified copies of the filed documents are submitted to Illinois EPA.

4. Corrective action efforts at this facility must be carried out in accordance with: 35 Ill. Admin. Code 620, 724 and 742; (2) the facility's RCRA permit; and (3) Illinois EPA letters regarding such activities.

5. A completed RCRA Corrective Action Certification Form must accompany all submittals made to Illinois EPA regarding this project. To allow for the proper review of a submittal, two copies of each document should be submitted to Illinois EPA as well as the original.

6. A completed LPC-PA23 form must accompany any application to modify the subject facility's RCRA permit, along with: (a) detailed information regarding the modification request; and (b) a demonstration that the proposed modification meets the requirements of the applicable regulations in 35 Ill. Admin. Code 700-728 and the requirements of the facility's RCRA permit.

Work required by this letter, your submittal 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.

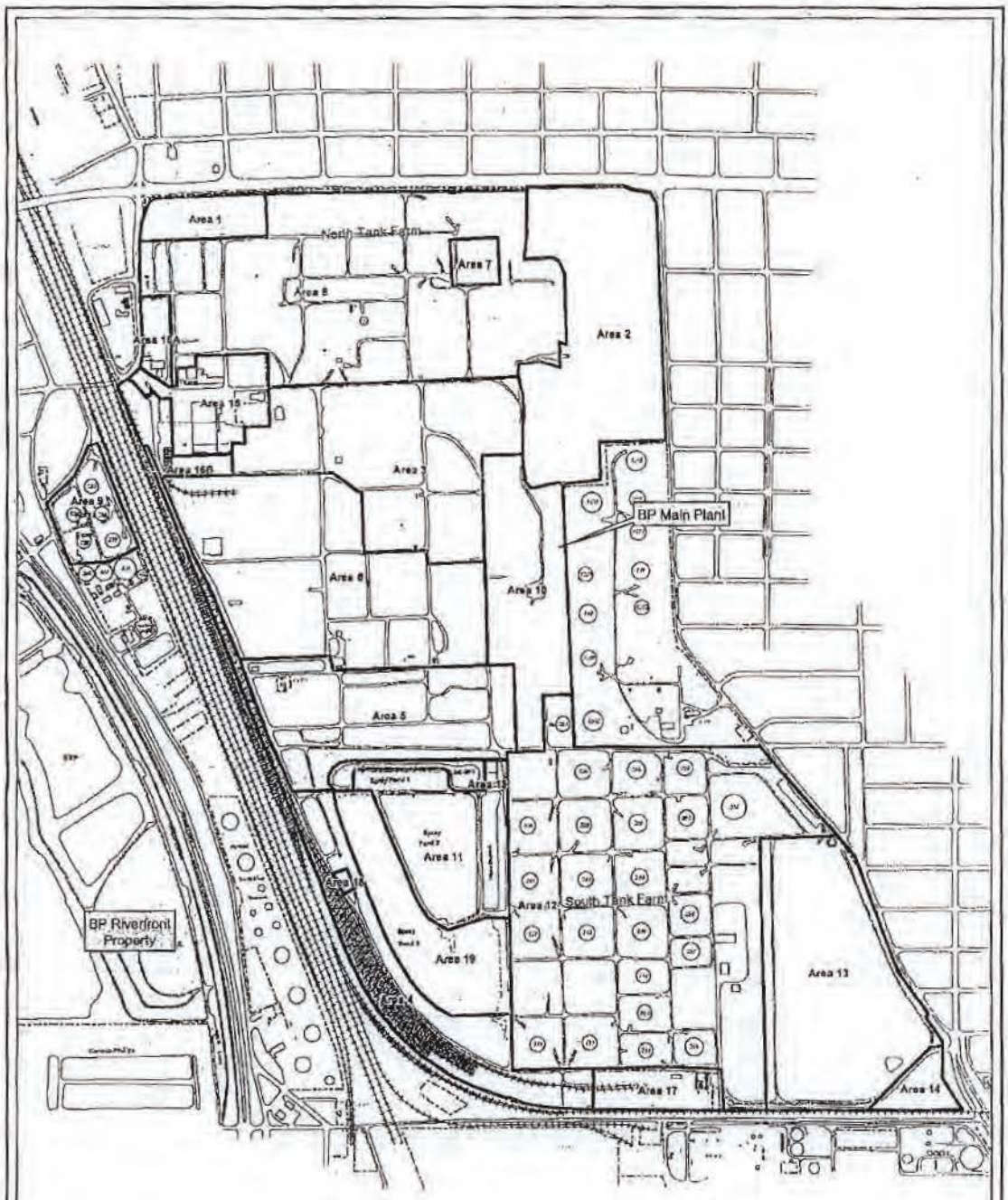
If you have any questions regarding the groundwater aspects of this letter, please contact Amy Boley at 217/558-4716. Questions regarding other aspects of this letter should be directed to Jim Moore at 217/524-3295.

Sincerely,

Joyce L. Munie, P.E., Manager
Permit Section
Division of Land Pollution Control
Bureau of Land

JLM:JKM:RCRA-1191150001-B-147R-CA-57
JKM AMB DM

Attachments: Site Layout Map
Location of Donation Parcel Within Area 2



Property of BP Products North America Inc.

Main Plant Land Reuse Parcels

Area 1 - Northwest Parcel*
Area 2 - Northeast Parcel*
Area 3 - North Central Parcel
Area 4 - Rail Yard Area
Area 5 - South Central Parcel
Area 6 - Former APAC -
Area 7 - Alky Plant
Area 8 - North Tank Farm
Area 9 - Horse Yards Farm
Area 10 - East Tank Farm
Area 11 - Spray Ponds (1, 2, and Intake Channel)
Area 12 - South Tank Farm
Area 13 - Wildlife Enhancement Area
Area 14 - Southeast Corner
Area 15 - Administration Building Parcel
Area 16 - Marketing Operation Area
Area 17 - LPG Caverns Area
Area 18 - North Cell of Spray Pond 1 and South Flare Pit and Surrounding Area
Area 19 - Spray Pond 3 Area

N

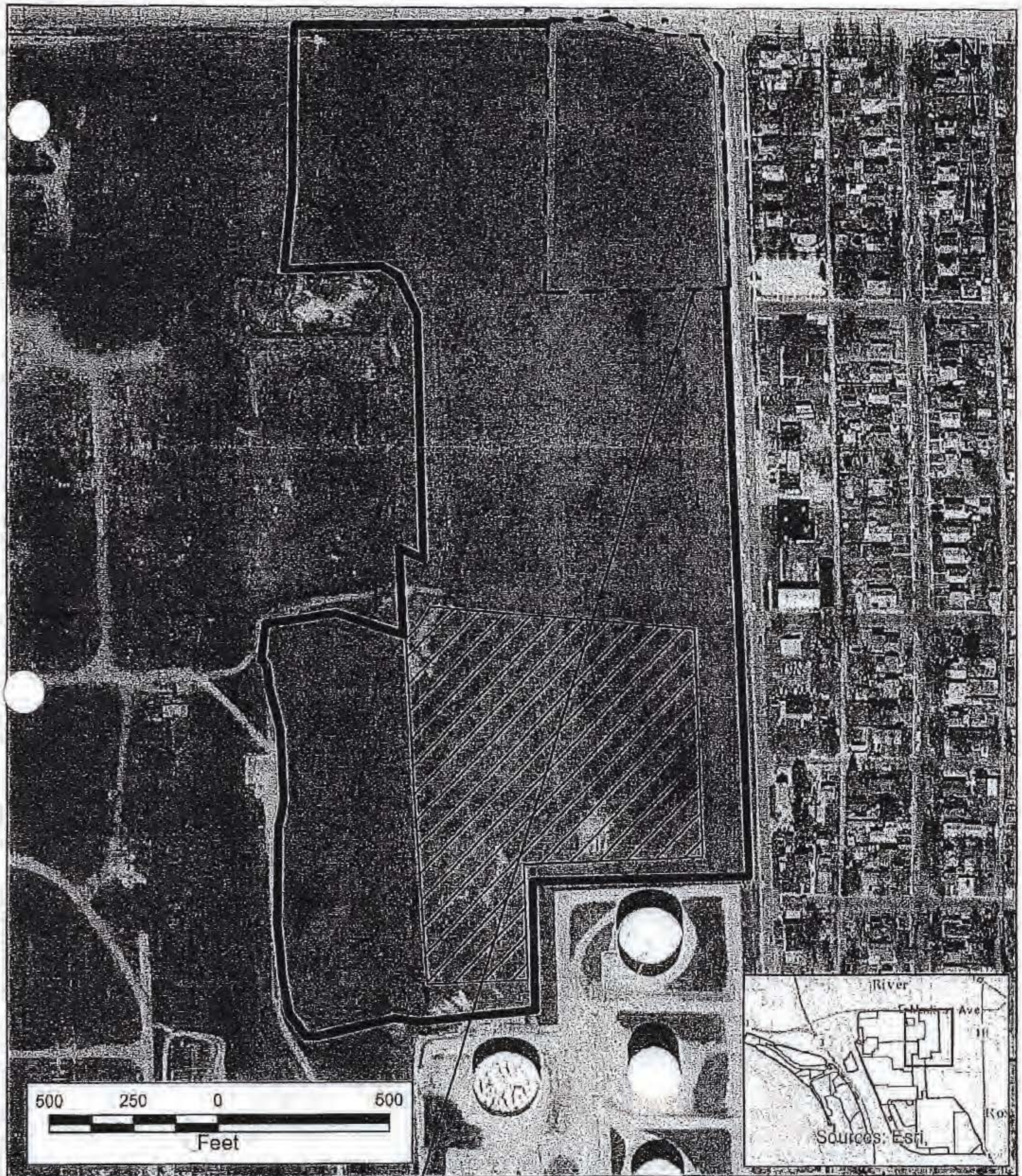
325 0 325
Feet

1 inch equals 750 feet

URS 100 South Wacker Drive Suite 500 Chicago, Illinois 60606

Main Plant Property
Land Reuse Parcels
BP Former Refinery
Wood River, Illinois

PROJECT NO. 25366764



Legend

- Area 2 Land Reuse Parcel Boundary
- Area 2 Donation Parcel II Boundary
- Engineered Barrier Areas
- Exception Donation Parcel

FIGURE 1
SITE LOCATION MAP

AREA 2
BP Main Plant Property
Wood River, Illinois

amec | bp

Job No.	2424-13-034
Drawn By:	JLT
Reviewed By:	
Date:	2/26/2014

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, DIRECTOR

217/524-3300

May 4, 2017

CERTIFIED MAIL
7014 2120 0002 3289 8054

BP Products North America Inc.
Attn: Lori G. Littrell, Operations Project Manager
150 West Warrenville
Naperville, Illinois 60563

Re: 1191150001 -- Madison County
BP Products North America – Main Plant
ILD980700967
Log No. B-147R-CA-77
Received: March 30, 2017
RCRA Permit

Dear Ms Littrell:

This is in partial response to your March 29, 2017 submittal regarding RCRA corrective action activities at the above-referenced RCRA permitted facility (Log No. B-147R and associated modifications). The subject facility is a closed oil refinery which is approximately 600 acres in size and located at 301 Evans Avenue, Wood River, Illinois. The RCRA corrective action program set forth in the subject facility's RCRA permit requires that BP properly remediate the entire facility. The RCRA permit broke the facility up into nineteen areas and sets forth a process for remediating the facility on an area by area basis. In addition, this permit contains provisions for removing remediated areas from the definition of the facility covered by the RCRA permit, thus allowing those areas to be more easily re-developed.

One of the areas being addressed by the RCRA corrective action program at this facility is referred to as "Area 2" which is located in the northeastern corner of the facility. A drawing showing the location of Area 2 within the facility is provided in Attachment 1 to this letter. On August 13, 2002, Illinois EPA issued a letter indicating that, subject to certain conditions and modifications, no further action was necessary for the soils at Area 2. One of the conditions of this letter required BP to establish an institutional control to place certain restrictions on future activities in this area. Illinois EPA approved a draft Environmental Land Use Control (ELUC) on January 29, 2003 which would establish the required institutional controls for Area 2. BP then filed the ELUC with the Madison County Recorder on February 5, 2003 as Document No. 2003R08605.

BP subsequently modified the ELUC for Area 2 to account for the fact that it desired to donate a 9.56 acre parcel within Area 2 to the City of Wood River for use as a storm water detention basin. This required that BP establish two new separate ELUCs which would supersede the

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Mall St., Collinsville, IL 62234 (618)346-5120
9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
412 SW Washington St., Suite D, Peoria, IL 61602 (309)671-3022
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601

original one filed February 5, 2003, one for the parcel of land being donated to the City of Wood River and one for the remainder of Area 2 being retained by BP. As such, a draft ELUC for the parcel of land being donated to the City of Wood River was approved by Illinois EPA on November 3, 2011 and filed with the Madison County Recorder as Document No. 2011R45888 on December 7, 2011. In addition, a draft ELUC for that portion of Area 2 retained by BP was approved by Illinois EPA in a second letter dated on November 3, 2011 and filed with the Madison County Recorder as Document No. 2011R45887 on December 7, 2011.

BP is now donating a second parcel (7.5 acres in size) within Area 2 to the City of Wood River for the construction of a Police Station (this parcel is referred to as the "Police Station Donation Parcel"). Thus, BP must again establish two new ELUCs to replace the one filed on December 7, 2011 as Document No.2011R45887--one for the Police Station Donation Parcel and one for the remainder of Area 2 being retained by BP. The inset map to Attachment 1 to this letter shows the location of this 7.5 acre parcel of land within Area 2. It must be noted that the parcel being donated to the City only extends downward to a horizontal plane at elevation 428' above mean sea level (which is located approximately 15' below ground surface). BP will retain ownership of the parcel which exists below this plane as well as well as the remainder of Area 2. A legal description of the parcel being donated to the City of Wood River is provided as Attachment 2 to this letter.

A draft ELUC for Police Station Donation Parcel was approved by Illinois EPA on February 28, 2017. However, BP found that minor revisions needed to be made to this ELUC and Illinois EPA's letter before they could be filed with the Madison County, Illinois Recorder's Office. Your March 29, 2017 submittal described the minor revisions which needed to be made to the draft ELUC for the Police Station Donation Parcel and also included a revised draft ELUC for the Police Station Donation Parcel which incorporated these minor revisions.

Illinois EPA reviewed your March 29, 2017 submittal and the revised draft ELUC for the Police Station Donation Parcel as a request to modify the RCRA corrective action program at the BP/Main Plant facility and hereby approves them subject to the following conditions and modifications:

1. A legal description of the portion of 7.5 acre within Area 2 of the BP/Main Plant facility covered by the ELUC being approved herein is provided in Attachment 2. The Parcel Index No. for this parcel is 19-2-08-27-10-101-002. It must be noted that this parcel only extends vertically from the ground surface downward to a horizontal plane at elevation 428' above mean sea level (this horizontal plane is approximately 15' below the ground surface).

2. A copy of this letter must be filed along with the draft ELUC being approved herein with the Office of the Recorder for Madison County, Illinois.

3. As indicated above, Illinois EPA determined on August 13, 2002 that no further action was necessary for the soils within Area 2 provided an ELUC was established which placed certain restrictions on future activities within Area 2. The draft ELUC being approved

herein establishes the restrictions on the Police Station Donation Parcel required by Illinois EPA's August 13, 2002 letter.

4. Amendments to 35 Ill. Admin. Code 742 (Tiered Approach to Corrective Action Objectives) which became effective on July 15, 2013 required that the indoor air inhalation exposure route be addressed in developing remediation objectives for, among other things, RCRA corrective action projects. As a result, Illinois EPA's August 13, 2002 no further action determination for the soils within Area 2 did not address the indoor air inhalation exposure route. BP conducted further investigations in the subject 7.5 acre parcel in accordance with plans approved by Illinois EPA. On August 22, 2016, Illinois EPA determined that no further action was necessary to address the indoor air inhalation exposure route provided certain restrictions were placed on future activities within the subject 7.5 acre parcel. The draft ELUC being approved herein establishes the restrictions on the subject parcel required by Illinois EPA's August 22, 2016 letter.

5. Once the draft ELUC approved herein is recorded, it will supersede the ELUC recorded on December 7, 2011 as Document No. 2011R45887 as it pertains to the Police Station Donation Parcel.

6. The final ELUC filed with the Office of the Recorder for Madison County, Illinois must include a dated and notarized signature of the property owner.

7. The proposed ELUC places the following restrictions on the subject property:

   a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

   b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 Ill. Adm. Code 742;

   c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

   d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

   e. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile

organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

(1) Field Screening. Soil shall be considered "potentially contaminated "if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings >100 units) of VOCs in soil.

(2) Laboratory Analysis. Soils exhibiting potential contamination based on the visual discoloring or a field screening test for VOCs will either be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

(3) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if; (1) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives ("ROs") developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e (i) above.

(4) Management of Non-Contaminated Soils. Soils that are considered to be not contaminated, as determined by field screening or laboratory results, may be reused as fill in other areas of the former BP Refinery Main Plant Facility. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(5) Management of Contaminated Soils. If the soil is found to be contaminated, then it must be sent off site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(6) Documentation. All of these activities must be documented in the facility's operating records.

f. The area designated as "EB 2B" of the Property, as shown in Attachment 3 to this letter and in Exhibit B-3 of the draft ELUC, requires an engineered barrier to restrict potential exposure to soils beneath the barrier. Ten feet of the existing soil in place over the contaminated soil (or a comparable designed engineered control) shall be used as the engineered barrier and must remain in place over the contaminated soils. Prior to commencement of any future excavation and/or construction in or near the areas containing the engineered barriers, a safety plan for these areas is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations and other U.S. EPA guidance as provided. At a minimum, the plan should address potential worker exposure if future excavation and construction activities occur within the contaminated soil. Any contaminated soil

removed, or excavated from, or disturbed at the areas containing the engineered barrier must be handled in accordance with all applicable laws and regulations.

g. The soil within the Property has met the remediation objectives set forth for the vapor intrusion exposure route in 35 Ill. Admin. Code 742, Appendix B, Table H. All future buildings constructed on this parcel must have a basement with concrete wall and floors, be of concrete slab-on-grade construction, or some combination thereof. BP has also specified the use of additional building control technologies (vapor membrane and contingency sub-slab vapor control system) for this donation parcel that are suitable pursuant to 35 Ill. Admin. Code 742, Subpart L.

h. BP is allowed access to the Property for any groundwater monitoring or remediation efforts.

8. Within forty-five days of the date of the this letter, the ELUC approved herein must be fully executed, notarized and recorded in the chain of title for the subject property in the Office of the Recorder for Madison County, Illinois, along with this letter. The approved ELUC will not become effective until officially recorded in the chain of custody for the subject property.

9. Within 30 days after filing the approved ELUC in accordance with Condition 8 above, a certified true copy of the filed ELUC, along with certification from the Office of the Recorder for Madison County, Illinois that the ELUC was properly filed, must be submitted to Illinois EPA.

10. Failure to comply with the limitations or requirements of an ELUC may result in voidance of an Illinois EPA no further remediation determination in accordance with the program under which the determination was made. The failure to comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Illinois Environmental Protection Act.

11. The limitations or requirements of the ELUC apply in perpetuity or until:

a. The Illinois EPA issues a new no further remediation determination approving modification or removal of the limitation/requirement; and

b. A release or modification of the land use limitation is filed on the chain of title for the property that is the subject of the ELUC.

12. At no time shall this site be used in a manner inconsistent with the land use limitations established in the approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved, and (2) a new no further action determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 Ill. Adm. Code 742. Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a: (1) request to amend the certification of closure; or (2) a permit modification

request. Sufficient information must be provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC 742.

13. A completed Corrective Action Certification form must accompany all corrective-action related information submitted to Illinois EPA. To allow for the proper review of each submittal, please provide the original and one copy of each submittal (two copies if the submittal is groundwater related.

14. Overall, corrective action activities at the subject facility must continue to be carried out in accordance with: (1) 35 Ill. Adm. Code 620, 724, and 742; and (2) the requirements set forth in its RCRA permit (Log No. B-147R) and all the other associated modifications/letters issued thereafter by the Illinois EPA for this facility.

Work required by this letter, your submittal(s) 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 this matter, please contact Jim Moore of my staff at 217/524-3295.

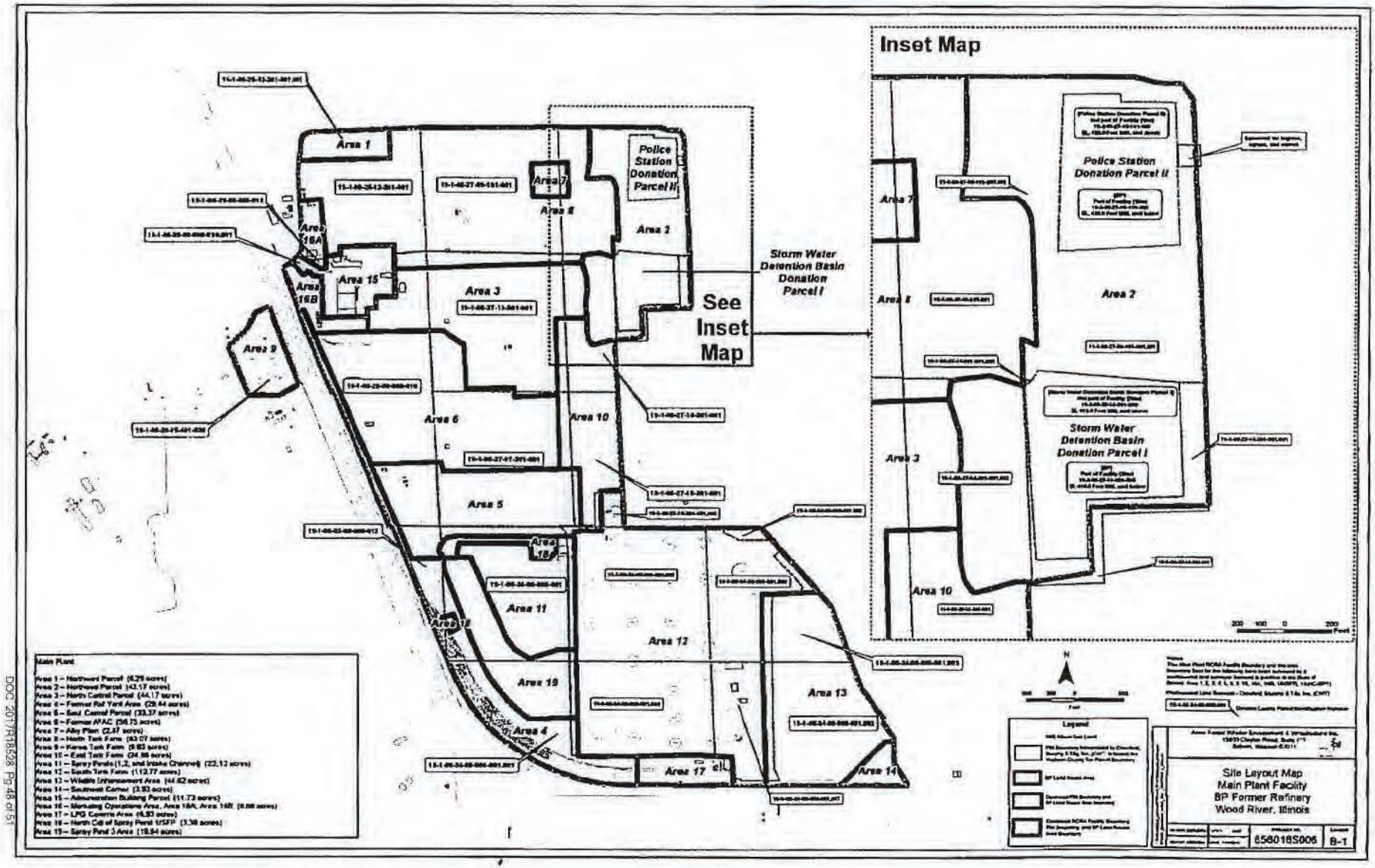
Sincerely,

Joyce L. Munie, P.E., Manager
Permit Section
Division of Land Pollution Control
Bureau of Land

JLM:JKM:1191150001-RCRA-B-147R-CA-77
AMB JKM TBM

Attachments: 1 – Site Layout Map
2 – Legal Description of Donation Parcel
3 – Location of Engineered Barrier Within the Donation Parcel

cc: Allison Crane, BP (via e-mail)



B-147R-CA-77
Attachment 1
Site Layout Map

Exhibit A

Legal Description and Parcel ID of the "Property" covered by this ELUC

The subject property is located in the City of Wood River, Madison County, State of Illinois, commonly known as 301 Evans Avenue, Wood River, Illinois and more particularly described as:

REAL ESTATE TAX INDEX #19-2-08-27-10-101-002
LEGAL DESCRIPTION

This ELUC applies to that portion of the following described tract of land which extends from the ground surface down to a horizontal plane at elevation 428 feet above mean sea level. The approximate "thickness" of this property is 15 feet.

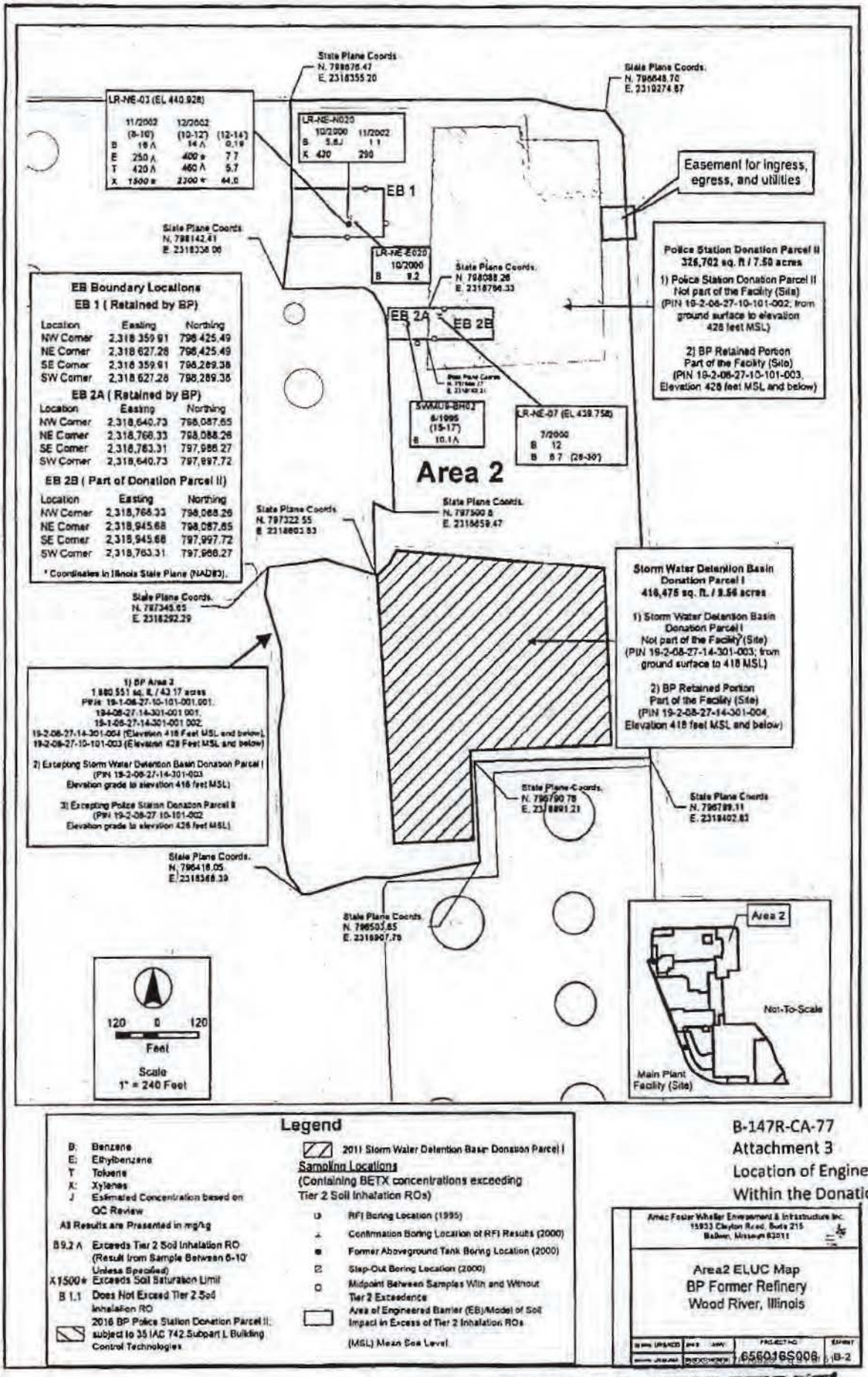
A tract of land situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Northwest Quarter: thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet to the Point of Beginning of the herein described tract; thence continuing South 87 degrees 18 minutes 50 seconds West 515.95 feet; thence North 00 degrees 31 minutes 55 seconds East 688.58 feet; thence North 89 degrees 46 minutes 35 seconds East 254.98 feet; thence South 02 degrees 59 minutes 38 seconds East 36.32 feet; thence South 88 degrees 59 minutes 38 seconds East 218.92 feet; thence South 03 degrees 02 minutes 32 seconds East 626.13 feet to the Point of Beginning, containing 326,702 square feet or 7.50 acres, more or less.

Subject to:
A 100 feet wide easement for ingress, egress and utility purposes situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Northwest Quarter; thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois .State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet; thence North 03 degrees 02 minutes 32 seconds West 335.44 feet to the Point of Beginning of the

herein described easement; thence continuing North 03 degrees 02 minutes 32 seconds West 100.00 feet; thence North 87 degrees 18 minutes 50 seconds East 86.75 feet to said right of way line; thence along said right of way line South 02 degrees 41 minutes 10 seconds East 100.00 feet; thence deporting said right of way line South 87 degrees 18 minutes 50 seconds West 86.13 feet to the Point of Beginning.



B-147R-CA-77
Attachment 3
Location of Engineered Barrier
Within the Donation Parcel

END OF DOCUMENT

Recorder's Certificate of Photocopy

STATE OF ILLINOIS)
) SS
COUNTY OF MADISON)

I, Linda A. Andreas, the duly elected RECORDER in and for the County and State aforesaid, do hereby certify that the foregoing copy of a certain ENVIRONMENTAL DISCLOSURE is the true and correct photocopy of said ENVIRONMENTAL DISCLOSURE from BP PRODUCTS NORTH AMERICA to NOTICES including the Certificate of Acknowledgment bearing date the 24th day of APRIL A.D. 2024 as the same appears in the records of my office in Document # **2017R18528** recorded on the 5th day of JUNE A.D. 2017

GIVEN under my hand and OFFICIAL SEAL of the RECORDER at Edwardsville, Illinois, this 24th day of APRIL A.D. 2024.

Linda A. Andreas
RECORDER
in and for
MADISON COUNTY, ILLINOIS

Return to: (Fed Ex Env.)
FATIC
30 N. LaSalle St.
Ste 2700 60602 4/16
Chicago, IL 60602

PREPARED BY:

Name: Lori G. Littrell
Operations Project Manager
BP Products North America Inc.
Address: 150 West Warrenville
Naperville, IL 60563

8435108
Tx:4335443

2017R18529
STATE OF ILLINOIS
MADISON COUNTY
06/05/2017 4:13 PM
AMY M. MEYER, RECORDER
REC FEE: 73.00
CO STAMP FEE:
ST STAMP FEE:
FF FEE:
RHSPS FEE: 9.00
 # OF PAGES: 48

RETURN TO:

Name: Lori G. Littrell
Operations Project Manager
BP Products North America Inc.
Address: 150 West Warrenville
Naperville, IL 60563

82.00 Ck 6395

THE ABOVE SPACE FOR RECORDER'S OFFICE

Environmental Land Use Control For Area 2

450F

THIS ENVIRONMENTAL LAND USE CONTROL ("ELUC"), is made this 22 day of May, 2017, by BP Products North America Inc., a Maryland corporation, ("Property Owner"), of the real property located at 301 Evans Avenue, Wood River, Illinois (referred to as the "Main Plant Facility"), which includes a 43.17 acre parcel of land referred to as "Area 2". Area 2 is the "Property" covered by this ELUC. This ELUC supersedes the ELUC recorded with the Madison County Recorder on December 7, 2011 as Document 2011R45887 for the Property which previously superseded the original ELUC recorded on February 5, 2003 as Document 2003R08605.

WHEREAS, 35 Ill. Admin. Code 742 and 415 ILCS 5/58.17 provide for the use of an ELUC as an institutional control in order to impose land use limitations or requirements related to environmental contamination so that persons conducting remediation can obtain a No Further Action determination from the Illinois Environmental Protection Agency ("IEPA"). Such determination has been obtained for the Property on August 13, 2002 and is attached hereto as Exhibit C. The reason for an ELUC is to ensure protection of human health and the environment. The limitations and requirements contained herein are necessary in order to protect against potential exposure to contaminated soil or groundwater or both that may be present on the Property as a result of prior industrial activities. Under 35 Ill. Adm. Code 742, the use of risk-based, site specific remediation objectives may require the use of an ELUC on real property and the ELUC may apply to certain physical features (e.g., engineered barriers, monitoring wells, caps, etc.).

WHEREAS, Property Owner intends to request risk-based, site specific soil and groundwater remediation objectives from the IEPA under 35 Ill. Admin. Code Part 742 to obtain risk-based closure for the Property, which is a portion of the Main Plant Facility ("Site"),

identified by Bureau of Land LPC number 1191150001, utilizing an ELUC (Exhibit B-1 shows the location of Area 2 (i.e. the "Property" covered by this ELUC within the Main Plant Facility).

NOW, THEREFORE, the recitals set forth above are incorporated by reference as if fully set forth herein and the Property Owner agrees as follows:

Section One. Property Owner does hereby establish an ELUC on the real estate, situated in the County of Madison, State of Illinois, and further described in Exhibit A attached hereto and incorporated herein by reference (the "Property").

Attached as Exhibits B-1 and B-2 are maps that show the legal boundary of the Property, the physical features to which the ELUC applies, the horizontal and vertical extent of the contaminants of concern above applicable remediation objectives for soil or groundwater or both, and the nature, location of the source, and direction of the contaminants of concern, as required under 35 Ill. Admin. Code Part 742.

a. The parcel covered by this ELUC is 43.17 acres in size; its Parcel Index Numbers (PINs) are:

   19-1-08-27-10-101-001.001;
   19-1-08-27-14-301-001.001;
   19-1-08-27-14-301-001.002;
   19-2-08-27-14-301-004 (only exists below 418' mean sea level [MSL]);
   19-2-08-27-10-101-003 (only exists below 428' MSL)
   Excepting
   19-2-08-27-14-301-003 (Ground surface to 418 Feet MSL) Donation Parcel I;
   19-2-08-27-10-101-002 (Ground surface to 428 Feet MSL) Donation Parcel II

b. Exhibit B-1 shows the layout of the Main Plant Facility and the location of the Area 2 within the Main Plant Facility.

c. Exhibit B-2 shows the locations where soil contamination is located that exceeds 35 Ill. Admin. Code 742, Subpart E (Tier 1) Remediation Objectives, and the boundaries of the engineered barriers which must be maintained within Area 2.

Section Two. Property Owner represents and warrants that it is the current owner of the Property and has the authority to record this ELUC on the chain of title for the Property in the Office of the Recorder or Registrar of Titles in Madison County, Illinois.

Section Three. The Property Owner hereby agrees, for itself, and its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessees, possessor or user of the Property or the holder of any portion thereof interest therein, that:

a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater

and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 IL Admin. Code 742;

c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

e. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

(i) Field Screening. Soil shall be considered "potentially contaminated" if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., Photoionization Detector ("PID") readings > 100 parts per million ("ppm") of VOCs in soil.

(ii) Laboratory Analysis. Soils exhibiting potential contamination based on visual discoloring or a field screening test for VOCs will either be sampled for: benzene, toluene, ethylbenzene, and xylenes ("BTEX"); and polycyclic aromatic hydrocarbons ("PAHs") by laboratory analysis, or considered contaminated without analytical testing.

(iii) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if: (1) laboratory analytical data indicates constituents in soil are less than the IEPA approved site specific remediation objectives ("ROs") developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e.(i) above.

(iv) Management of Non-Contaminated Soils. Soils that are considered to be not contaminated, as determined by field screening or laboratory results, may be reused as fill in other areas of the former BP Refinery Main Plant Facility. Soils may be transported off site as clean fill if laboratory data indicates constituents are less than Tiered Approach to Corrective Action Objectives ("TACO") residential standards.

(v) Management of Contaminated Soils. If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(vi) Documentation. All of these activities must be documented in the facility's operating records.

f. Areas designated "EB 1" and "EB 2A" of the Property, which are identified on Exhibit B-2, require an engineered barrier ("EB") to restrict potential exposure to soils beneath the barrier. Ten (10) feet of the existing soil in place over the contaminated soil (or a comparable designed engineered control) shall be used as the engineered barrier and must remain in place over the contaminated soils. Prior to commencement of any future excavation and/or construction in or near the areas containing the engineered barriers, a safety plan for these areas is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations; and other U.S. EPA guidance as provided. At a minimum, the plan should address potential worker exposure if future excavation and construction activities occur within the contaminated soil. Any contaminated soil removed, or excavated from, or disturbed at the areas containing the engineered barrier must be handled in accordance with all applicable laws and regulations.

g. BP is allowed access to the Property for any groundwater or remediation efforts.

Section Four. This ELUC is binding on the Property Owner, its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein. This ELUC shall apply in perpetuity against the Property and shall not be released until: (1) the IEPA determines there is no longer a need for the ELUC as an institutional control; (2) the IEPA, upon written request, issues to the Property that received the no further remediation determination a new no further remediation determination approving modification or removal of the limitation(s) or requirement(s); (3) the new no further remediation determination is filed on the chain of title of the Property subject to the no further remediation determination; and (4) a release or modification of the land use limitation or requirement is filed in the chain of title for the Property.

Section Five. Information regarding the remediation performed on the Property may be obtained from the IEPA through a request under the Freedom of Information Act (5 ILCS 140) and rules promulgated thereunder by providing the IEPA with the 10-digit LPC number listed above.

Section Six. The effective date of this ELUC shall be the date that it is officially recorded in the chain of title for the Property to which this ELUC applies.

WITNESS the following signature:

BP Products North America Inc.

By: Lisa G Smith Attest: Allison Crane

Printed: LISA A SMITH Printed: Allison Crane

Its: VICE PRESIDENT Its: Liability Business manager

Date: Date:

STATE OF TEXAS)
) SS:
COUNTY OF HARRIS)

I, Mary J. Heinitz the undersigned, a Notary Public for said County and State, DO HEREBY CERTIFY, that Lisa A. Smith and Allison Crane, personally known to me to be the Vice President and Liability Business Manager, respectively, of **BP Products North America Inc.**, a Maryland corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that in said capacities they signed and delivered the said instrument and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation, as their free and voluntary act, and as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

Given under my hand and official seal, this 18th day of May, 2017.

Mary J Heinitz
Notary Public

MARY J. HEINITZ
Notary Public, State of Texas
Comm. Expires 04-06-2020
Notary ID 1086666

List of Exhibits

Exhibit A: Legal Descriptions and Parcel IDs

Exhibit B: Scaled Maps
B-1: Site Layout Map
B-2: Area 2 ELUC Map (showing removed Donation Parcels I and II)

Exhibit C: Copy of the NFA letter from IEPA to BP dated August 13, 2002, with Attachments

Exhibit A

Legal Descriptions and Parcel IDs

The Property which is the subject of this ELUC, also referred to as Area 2, is located in the City of Wood River, Madison County, State of Illinois, within the BP/Main Plant Facility whose address is 301 Evans Avenue, Wood River, Illinois and more particularly described as (note that Attachment B-1 depicts the layout of the BP/Main Plant Facility, and the Property (Area 2) which is the subject of this ELUC):

LEGAL DESCRIPTION

The portion of the following described property:

Part of the West half of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the northeast comer of the Southwest Quarter of said Section 27; thence North 89 degrees 13 minutes 29 seconds West, 60.11 feet to the westerly right of way of Sixth Street, formerly known as Old Alton Edwardsville Road, and the POINT OF BEGINNING; thence South 02 degrees 41 minutes 19 seconds East, along said right of way, 3.38 feet; thence South 02 degrees 11 minutes 21 seconds East, 537.69 feet; thence South 89 degrees 03 minutes 56 seconds West, 511.68 feet; thence South 03 degrees 17 minutes 51 seconds East, 287.59 feet; thence South 80 degrees 51 minutes 24 seconds West, 267.69 feet; thence North 87 degrees 28 minutes 33 seconds West, 15.25 feet; thence North 87 degrees 28 minutes 33 seconds West, 51.06 feet; thence South 74 degrees 04 minutes 54 seconds West, 176.24 feet; thence North 88 degree 57 minutes 22 seconds West, 19.35 feet; thence North 34 degrees 52 minutes 15 seconds West, 68.25 feet; thence North 11 degrees 08 minutes 36 seconds West, 79.65 feet; thence North 02 degrees 01 minute 18 seconds West, 331.70 feet; thence North 08 degrees 17 minutes 11 seconds East, 94.49 feet; thence North 03 degrees 16 minutes 24 seconds West, 140.22 feet; thence North 16 degrees 34 minutes 48 seconds West, 157.07 feet; thence North 06 degrees 34 minutes 43 seconds East, 80.46 feet; thence North 81 degrees 50 minutes 44 seconds East, 167.06 feet; thence South 72 degrees 15 minutes 30 seconds East, 153.53 feet; thence North 01 degree 37 minutes 11 seconds West, 205.96 feet; thence South 65 degrees 47 minutes 26 seconds East, 67.39 feet; thence North 02 degrees 18 minutes 55 seconds West, 533.37 feet; thence North 09 degrees 12 minutes 39 seconds West, 32.06 feet; thence North 22 degrees 48 minutes 45 seconds West, 36.49 feet; thence North 35 degrees 46 minutes 07 seconds West, 36.12 feet; thence North 56 degrees 50 minutes 16 seconds West, 33.22 feet; thence South 88 degrees 59 minutes 56 seconds West, 233.69 feet; thence North 06 degrees 34 minutes 04 seconds East; 210.75 feet; thence North 00 degrees

52 minutes 34 seconds West, 324.73 feet to the southerly right of way of Illinois Route 143, also known as Madison Avenue; thence continuing along said right of way for the following four courses: 1) North 89 degrees 46 minutes 26 seconds East, 719.43 feet; 2) South 75 degrees 53 minutes 19 seconds East, 103.38 feet; 3) South 86 degrees 54 minutes 16 seconds East, 100.13 feet; 4) South 35 degrees 47 minutes 53 seconds East, 83.60 feet to the westerly right of way of Sixth Street, formerly known as Old Alton Edwardsville Road; thence South 02 degrees 41 minutes 19 seconds East, 1242.49 feet to the POINT OF BEGINNING, containing 43.17 acres or 1,880,551 feet.

PIN: 19-1-08-27-10-101-001.001;
19-1-08-27-14-301-001.001;
19-1-08-27-14-301-001.002;
19-2-08-27-14-301-004 (Elevation 418 Feet MSL and below); and
19-2-08-27-10-101-003 (Elevation 428 Feet MSL and below)

EXCEPT,

1. **Storm Water Detention Basin Donation Parcel I**

REAL ESTATE TAX INDEX #19-2-08-27-14-301-003
LEGAL DESCRIPTION

The portion of the following described property located above the elevation of 418 feet above mean sea level. The approximate "thickness" of the Donation Parcel is 23 feet.

Part of the West half of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the northeast corner of the Southwest Quarter of said Section 27; thence North 89 degrees 13 minutes 29 seconds West, 60.11 feet to the westerly right of way of Sixth Street, formerly known as Old Alton Edwardsville Road; thence South 02 degrees 41 minutes 19 seconds East, along said right of way, 3.38 feet; thence South 02 degrees 11 minutes 21 seconds East, 3.90 feet; thence North 85 degrees 11 minutes 49 seconds West, 111.30 feet to the Point Of Beginning; thence South 02 degrees 13 minutes 17 seconds East, 505.12 feet; thence South 87 degrees 48 minutes 39 seconds West, 410.66 feet; thence South 02 degrees 02 minutes 36 seconds East 253.81 feet; thence South 87 degrees 37 minutes 30 seconds West, 230.51 feet; thence North 04 degrees 15 minutes 04 seconds West, 273.85 feet; thence North 04 degrees 10 minutes 26 seconds West, 133.01 feet; thence North 03 degrees 19 minutes 34 seconds West, 356.65 feet; thence North 44 degrees 20 minutes 55 seconds East, 48.26 feet; thence North 32 degrees 50 minutes 39 seconds East, 35.75 feet; thence North 27 degrees 57 minutes 32 seconds East, 9.22 feet; thence

South 85 degrees 11 minutes 49 seconds East, 607.40 feet to the Point of Beginning, containing 9.56 acres or 416,475 square feet.

PIN: 19-2-08-27-14-301-003 (Ground Surface Down to Elevation 418 Feet MSL)

AND EXCEPT,

2. **Police Station Donation Parcel II**

REAL ESTATE TAX INDEX #19-2-08-27-10-101-002
LEGAL DESCRIPTION

The portion of the following described property located above the elevation of 428 feet above mean sea level. The approximate "thickness" of the Donation Parcel is 15 feet.

A tract of land situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described ae follows:

Commencing at the southeast corner of said Northwest Quarter: thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet to the Point of Beginning of the herein described tract; thence continuing South 87 degrees 18 minutes 50 seconds West 515.95 feet; thence North 00 degrees 31 minutes 55 seconds East 688.58 feet; thence North 89 degrees 46 minutes 35 seconds East 254.98 feet; thence South 02 degrees 59 minutes 38 seconds East 36.32 feet; thence South 88 degrees 59 minutes 38 seconds East 218.92 feet; thence South 03 degrees 02 minutes 32 seconds East 626.13 feet to the Point of Beginning, containing 326,702 square feet or 7.50 acres, more or less.

Subject to:
A 100 feet wide easement for ingress, egress and utility purposes situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Northwest Quarter; thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois .State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet; thence North 03 degrees 02 minutes 32 seconds West 335.44 feet to the Point of Beginning of the herein described easement; thence continuing North 03 degrees 02 minutes 32 seconds West 100.00 feet; thence North 87 degrees 18 minutes 50 seconds East 86.75 feet to said right of way line; thence along said right of way line South 02 degrees 41 minutes 10 seconds

East 100.00 feet; thence deporting said right of way line South 87 degrees 18 minutes 50 seconds West 86.13 feet to the Point of Beginning.

PIN: 19-2-08-27-10-101-002 (Ground Surface Down to Elevation 428 Feet MSL)

Exhibit B

Scaled Maps showing:

A) The legal boundary of the property to which the ELUC applies;
B) The horizontal and vertical extent of contaminants of concern above applicable remediation objectives for soil and groundwater to which the ELUC applies;
C) Any physical features to which an ELUC applies; and
D) The nature, location of the source, and direction of movement of the contaminants of concern.

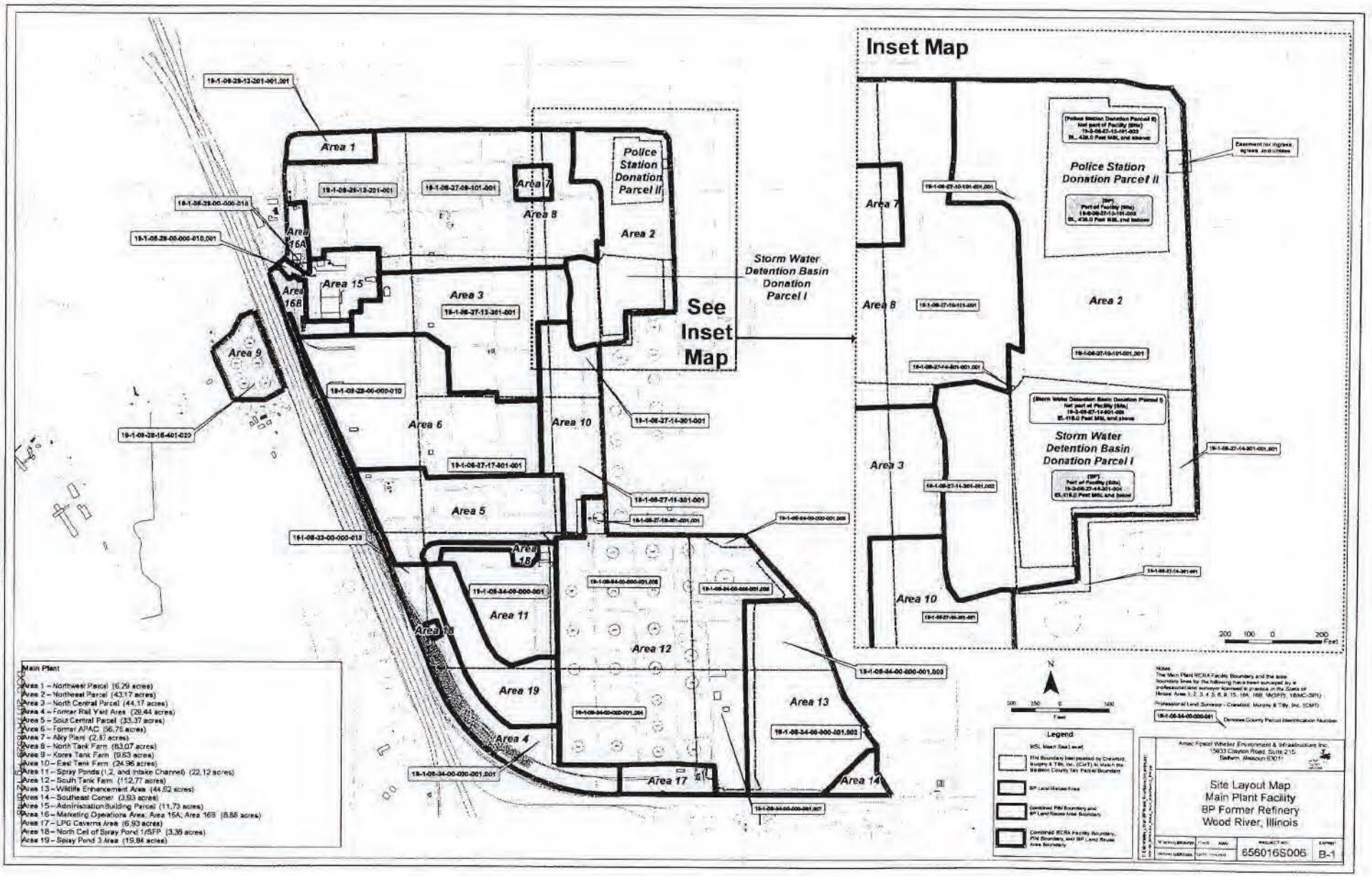
Maps Contained in Exhibit B

Exhibit B:

B-1: Site Layout Map
B-2: Area 2 ELUC Map (showing removed Donation Parcels I and II)

PINs: 19-1-08-27-10-101-001.001;
19-l-08-27-14-301-001.001;
19-1-08-27-14-301-001.002;
19-2-08-27-14-301-004 (Elevation 418 Feet MSL and below)
19-2-08-27-10-101-003 (Elevation 428 Feet MSL and below)
Excepting
19-2-08-27-14-301-003 (Surface Elevation to Elevation 418 Feet MSL)
19-2-08-27-10-101-002 (Surface Elevation to Elevation 428 Feet MSL)

[See attached]


Inset Map
Area 1
Area 2
Area 3
Area 4
Area 5
Area 6
Area 7
Area 8
Area 9
Area 10
Area 11
Area 12
Area 13
Area 14
Area 15
Area 16A
Area 16B
Area 17
Area 18
Area 19
Police Station Donation Parcel II
Storm Water Detention Basin Donation Parcel I
See Inset Map
Main Plant
Area 1 – Northwest Parcel (6.29 acres)
Area 2 – Northeast Parcel (43.17 acres)
Area 3 – North Central Parcel (44.17 acres)
Area 4 – Former Rail Yard Area (28.44 acres)
Area 5 – Sout Central Parcel (33.37 acres)
Area 6 – Former APAC (56.75 acres)
Area 7 – Alky Plant (2.57 acres)
Area 8 – North Tank Farm (83.07 acres)
Area 9 – Kores Tank Farm (9.63 acres)
Area 10 – East Tank Farm (24.96 acres)
Area 11 – Spray Ponds (1,2, and Intake Channel) (22.12 acres)
Area 12 – South Tank Farm (112.77 acres)
Area 13 – Wildlife Enhancement Area (44.62 acres)
Area 14 – Southeast Corner (3.93 acres)
Area 15 – Administration Building Parcel (11.73 acres)
Area 16 – Marketing Operations Area, Area 16A; Area 16B (8.88 acres)
Area 17 – LPG Caverns Area (6.93 acres)
Area 18 – North Cell of Spray Pond 1/SFP (3.36 acres)
Area 19 – Spray Pond 3 Area (19.84 acres)
Legend
Amec Foster Wheeler Environment & Infrastructure, Inc.
16633 Dayton Road, Suite 215
Ballwin, Missouri 63011
Site Layout Map
Main Plant Facility
BP Former Refinery
Wood River, Illinois
656016S006
B-1

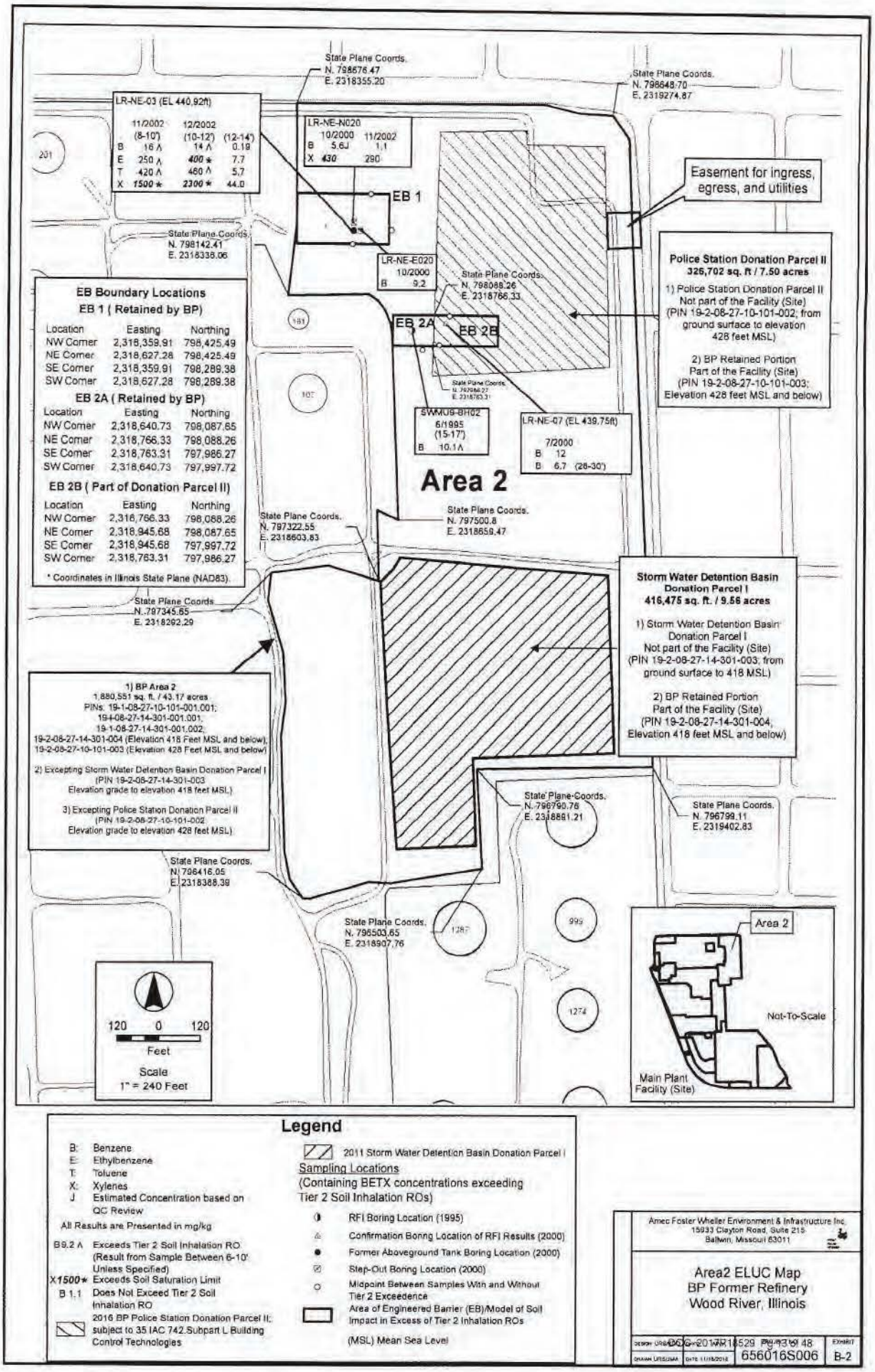

State Plane Coords.
N. 798676.47
E. 2318355.20
State Plane Coords.
N. 798648.70
E. 2319274.87
LR-NE-03 (EL 440.92ft)
11/2002 (8-10') 12/2002 (10-12') (12-14')
B 16 Λ 14 Λ 0.19
E 250 Λ 400 * 7.7
T 420 Λ 460 Λ 5.7
X 1500 * 2300 * 44.0
LR-NE-N020
10/2000 11/2002
B 5.6J 1.1
X 430 290
EB 1
Easement for ingress, egress, and utilities
State Plane Coords.
N. 798142.41
E. 2318338.06
LR-NE-E020
10/2000
B 9.2
State Plane Coords.
N. 798088.26
E. 2318766.33
Police Station Donation Parcel II
326,702 sq. ft / 7.50 acres
1) Police Station Donation Parcel II
Not part of the Facility (Site)
(PIN 19-2-08-27-10-101-002; from ground surface to elevation 428 feet MSL)
2) BP Retained Portion
Part of the Facility (Site)
(PIN 19-2-08-27-10-101-003; Elevation 428 feet MSL and below)
EB Boundary Locations
EB 1 (Retained by BP)
Location Easting Northing
NW Corner 2,318,359.91 798,425.49
NE Corner 2,318,627.28 798,425.49
SE Corner 2,318,359.91 798,289.38
SW Corner 2,318,627.28 798,289.38
EB 2A (Retained by BP)
Location Easting Northing
NW Corner 2,318,640.73 798,087.65
NE Corner 2,318,766.33 798,088.26
SE Corner 2,318,763.31 797,986.27
SW Corner 2,318,640.73 797,997.72
EB 2B (Part of Donation Parcel II)
Location Easting Northing
NW Corner 2,318,766.33 798,088.26
NE Corner 2,318,945.68 798,087.65
SE Corner 2,318,945.68 797,997.72
SW Corner 2,318,763.31 797,986.27
* Coordinates in Illinois State Plane (NAD83)
EB 2A
EB 2B
State Plane Coords.
N. 797984.27
E. 2318763.31
SWMU9-BH02
6/1995
(15-17')
B 10.1Λ
LR-NE-07 (EL 439.75ft)
7/2000
B 12
B 6.7 (26-30')
Area 2
State Plane Coords.
N. 797322.55
E. 2318603.83
State Plane Coords.
N. 797500.8
E. 2318659.47
Storm Water Detention Basin Donation Parcel I
416,475 sq. ft. / 9.56 acres
1) Storm Water Detention Basin Donation Parcel I
Not part of the Facility (Site)
(PIN 19-2-08-27-14-301-003; from ground surface to 418 MSL)
2) BP Retained Portion
Part of the Facility (Site)
(PIN 19-2-08-27-14-301-004; Elevation 418 feet MSL and below)
State Plane Coords.
N. 797345.65
E. 2318292.29
1) BP Area 2
1,880,551 sq. ft. / 43.17 acres
PINs: 19-1-08-27-10-101-001.001;
19-1-08-27-14-301-001.001;
19-1-08-27-14-301-001.002;
19-2-08-27-14-301-004 (Elevation 418 Feet MSL and below);
19-2-08-27-10-101-003 (Elevation 428 Feet MSL and below)
2) Excepting Storm Water Detention Basin Donation Parcel I
(PIN 19-2-08-27-14-301-003
Elevation grade to elevation 418 feet MSL)
3) Excepting Police Station Donation Parcel II
(PIN 19-2-08-27-10-101-002
Elevation grade to elevation 428 feet MSL)
State Plane Coords.
N. 796790.76
E. 2318881.21
State Plane Coords.
N. 796799.11
E. 2319402.83
State Plane Coords.
N. 796416.05
E. 2318388.39
State Plane Coords.
N. 795503.65
E. 2318907.76
120 0 120
Feet
Scale
1" = 240 Feet
Area 2
Not-To-Scale
Main Plant
Facility (Site)
Legend
B: Benzene
E: Ethylbenzene
T: Toluene
X: Xylenes
J Estimated Concentration based on QC Review
All Results are Presented in mg/kg
B9.2 Λ Exceeds Tier 2 Soil Inhalation RO (Result from Sample Between 6-10' Unless Specified)
X1500* Exceeds Soil Saturation Limit
B 1.1 Does Not Exceed Tier 2 Soil Inhalation RO
2016 BP Police Station Donation Parcel II; subject to 35 IAC 742.Subpart L Building Control Technologies
2011 Storm Water Detention Basin Donation Parcel I
Sampling Locations
(Containing BETX concentrations exceeding Tier 2 Soil Inhalation ROs)
RFI Boring Location (1995)
Confirmation Boring Location of RFI Results (2000)
Former Aboveground Tank Boring Location (2000)
Step-Out Boring Location (2000)
Midpoint Between Samples With and Without Tier 2 Exceedence
Area of Engineered Barrier (EB)/Model of Soil Impact in Excess of Tier 2 Inhalation ROs
(MSL) Mean Sea Level
Amec Foster Wheeler Environment & Infrastructure Inc.
15933 Clayton Road, Suite 215
Ballwin, Missouri 63011
Area2 ELUC Map
BP Former Refinery
Wood River, Illinois
656016S006
B-2

Exhibit C

Copy of the NFA letter dated August 13, 2002, with Attachments

1191150001 – Madison County
BP Products North America Inc. – Wood River Former Refinery
ILD980700967
Log No. B-147-CA-14
RCRA Permit

[See attached]

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

RENEE CIPRIANO, DIRECTOR

217/524-3300

August 13, 2002

CERTIFIED MAIL
7001 2510 0002 3279 8113

Gregory S. Jevyak, Environmental Business Manager
Global Environmental Management Business Company
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095

Re: 1191150001 – Madison County
BP Products North America Inc. - Wood River Refinery
ILD980700967
Log No. B-147-CA-14
RCRA Permit

Dear Mr. Jevyak:

This is in response to several recent submittals regarding RCRA corrective action activities at an area known as the "Northeast Corner Parcel (Area 2)" at the above-referenced facility (a list of these submittals is provided in Attachment 1 to this letter). A site layout map showing this area within the facility and the parcel's legal description, are provided as Attachments 2 and 3 respectively. Overall, the corrective action activities at the subject facility are being conducted in accordance with a RCRA permit issued to the facility (Log No. B-147 and associated modifications).

The submittals identified in Attachment 1 to this letter contain information regarding the investigative and remedial activities completed to date in Area 2. Illinois EPA had previously approved plans for conducting these activities for all recognized environmental conditions in Area 2 on August 15, 2000. Based on a review of the information, Illinois EPA has determined that no further action is necessary in Area 2 provided the following requirements are met:

1. Two areas within Area 2 require an engineered barrier and associated institutional control meeting the requirements of 35 Ill. Adm. Code 742 to restrict exposure to the soils beneath the barrier. The institutional control must require maintenance of the engineered barrier, implementation of a site safety plan to protect construction workers during construction activities associated with these two areas, and proper management of any soil removed from beneath the engineered barrier. A plan view of Area 2 delineating the two areas where an engineered barrier must be established is presented in Attachment 4 to this letter.

2. Any excavation and subsurface construction work in Area 2 shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils in Area 2 and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan.

3. The soil within Area 2 shall remain in place, except where necessary to remove it for construction activities.

4. Soil excavated during construction/demolition/excavation activities within Area 2 must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds (VOCs). Soil shall be considered "contaminated" if (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) the field screening test detects the presence (i.e. PID readings >100 units) of VOCs in soil. Soils exhibiting potential contamination based on the visual or field screening will either be sampled for VOC and SVOC analysis or considered contaminated. If laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives (ROs) developed for the parcel then the soils will be considered to be not contaminated for reuse on the Main Plant property. If the soils are less than the site specific ROs but greater than residential standards they will be considered contaminated if transported offsite.

   (1) If the soil is found to be contaminated, then it must be sent off-site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

   (2) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as clean fill in other areas of the former refinery facility. However, procedures must be in place to ensure that this material remains on the former refinery facility and is not be transported off-site, unless it is transported off-site as a special waste in accordance with 35 Ill. Adm. Code Subtitle G: Waste Disposal or unless such material is shown to not be a special waste to the satisfaction of Illinois EPA.

   (3) Documentation of all these activities must be placed in the facility's operating records.

5. Future use of Area 2 must remain commercial/industrial.

6. Appropriate institutional controls meeting the requirements of 35 Ill. Adm. Code, Part 742, Subpart J must be established and recorded to ensure the requirements in Conditions 1, 2, 3, 4, 5, 7 and 8 will be met in the future.

7. Contaminated soil present at the following sample locations is properly managed via engineered barriers or SWMU9-BH02 addressed to achieve remediation objectives developed in accordance with 35 Ill. Adm. Code 742:

LR-NE-03	LR-NE-03-N020
LR-NE-03-E020	LR-NE-07

8. The groundwater beneath the facility is being and must continue to be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications. Groundwater activities associated with the uppermost aquifer are subject to the following conditions:

   a. The groundwater within the Parcel must still be addressed in accordance with Section V of the RCRA Part B permit and all subsequent permit modifications;

   b. The March 28, 2002 letter from the Illinois EPA approved the City of Wood River Ordinance 02-01 and Memorandum of Understanding (MOU) between the City and the Illinois EPA for use as an institutional control. This approved institutional control meets the criteria found in 35 Ill. Adm. Code 742.925, to exclude the groundwater ingestion exposure route, established in accordance with 35 Ill. Adm. Code Part 742, Subpart J. Therefore, no further action is required with respect to the groundwater at the Parcel, except as required by Condition 8(a) above; and

   c. In an Illinois EPA letter dated March 13, 2002, the Groundwater Management Zone (GMZ) for the uppermost aquifer at the facility was revised to include the areas where constituent concentrations in groundwater exceed Class I groundwater standards. Following Illinois EPA's review of the associated permit modification request dated May 10, 2002 for the revised GMZ, the Illinois EPA will modify the RCRA Part B permit to incorporate the revision to the GMZ.

9. Prior to completion of a corrective action associated with a GMZ the groundwater quality standards (Class I or Class II) are not applicable while the GMZ is being monitored and maintained. As stated in Condition 8 of the February 5, 2002 letter from the Illinois EPA to BP, a GMZ may not be used to restrict the use of groundwater in the vicinity of the subject property. A GMZ does not prohibit the use of groundwater within its boundary,

and therefore does not meet the definition of an institutional control as found in 35 Ill. Adm. Code 742.1000(c).

10. Additional field duplicates must be collected in future groundwater sampling events. One (1) field duplicate must be collected for every ten (10) samples collected.

11. Overall, corrective action activities at the former refinery facility must continue to be implemented in accordance with: (1) this letter, (2) 35 Ill. Adm. Code 620, 724.201, and 742; and (3) the requirements set forth in its RCRA Part B permit (Log No. B-147) and all other associated modifications or other comparable mechanism issued thereafter by the Illinois EPA for this facility.

12. A completed RCRA Corrective Action Certification form (copy enclosed) must accompany all submittals made to Illinois EPA regarding RCRA corrective action activities at this facility.

This letter shall constitute Illinois EPA's final decision on the subject submittal. Within 35 days of the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed ninety days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal 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 concerning groundwater-related aspects of this letter, please contact Ryan Bennett at (217) 558-2150. Questions about any other aspects of this letter should be directed to James K. Moore, P.E. at 217/524-3295.

Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:JKM:bjh\20021582s.doc

Attachments:
1. List of Area 2 Submittals
2. Topographic Map/Site Layout Map
3. Legal Description of Area 2
4. Portions of Area 2 Requiring an Engineered Barrier
5. Corrective Action Certification Form

Attachment 1
Log No. B-147-CA-14
Information Submitted by Facility

This document identifies the information received and reviewed by Illinois EPA as it evaluated a request for No Further Action in Area 2 of the Amoco/Main Plant Facility (Illinois EPA ID No 1191150001; USEPA ID No. ILD980700967). This information was assigned Log No. B-147-CA-14 by Illinois EPA.

1. A September 21, 2001 submittal from Frederick W. Johnson, URS, and Gregory S. Jevyak, BP which included a document entitled "Northeast Corner (Area 2) Land Reuse Investigation and Status Report."

2. A October 12, 2002 submittal from Keith T. Wilcoxson, URS, containing revised tables in response to comments received from Harry Chappel.

3. A December 20, 2001 submittal from Frederick W. Johnson, URS which included a document entitled "Addendum 1—Northeast Corner (Area 2) Land Reuse Investigation and Status Report."

4. A January 22, 2002 submittal from Gregory S. Jevyak, BP America, Inc., which included a document entitled "Addendum 2—Northeast Corner (Area 2) Land Reuse and Investigation Report

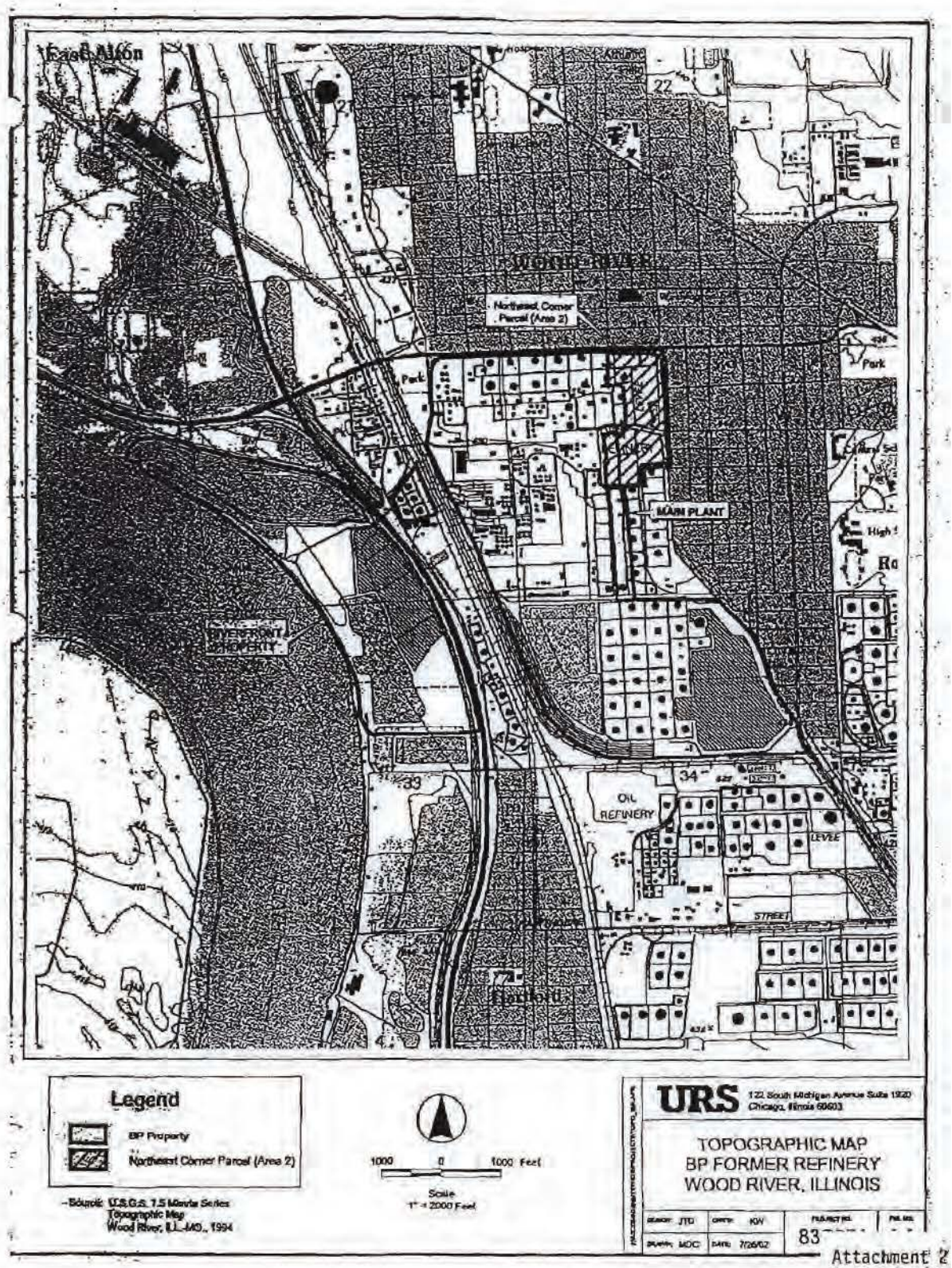
5. An April 5, 2002 submittal from Dennis A. Kasner and Frederick W. Johnson, URS which included a document entitled "Addendum 3—Northeast Corner (Area 2) Land Reuse Investigation and Status Report."

6. A May 16, 2002 letter report from Dennis A. Kasner and Frederick W. Johnson, URS which served as Addendum 4 to the Northeast Corner (Area 2) Land Reuse Investigation and Status Report.

7. A July 26, 2002 letter report from Dennis A. Kasner and Frederick W. Johnson, PE., URS, which contained additional information regarding issues addressed in Addendum 3.

8. A July 26, 2002 submittal from John Dennison, URS, which contained drawings of Area 2 and the legal description for Area 2.

att 1 b-147-ca-14



Attachment 2

Attachment 3
B-147-CA-14

This document contains the legal description for that portion of the former BP refinery in Wood River, Illinois (Illinois EPA Site No. 1191150001; USEPA ID No. ILD980700967) referred to as the "Northeast Corner" or "Area 2." Area 2 is 43.17 acres and is composed of two tracts (a 36.91 acre tract referred to as "Leased Tract 2" and a 6.26 acre tract referred to as "Leased Tract 3"). A legal description of each of these individual tracts is provided on the following pages.

att2 b-147-ca-14

M. B. CORLEW & ASSOCIATES, INC.

ENGINEERS & SURVEYORS
707 NORTH MAIN STREET • P. O. BOX 197
EDWARDSVILLE, ILLINOIS 62025-0597

Telephone: (618) 656-0470 • FAX (618) 656-0922

CIVIL
STRUCTURAL
SURVEYING
TRANSPORTATION
LAND PLANNING
DRAINAGE

Description For
Triad Industries

Leased Tract 2
See Corlew Plat CC 2051A

(36.91 Acres in the Northeast Corner of Amoco Main Plant in Wood River, IL)

April 18, 2000
Revised October 1, 2001

A tract of land in the Southeast Quarter of the Northwest Quarter and in the Northeast Quarter of the Southwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the southeast corner of the Southeast Quarter of the Northwest Quarter of Section 27, Township 5 North, Range 9 West; thence North 87° 13' 15" West, along the south line of said Quarter Quarter Section, a distance of 60.11 feet to the west right of way line of Sixth Street (Old Alton-Edwardsville Road, 60 feet wide), the POINT OF BEGINNING of the tract herein described; thence South 00° 41' 06" West, along said west right of way line, a distance of 3.37 feet; thence South 00° 11' 08" East, continuing along said west right of way line, a distance of 537.69 feet; thence North 88° 55' 51" West a distance of 511.68 feet; thence South 01° 17' 38" East a distance of 287.59 feet; thence South 82° 51' 37" West a distance of 267.69 feet; thence North 00° 37' 37" West a distance of 862.36 feet; thence North 00° 23' 02" East a distance of 205.96 feet; thence South 63° 47' 13" East a distance of 67.39 feet; thence North 00° 18' 42" West a distance of 533.37 feet; thence North 07° 12' 26" West a distance of 32.06 feet; thence North 20° 48' 32" West a distance of 36.49 feet; thence North 33° 45' 54" West a distance of 36.12 feet; thence North 54° 50' 03" West a distance of 33.22 feet; thence North 88° 59' 50" West a distance of 233.69 feet; thence North 08° 34' 18" East a distance of 210.75 feet; thence North 01° 07' 40" East a distance of 324.73 feet; thence South 88° 13' 21" East a distance of 719.43 feet; thence South 73° 53' 06" East a distance of 103.38

feet; thence South 84° 54' 03" East a distance of 100.13 feet; thence South 33° 47' 40" East a distance of 83.60 feet; thence South 00° 41' 06" East a distance of 1242.50 feet to the point of beginning, containing 36.91 acres.

I, the undersigned Registered Illinois Land Surveyor, do hereby declare that the above is a legal description made under my supervision.

Larry L. Stahlhut (Seal)
Larry L. Stahlhut, RLS #2214
My License Expires 11/30/2002

M. B. CORLEW & ASSOCIATES, INC.

ENGINEERS & SURVEYORS
701 NORTH MAIN STREET • P. O. BOX 597
EDWARDSVILLE, ILLINOIS 62025-0597

Telephone: (618) 656-0470 • FAX (618) 656-0922

CIVIL
STRUCTURAL
SURVEYING
TRANSPORTATION
LAND PLANNING
DRAINAGE

Description For
Triad Industries

Leased Tract 3
See Corlew Plat CC 2051A

(6.26 Acres in the Northeast Corner of Amoco Main Plant in Wood River, Illinois)

April 18, 2000
Revised October 1, 2001

A tract of land in the Southeast Quarter of the Northwest Quarter and in the Northeast Quarter of the Southwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

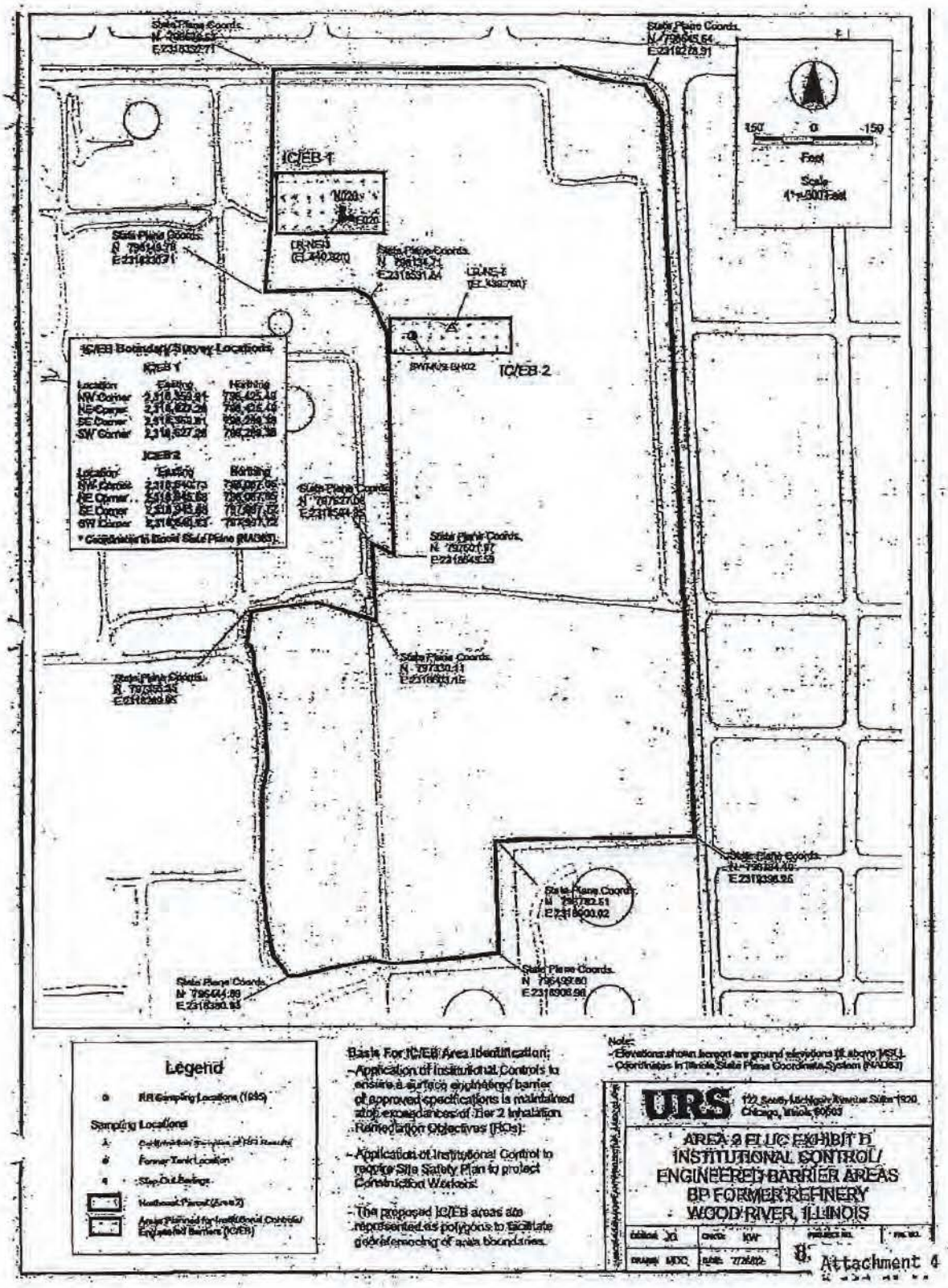
Commencing at the southeast corner of the Southeast Quarter of the Northwest Quarter of Section 27, Township 5 North, Range 9 West; thence North 87° 13' 15" West, along the south line of said Quarter Quarter Section, a distance of 60.11 feet to the west right of way line of Sixth Street (Old Alton-Edwardsville Road, 60 feet wide); thence South 00° 41' 06" West, along said west right of way line, a distance of 3.37 feet; thence South 00° 11' 08" East, continuing along said west right of way line, a distance of 537.69 feet; thence North 88° 55' 51" West a distance of 511.68 feet; thence South 01° 17' 38" East a distance of 287.59 feet; thence South 82° 51' 37" West a distance of 267.69 feet to the POINT OF BEGINNING of the tract herein described; thence North 85° 28' 20" West a distance of 66.31 feet; thence South 76° 05' 07" West a distance of 176.24 feet; thence North 86° 57' 09" West a distance of 19.35 feet; thence North 32° 52' 02" West a distance of 68.25 feet; thence North 09° 08' 23" West a distance of 79.65 feet; thence North 00° 01' 05" West a distance of 331.70 feet; thence North 10° 17' 24" East a distance of 94.49 feet; thence North 01° 16' 11" West a distance of 140.22 feet; thence North 14° 34' 25" West a distance of 157.07 feet; thence North 08° 34' 56" East a distance of

80.46 feet; thence North 83° 50' 58" East a distance of 167.06 feet; thence South 70° 15' 17" East a distance of 153.53 feet; thence South 00° 37' 37" East a distance of 862.36 feet to the point of beginning, containing 6.26 acres.

I, the undersigned Registered Illinois Land Surveyor, do hereby declare that the above is a legal description made under my supervision.

(Seal)
Larry L. Stahlhut, RLS #2214
My License Expires 11/30/2002

MBC 99-168


ICEB-1
ICEB-2
IC/EB Boundary Survey Locations
Legend
Basis For IC/EB Area Identification:
Note:
URS
AREA 9 ELUC EXHIBIT D
INSTITUTIONAL CONTROL/
ENGINEERED BARRIER AREAS
BP FORMER REFINERY
WOOD RIVER, ILLINOIS
Attachment 4

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 - (217) 782-2829
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, ILLINOIS 60601 - (312) 814-6026

PAT QUINN, GOVERNOR LISA BONNETT, INTERIM DIRECTOR

217/524-3300

November 3, 2011

CERTIFIED MAIL
7009 3410 0002 3751 3834

Mr. Tom Tunnicliff
Environmental Business Manager
Atlantic Richfield Company
301 Evans Avenue
P.O. Box 167
Wood River, Illinois 62095-0167

Re: 1191150001 – Madison County
BP Products North America – Main Plant
ILD980700967
Log No. B-147R-CA-12
Received: August 12, 2011
RCRA Permit

Dear Mr. Tunnicliff:

This is in response to an August 11, 2011 submittal made on behalf of BP Products North America by George Valera and Ryan P. Hartley, P.E., URS Corporation regarding certain RCRA corrective action activities at the above-referenced facility. The RCRA corrective action program set forth in the subject facility's RCRA permit broke the facility up into several areas and required that each area be adequately remediated.

One of the areas being addressed by the RCRA corrective action program at this facility is referred to as "Area 2" which is located in the northeastern corner of the facility. A drawing showing the location of Area 2 within the facility is provided in Attachment 1 to this letter. On August 13, 2002, Illinois EPA issued a letter indicating that, subject to certain conditions and modifications, No Further Action was necessary at Area 2. One of the conditions of this letter required BP to establish an institutional control to place certain restrictions on future activities in this area. Illinois EPA approved a draft letter of the required institutional control, an Environmental Land Use Control (ELUC) on January 29, 2003 and BP then filed the ELUC with the Madison County Recorder on February 5, 2003 as Document No. 2003R08605.

A revision of the Area 2 ELUC has become necessary as BP is donating a certain portion of Area 2 to the City of Wood River for use as a storm water basin (a drawing showing the location of this parcel of land is provided as Attachment 2 to this letter). The August 11, 2011 submittal mentioned above contained a proposed ELUC which would be established for the 9.56 acre parcel of land being donated to the city; it must be noted that this parcel only extends from the ground surface to an elevation depth of 418 mean sea level (approximately 25 feet below ground surface).

Illinois EPA has reviewed the draft ELUC for the parcel of land within Area 2 at the BP Products North America Inc. facility at 301 Evans Avenue in Wood River, Illinois which is to be donated to the City of Wood River and hereby approves it subject to the following conditions and modifications:

1. A legal description of the portion of Area 2 of the facility covered by the ELUC being approved herein is provided in Attachment 3. According to information provided by Mr. Valera, the PIN for this parcel is 19-2-08-27-14-301-003.

2. The recorded ELUC will supersede the ELUC recorded on February 5, 2003 for this property as Document No. 2003R08605.

3. The final ELUC filed with the Office of the Recorder or Registrar of Titles for Madison County must include a dated and notarized signature of the property owner.

4. The proposed ELUC places the following restrictions on the subject property:

    a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

    b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 Ill. Adm. Code 742;

    c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

    d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

    e. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

(i) Field Screening. Soil shall be considered "potentially contaminated "if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings >100 units) of VOCs in soil.

(ii) Laboratory Analysis. Soils exhibiting potential contamination based on the visual discoloring or a field screening test for VOCs will either be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

(iii) Determination of Non-Contaminated Soils. Soils will be considered non-contaminated if; (1) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives ("ROs") developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e (i) above.

(iv) Management of Non-Contaminated Soils. Soils that are considered to be not contaminated, as determined by field screening or laboratory results, may be reused as fill in other areas of the former BP Refinery Main Plant Facility. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(v) Management of Contaminated Soils. If the soil is found to be contaminated, then it must be sent off site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(vi) Documentation. All of these activities must be documented in the facility's operating records.

5. Within forty-five days of the date of the this letter, the ELUC approved herein must be fully executed, notarized and recorded in the chain of title for the subject property in the Office of the Recorder or Registrar of Titles for Madison County, along with this letter. The approved ELUC will not become effective until officially recorded in the chain of custody for the subject property.

6. Within 30 days after filing the approved ELUC in accordance with Condition 3 above, a certified true copy of the filed ELUC, along with certification for the Office of the Recorder or Registrar of Titles for Madison County that the ELUC was properly filed, must be submitted to Illinois EPA.

7. Failure to comply with the limitations or requirements of an ELUC may result in voidance of an Agency no further remediation determination in accordance with the program under which the determination was made. The failure to comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Illinois Environmental Protection Act.

8. The limitations or requirements of the ELUC apply in perpetuity or until:

   a. The Illinois EPA issues a new no further remediation determination approving modification or removal of the limitation/requirement; and

   b. A release or modification of the land use limitation is filed on the chain of title for the property that is the subject of the ELUC.

9. At no time shall this site be used in a manner inconsistent with the land use limitations established in the approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved, and (2) a new no further action determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 Ill. Adm. Code 742. Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a: (1) request to amend the certification of closure; or (2) a permit modification request. Sufficient information must be provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC 742.

10. The original and two (2) copies of all certifications, logs, or reports which are required to be submitted to the Illinois EPA by the facility should be mailed to the following address:

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

11. Overall, corrective action activities at the subject facility must continue to be carried out in accordance with: (1) 35 Ill. Adm. Code 620, 724, and 742; and (2) the requirements set forth in its RCRA permit (Log No. B-147R) and all the other associated modifications/letters issued thereafter by the Illinois EPA for this facility.

This action shall constitute Illinois EPA's final action on the subject submittal. Within 35 days after the date of mailing of Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of Illinois EPA. The 35-day period for petitioning for a hearing may be extended for a period of time not to exceed 90 days

by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this letter, your submittal(s) 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 this matter, please contact Karen Nachtwey at 217/524-3233 of my staff.

Sincerely,

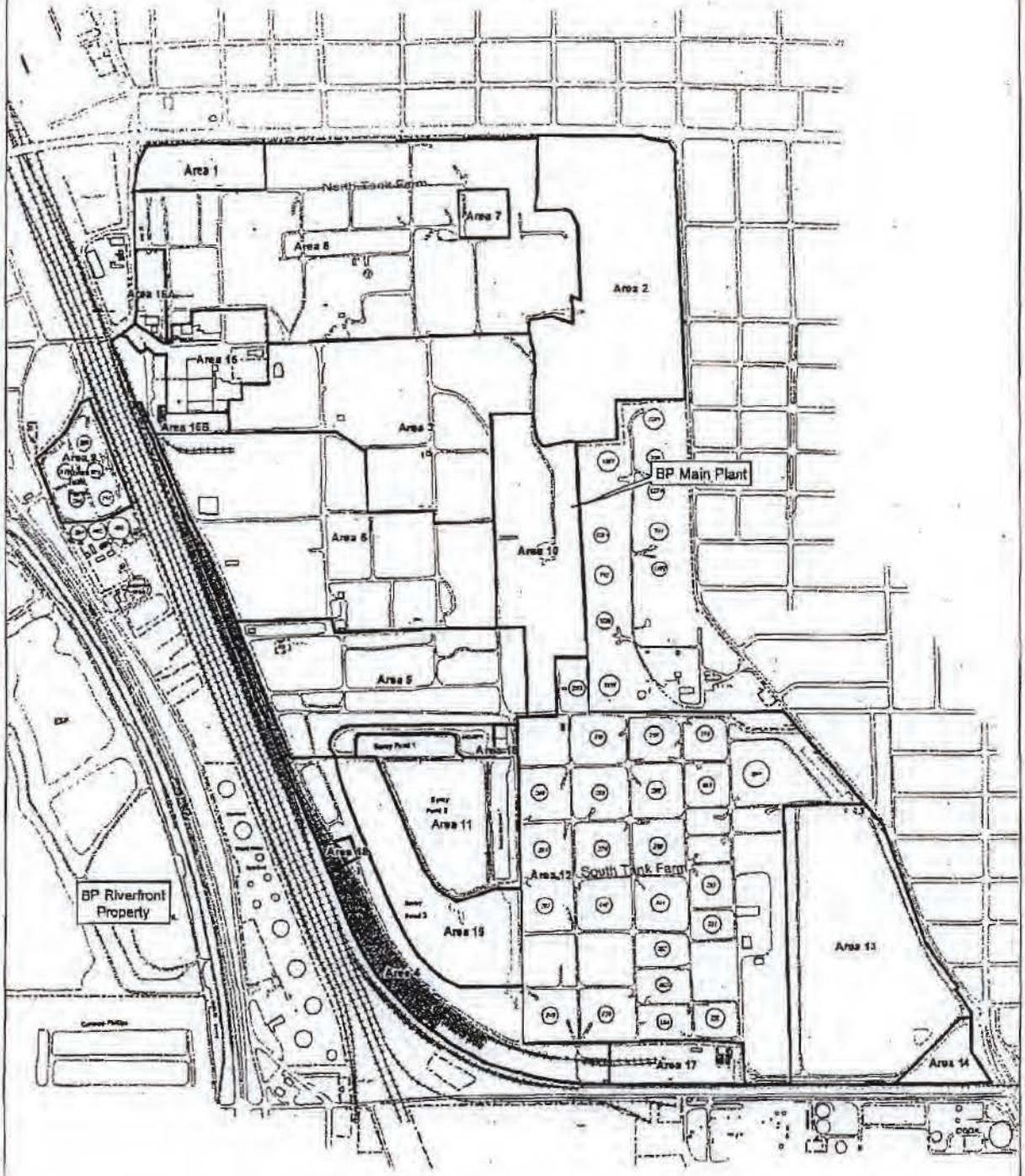
Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land

SFN:KEN:bjh\111636s.doc
JCH

Attachment 1 – Site Layout Map
Attachment 2 - Map Showing Donated Parcel within Area 2
Attachment 3 – Legal Description of Donated Parcel

cc: Ryan P. Hartley, URS Corporation

Attachment 1



Property of BP Products North America Inc.

Main Plant Land Reuse Parcels

Area 1 - Northwest Parcel*
Area 2 - Northeast Parcel*
Area 3 - North Central Parcel
Area 4 - Rail Yard Area
Area 5 - South Central Parcel
Area 6 - Former APAC
Area 7 - Alky Plant
Area 8 - North Tank Farm
Area 9 - Korea Tank Farm
Area 10 - East Tank Farm
Area 11 - Spray Ponds (1, 2, and Intake Channel)
Area 12 - South Tank Farm
Area 13 - Wildlife Enhancement Area
Area 14 - Southeast Corner
Area 15 - Administration Building Parcel
Area 16 - Marketing Operation Area
Area 17 - LPG Caverns Area
Area 18 - North Cell of Spray Pond 1 and South Flare Pit and Surrounding Area
Area 19 - Spray Pond 3 Area

N

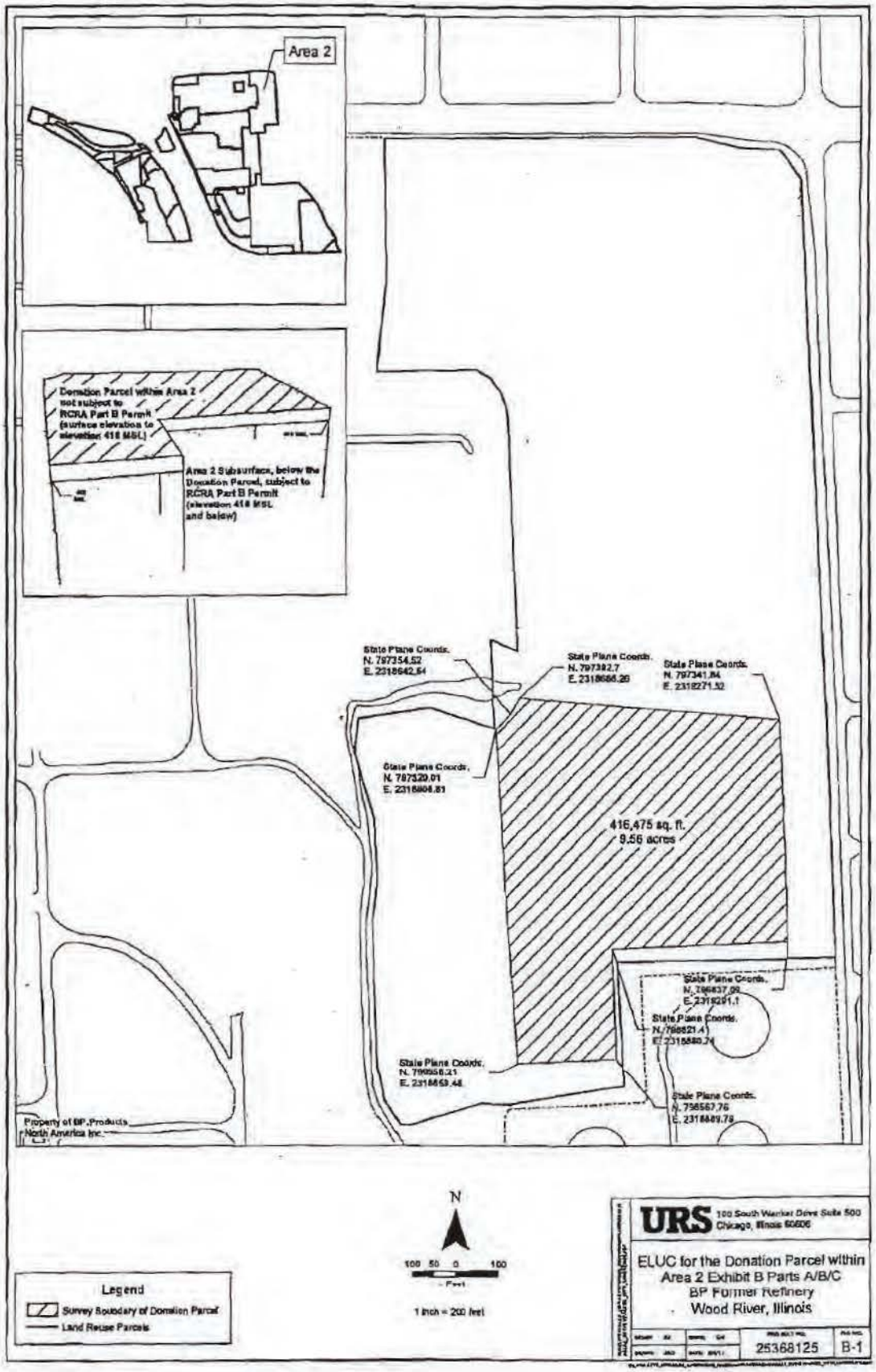
325 0 325
Feet

1 inch equals 750 feet

URS 100 South Wacker Drive Suite 500 Chicago, Illinois 60606

Main Plant Property
Land Reuse Parcels
BP Former Refinery
Wood River, Illinois

B-147R-CA-12
Attachment 2



B-147R-Ch-12
Attachment 3

Exhibit A

Legal Description

The portion of the following described property located above the elevation of 418 feet above mean sea level. The approximate "thickness" of the Donation Parcel is 23 feet.

Part of the West Half of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the northeast corner of the Southwest Quarter of said Section 27; thence North 89 degrees 13 minutes 29 seconds West, 60.11 feet to the westerly right of way of Sixth Street, formerly known as Old Alton and Edwardsville Road; thence South 02 degrees 41 minutes 19 seconds East, along said right of way, 3.38 feet; thence South 02 degrees 11 minutes 21 seconds East, 3.90 feet; thence North 85 degrees 11 minutes 49 seconds West, 111.30 feet to the Point Of Beginning; thence South 02 degrees 13 minutes 17 seconds East, 505.12 feet; thence South 87 degrees 48 minutes 39 seconds West, 410.66 feet; thence South 02 degrees 02 minutes 36 seconds East 253.81 feet; thence South 87 degrees 37 minutes 30 seconds West, 230.51 feet; thence North 04 degrees 15 minutes 04 seconds West, 273.85 feet; thence North 04 degrees 10 minutes 26 seconds West, 133.01 feet; thence North 03 degrees 19 minutes 34 seconds West, 356.65 feet; thence North 44 degrees 20 minutes 55 seconds East, 48.26 feet; thence North 32 degrees 50 minutes 39 seconds East, 35.75 feet; thence North 27 degrees 57 minutes 32 seconds East, 9.22 feet; thence South 85 degrees 11 minutes 49 seconds East, 607.40 feet to the Point of Beginning, containing 9.56 acres or 416,475 square feet.

PIN NO. 19-2-08-27-14-301.003

Atlantic Richfield Company

Memorandum

DATE: December 1, 2011

TO: Madison County Recorder's Office, Edwardsville, Illinois - File

FROM: Thomas G. Tunnicliff, BP Products North America Inc.

SUBJECT: Minor Corrections to the Approved Donation Parcel within Area 2 ELUC dated November 3, 2011

The Illinois Environmental Protection Agency (Illinois EPA) approved the Environmental Land Use Control (ELUC) for the Donation Parcel within Area 2 on November 3, 2011. After review of this document, the following inconsistencies were identified:

Donation Parcel within Area 2 ELUC

- First page, last sentence, last paragraph - a reference to the approximate depth of the donation parcel indicates 25 feet. This should be 23 feet as stated in the August 11, 2011 submittal.
- Section 3.f of the Draft ELUC states the following: "BP is allowed access to the property for any groundwater monitoring or remediation efforts". This was not mentioned in the Illinois EPA letter. However, the Illinois EPA approved the Draft ELUC with this language and will be recorded as such.
- The PIN No. found in Attachment 3 needs to be changed from 19-2-08-27-14-301.003 to 19-2-08-27-14-301-003 which is changing the "." to "-".

Distribution
Stephen F. Nightingale, Illinois EPA
Ryan Hartley, URS Corporation

END OF DOCUMENT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, DIRECTOR

217/524-3300

April 21, 2017

CERTIFIED MAIL
7014 2120 0002 3289 8030

BP Products North America Inc.
Attn: Lori G. Littrell, Operations Project Manager
150 West Warrenville Road
Naperville, Illinois 60563

Re: 1191150001 -- Madison County
BP Products North America – Main Plant
ILD980700967
Log No. B-147R-CA-78
Received: March 30, 2017
RCRA Permit

Dear Ms. Littrell:

This is in partial response to your March 29, 2017 submittal regarding RCRA corrective action activities at the above-referenced RCRA permitted facility (Log No. B-147R and associated modifications). The subject facility is a closed oil refinery which is approximately 600 acres in size and located at 301 Evans Avenue, Wood River, Illinois. The RCRA corrective action program set forth in the subject facility's RCRA permit requires that BP properly remediate the entire facility. The RCRA permit broke the facility up into nineteen areas and sets forth a process for remediating the facility on an area by area basis. In addition, this permit contains provisions for removing remediated areas from the definition of the facility covered by the RCRA permit, thus allowing those areas to be more easily re-developed.

One of the areas being addressed by the RCRA corrective action program at this facility is referred to as "Area 2" which is located in the northeastern corner of the facility. A drawing showing the location of Area 2 within the facility is provided in Attachment 1 to this letter. On August 13, 2002, Illinois EPA issued a letter indicating that, subject to certain conditions and modifications, no further action was necessary at Area 2. One of the conditions of this letter required BP to establish an institutional control to place certain restrictions on future activities in this area. Illinois EPA approved a draft Environmental Land Use Control (ELUC) on January 29, 2003 which would establish the required institutional controls for Area 2. BP then filed the ELUC with the Madison County Recorder on February 5, 2003 as Document No. 2003R08605.

BP subsequently modified the ELUC for Area 2 to account for the fact that it desired to donate a 9.56 acre parcel within Area 2 to the City of Wood River for use as a storm water detention basin. This required that BP establish two new separate ELUCs which would supersede the original one filed on February 5, 2003—one for the parcel of land being donated to the City of

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Mall St., Collinsville, IL 62234 (618)346-5120
9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
412 SW Washington St., Suite D, Peoria, IL 61602 (309)671-3022
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601

Wood River and one for the remainder of Area 2 being retained by BP. As such, a draft ELUC for the parcel of land being donated to the City of Wood River was approved by Illinois EPA on November 3, 2011 and filed with the Madison County Recorder as Document No. 2011R45888 on December 7, 2011. In addition, a draft ELUC for that portion of Area 2 retained by BP was approved by Illinois EPA in a second letter dated on November 3, 2011 and filed with the Madison County Recorder as Document No. 2011R45887 on December 7, 2011.

BP is now donating a second parcel (7.5 acres in size) within Area 2 to the City of Wood River for the construction of a Police Station (this parcel is referred to as the "Police Station Donation Parcel"). Thus, BP must again establish two new ELUCs to replace the one filed on December 7, 2011 as Document No.2011R45887 -one for the Police Station Donation Parcel and one for the remainder of Area 2 being retained by BP. The inset map in Attachment 1 to this letter shows the location of the Police Station Donation Parcel within Area 2. It must be noted that the parcel being donated to the City only extends downward to a horizontal plane at elevation 428' above mean sea level located approximately 15' below the ground surface. BP will retain ownership of the parcel which exists below this plane as well as the remainder of Area 2. A legal description of the portion of Area 2 being retained by BP is provided as Attachment 2 to this letter.

A draft ELUC for the portion of Area 2 being retained by BP as it donates the 7.5 acre parcel within Area 2 as described above to the City of Wood River was approved by Illinois EPA on February 28, 2017 (Log No. B-147R-CA-65). However, BP found that minor revisions needed to be made to this ELUC and Illinois EPA's approval letter before they could be filed with the Madison County, Illinois Recorder's Office. Your March 29, 2017 submittal described these minor revisions and also included a revised draft ELUC for the portion of Area 2 being retained by BP.

Illinois EPA reviewed your March 29, 2017 submittal, including the revised draft ELUC for the portion of Area 2 being retained by BP, as a request to modify the RCRA corrective action program for the BP/Main Plant facility and hereby approves it subject to the following conditions and modifications:

1. A legal description of the portion of Area 2 within the BP/Main Plant facility covered by the ELUC being approved herein is provided in Attachment 2 to this letter. The Parcel Index Nos. for this parcel are:

   19-1-08-27-10-101-001.001
   19-1-08-27-14-301-001.001
   19-1-08-27-14-301-001.002
   19-2-08-27-14-301-004 (only exists below 418' mean sea level)
   19-2-08-27-10-101-003 (only exists below 428' mean sea level).

2. Parcel 19-2-08-27-10-101-003 is located directly beneath a 7.5 acre parcel being donated to the City of Wood River (The Parcel Index No. for the parcel being donated to the City of Wood River is 19-2-08-27-10-101-002); the parcel being donated only extends vertically

from the ground surface downward to a horizontal plane at elevation 428' above mean sea level (this horizontal plane is approximately 15' below the ground surface).

3. A copy of this letter must be filed along with the draft ELUC being approved herein with the Office of the Recorder for Madison County, Illinois.

4. As indicated above, Illinois EPA determined on August 13, 2002 that no further action was necessary for the soils within Area 2 provided an ELUC was established which placed certain restrictions on future activities within Area 2. The draft ELUC being approved herein establishes the restrictions required by Illinois EPA's August 13, 2002 letter for the portion of Area 2 being retained by BP.

5. Once the draft ELUC approved herein is recorded, it will supersede the ELUC recorded on December 7, 2011 as Document No. 2011R45888 as it pertains to the portion of Area 2 being retained by BP as identified in Condition 1 above.

6. The final ELUC filed with the Office of the Recorder for Madison County, Illinois must include a dated and notarized signature of the property owner.

7. The proposed ELUC places the following restrictions on the subject property:

   a. All groundwater, including the perched groundwater, under the Property shall not be used as a potable supply of water, and any contaminated groundwater and/or soil that is removed, excavated, or disturbed from the Property must be handled in accordance with all applicable laws and regulations;

   b. The Property shall not be used for Residential use. The Property shall be used solely and exclusively for "industrial/commercial property" use as it is defined in 35 Ill. Adm. Code 742;

   c. Any excavation and subsurface construction work on the Property shall be conducted in accordance with a site health and safety plan designed to restrict direct worker exposure to impacted soils on the Property, and all the construction workers shall be equipped with appropriate personal protective equipment as required and specified by the site health and safety plan;

   d. The soil within the Property shall remain in place, except where necessary to remove it for construction activities;

   e. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated. This determination shall be made by a visual inspection and by subjecting the soils to a field screening test for volatile organic compounds ("VOCs"). The soil evaluation and management procedures shall be as follows:

(1) Field Screening. Soil shall be considered "potentially contaminated "if: (1) there is a visual discoloring of the soil indicative of hydrocarbon product; or (2) a field screening test for VOCs detects the presence (i.e., PID readings >100 units) of VOCs in soil.

(2) Laboratory Analysis. Soils exhibiting potential contamination based on the visual discoloring or a field screening test for VOCs will either be sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) laboratory analysis, or considered contaminated without analytical testing.

(3) Determination of Non-Contaminated Soils. Soils will be considered non contaminated if: (1) laboratory analytical data indicates constituents in soil are less than the Illinois EPA approved site specific remediation objectives ("ROs") developed for the Property; or (2) visual inspection or field screening indicates soils are below the threshold levels given in 3.e (i) above.

(4) Management of Non-Contaminated Soils. Soils that are considered to be not contaminated, as determined by field screening or laboratory results, may be reused as fill in other areas of the former BP Refinery Main Plant Facility. Soils may be transported off-site as clean fill if laboratory data indicates constituents are less than TACO residential standards.

(5) Management of Contaminated Soils. If the soil is found to be contaminated, then it must be sent off site for disposal as a special waste in accordance with 35 Ill. Adm. Code, Subtitle G: Waste Disposal.

(6) Documentation. All of these activities must be documented in the facility's operating records.

f. The areas designated as "EB 1" and "EB 2A" of the Property, as shown in Attachment 3 to this letter and in Exhibit B 2 of the draft ELUC, requires an engineered barrier to restrict potential exposure to soils beneath the barrier. Ten feet of the existing soil in place over the contaminated soil (or a comparable designed engineered control) shall be used as the engineered barrier and must remain in place over the contaminated soils. Prior to commencement of any future excavation and/or construction in or near the areas containing the engineered barriers, a safety plan for these areas is required that is consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, particularly in 29 CFR 1910 and 1926; state and local regulations and other U.S. EPA guidance as provided. At a minimum, the plan should address potential worker exposure if future excavation and construction activities occur within the contaminated soil. Any contaminated soil removed, or excavated from, or disturbed at the areas containing the engineered barrier must be handled in accordance with all applicable laws and regulations.

g. BP is allowed access to the Property for any groundwater monitoring or remediation efforts.

9. Within forty-five days of the date of the this letter, the LUC approved herein must be fully executed, notarized and recorded in the chain of title for the subject property in the Office of the Recorder for Madison County, Illinois, along with this letter. The approved ELUC will not become effective until officially recorded in the chain of custody for the subject property.

10. Within 30 days after filing the approved ELUC in accordance with Condition 9 above, a certified true copy of the filed ELUC, along with certification for the Office of the Recorder for Madison County, Illinois that the ELUC was properly filed, must be submitted to Illinois EPA.

11. Failure to comply with the limitations or requirements of an ELUC may result in voidance of Illinois EPA's no further remediation determination in accordance with the program under which the determination was made. The failure to comply with the limitations or requirements of an ELUC may also be grounds for an enforcement action pursuant to Title VIII of the Illinois Environmental Protection Act.

12. The limitations or requirements of the ELUC apply in perpetuity or until:

    a. The Illinois EPA issues a new no further remediation determination approving modification or removal of the limitation/requirement; and

    b. A release or modification of the land use limitation is filed on the chain of title for the property that is the subject of the ELUC.

13. At no time shall this site be used in a manner inconsistent with the land use limitations established in the approved ELUC, unless: (1) attainment of objectives appropriate for the new land use is achieved, and (2) a new no further action determination is obtained from Illinois EPA and subsequently recorded in accordance with 35 Ill. Adm. Code 742. Requests to release or modify an ELUC must be formally requested in writing from Illinois EPA as a: (1) request to amend the certification of closure; or (2) a permit modification request. Sufficient information must be provided in these requests to demonstrate that the requested change meets all the requirements of 35 IAC 742.

14. A completed Corrective Action Certification form must accompany all corrective-action related information submitted to Illinois EPA. To allow for the proper review of each submittal, please provide the original and one copy of each submittal (two copies if the submittal is groundwater related.

15. The original and two (2) copies of all certifications, logs, or reports which are required to be submitted to the Illinois EPA by the facility should be mailed to the following address:

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

16. Overall, corrective action activities at the subject facility must continue to be carried out in accordance with: (1) 35 Ill. Adm. Code 620, 724, and 742; and (2) the requirements set forth in its RCRA permit (Log No. B-147R) and all the other associated modifications letters issued thereafter by the Illinois EPA for this facility.

Work required by this letter, your submittals 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 this matter, please contact Jim Moore of my staff at 217/524-3295.

Sincerely,

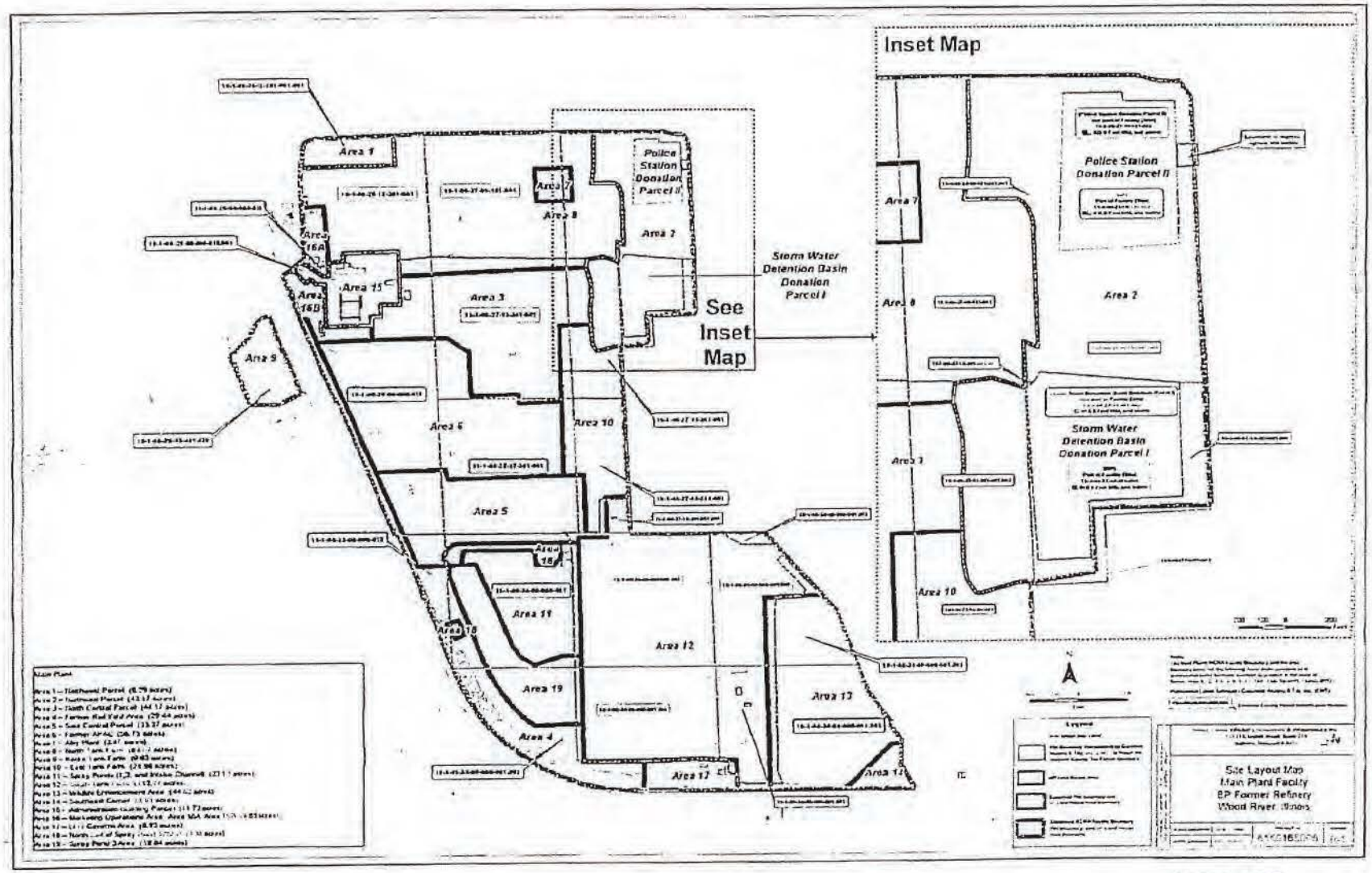
Joyce L. Munie, P.E., Manager
Permit Section
Division of Land Pollution Control
Bureau of Land

JLM:JKM:1191150001-RCRA B 147R CA 78

Attachments: 1 – Site Layout Map
2 – Legal Description of Portion of Area 2 Retained by BP
3 – Location of Engineered Barriers Within the Portion of Area 2 Retained by BP

cc: Allison Crane (via e-mail)

cc: Bureau File
Collinsville Region
Terri Blake Myers
Takako Halteman
Amy Doley
Jim Moore



B-147R-CA-78
Attachment 1
Site Layout Map

Exhibit A

Legal Descriptions and Parcel IDs

The Property which is the subject of this ELUC, also referred to as Area 2, is located in the City of Wood River, Madison County, State of Illinois, within the BP Main Plant Facility whose address is 301 Evans Avenue, Wood River, Illinois and more particularly described as (note that Attachment B-1 depicts the layout of the BP Main Plant Facility, and the Property (Area 2) which is the subject of this ELUC):

LEGAL DESCRIPTION

The portion of the following described property:

Part of the West half of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the northeast corner of the Southwest Quarter of said Section 27; thence North 89 degrees 13 minutes 29 seconds West, 60.11 feet to the westerly right of way of Sixth Street, formerly known as Old Alton Edwardsville Road, and the POINT OF BEGINNING; thence South 02 degrees 41 minutes 19 seconds East, along said right of way, 3.38 feet; thence South 02 degrees 11 minutes 21 seconds East, 537.69 feet; thence South 89 degrees 03 minutes 56 seconds West, 511.68 feet; thence South 03 degrees 17 minutes 51 seconds East, 287.59 feet; thence South 80 degrees 51 minutes 24 seconds West, 267.69 feet; thence North 87 degrees 28 minutes 33 seconds West, 15.25 feet; thence North 87 degrees 28 minutes 33 seconds West, 51.06 feet; thence South 74 degrees 04 minutes 54 seconds West, 176.24 feet; thence North 88 degree 57 minutes 22 seconds West, 19.35 feet; thence North 34 degrees 52 minutes 15 seconds West, 68.25 feet; thence North 11 degrees 08 minutes 36 seconds West, 79.65 feet; thence North 02 degrees 01 minute 18 seconds West, 331.70 feet; thence North 08 degrees 17 minutes 11 seconds East, 94.49 feet; thence North 03 degrees 16 minutes 24 seconds West, 140.22 feet; thence North 16 degrees 34 minutes 48 seconds West, 157.07 feet; thence North 06 degrees 34 minutes 43 seconds East, 80.46 feet; thence North 81 degrees 50 minutes 44 seconds East, 167.06 feet; thence South 72 degrees 15 minutes 30 seconds East, 153.53 feet; thence North 01 degree 37 minutes 11 seconds West, 205.96 feet; thence South 65 degrees 47 minutes 26 seconds East, 67.39 feet; thence North 02 degrees 18 minutes 55 seconds West, 533.37 feet; thence North 09 degrees 12 minutes 39 seconds West, 32.06 feet; thence North 22 degrees 48 minutes 45 seconds West, 36.49 feet; thence North 35 degrees 46 minutes 07 seconds West, 36.12 feet; thence North 56 degrees 50 minutes 16 seconds West, 33.22 feet; thence South 88 degrees 59 minutes 56 seconds West, 233.69 feet; thence North 06 degrees 34 minutes 04 seconds East; 210.75 feet; thence North 00 degrees

52 minutes 34 seconds West, 324.73 feet to the southerly right of way of Illinois Route 143, also known as Madison Avenue; thence continuing along said right of way for the following four courses: 1) North 89 degrees 46 minutes 26 seconds East, 719.43 feet; 2) South 75 degrees 53 minutes 19 seconds East, 103.38 feet; 3) South 86 degrees 54 minutes 16 seconds East, 100.13 feet; 4) South 35 degrees 47 minutes 53 seconds East, 83.60 feet to the westerly right of way of Sixth Street, formerly known as Old Alton Edwardsville Road; thence South 02 degrees 41 minutes 19 seconds East, 1242.49 feet to the POINT OF BEGINNING, containing 43.17 acres or 1,880,551 feet.

PIN: 19-1-08-27-10-101-001.001;
19-1-08-27-14-301-001.001;
19-1-08-27-14-301-001.002;
19-2-08-27-14-301-004 (Elevation 418 Feet MSL and below); and
19-2-08-27-10-101-003 (Elevation 428 Feet MSL and below)

EXCEPT,

1. Storm Water Detention Basin Donation Parcel 1

REAL ESTATE TAX INDEX #19-2-08-27-14-301-003
LEGAL DESCRIPTION

The portion of the following described property located above the elevation of 418 feet above mean sea level. The approximate "thickness" of the Donation Parcel is 23 feet.

Part of the West half of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, Madison County, Illinois, described as follows:

Commencing at the northeast corner of the Southwest Quarter of said Section 27; thence North 89 degrees 13 minutes 29 seconds West, 60.11 feet to the westerly right of way of Sixth Street, formerly known as Old Alton Edwardsville Road; thence South 02 degrees 41 minutes 19 seconds East, along said right of way, 3.38 feet; thence South 02 degrees 11 minutes 21 seconds East, 3.90 feet; thence North 85 degrees 11 minutes 49 seconds West, 111.30 feet to the Point Of Beginning; thence South 02 degrees 13 minutes 17 seconds East, 505.12 feet; thence South 87 degrees 48 minutes 39 seconds West, 410.66 feet; thence South 02 degrees 02 minutes 36 seconds East 253.81 feet; thence South 87 degrees 37 minutes 30 seconds West, 230.51 feet; thence North 04 degrees 15 minutes 04 seconds West, 273.85 feet; thence North 04 degrees 10 minutes 26 seconds West, 133.01 feet; thence North 03 degrees 19 minutes 34 seconds West, 356.65 feet; thence North 44 degrees 20 minutes 55 seconds East, 48.26 feet; thence North 32 degrees 50 minutes 39 seconds East, 35.75 feet; thence North 27 degrees 57 minutes 32 seconds East, 9.22 feet; thence

South 85 degrees 11 minutes 49 seconds East, 607.40 feet to the Point of Beginning, containing 9.56 acres or 416,475 square feet.

PIN: 19-2-08-27-14-301-003 (Ground Surface Down to Elevation 418 Feet MSL)

AND EXCEPT,

2. Police Station Donation Parcel II

REAL ESTATE TAX INDEX #19-2-08-27-10-101-002
LEGAL DESCRIPTION

The portion of the following described property located above the elevation of 428 feet above mean sea level. The approximate "thickness" of the Donation Parcel is 15 feet.

A tract of land situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described ae follows:

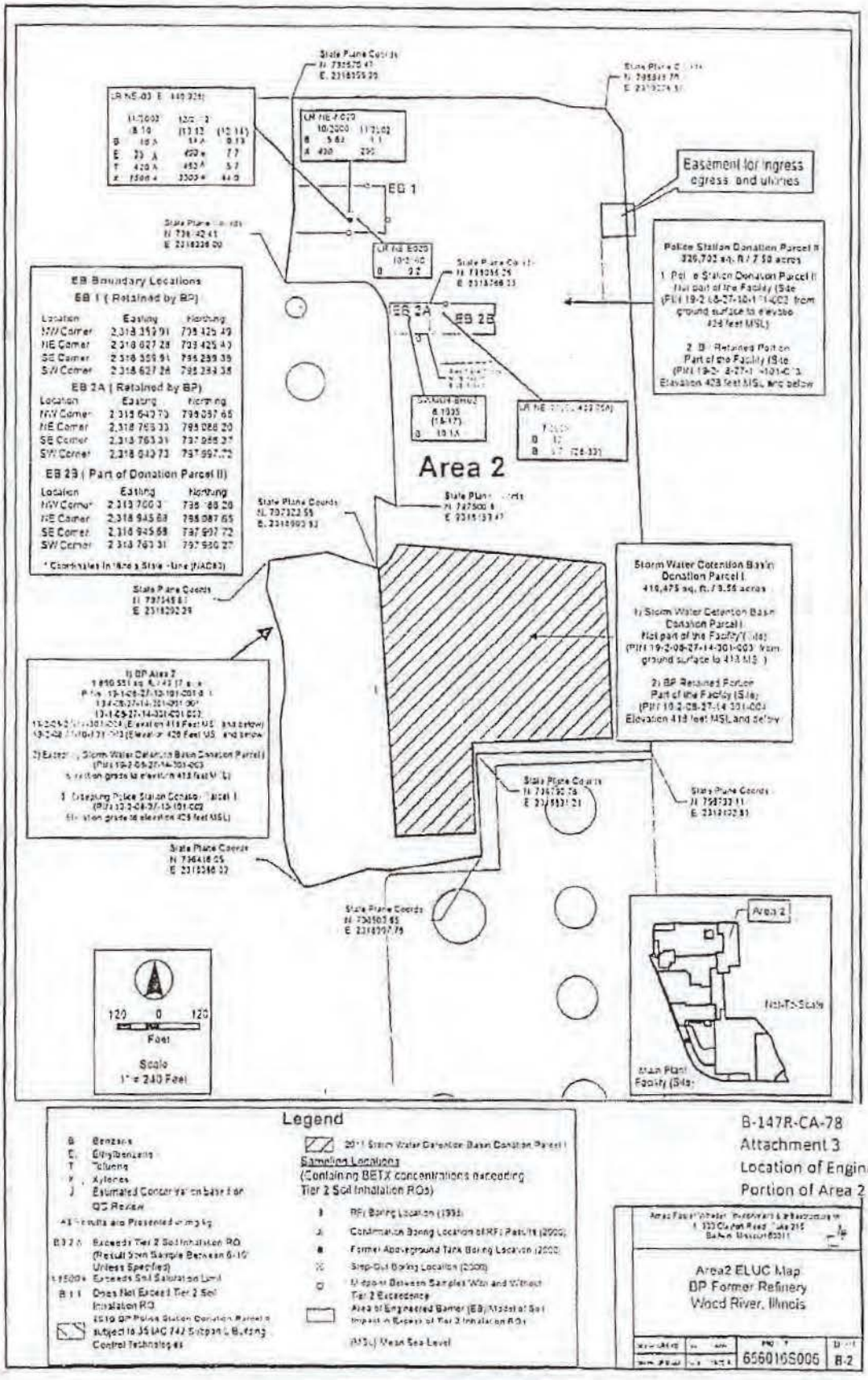
Commencing at the southeast corner of said Northwest Quarter: thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet to the Point of Beginning of the herein described tract; thence continuing South 87 degrees 18 minutes 50 seconds West 515.95 feet; thence North 00 degrees 31 minutes 55 seconds East 688.58 feet; thence North 89 degrees 46 minutes 35 seconds East 254.98 feet; thence South 02 degrees 59 minutes 38 seconds East 36.32 feet; thence South 88 degrees 59 minutes 38 seconds East 218.92 feet; thence South 03 degrees 02 minutes 32 seconds East 626.13 feet to the Point of Beginning, containing 326,702 square feet or 7.50 acres, more or less.

Subject to:
A 100 feet wide easement for ingress, egress and utility purposes situated in the Northwest Quarter of Section 27, Township 5 North, Range 9 West of the Third Principal Meridian, City of Wood River, Madison County, Illinois, described as follows:

Commencing at the southeast corner of said Northwest Quarter; thence North 89 degrees 13 minutes 29 seconds West (basis of bearings is the Illinois .State Plane Coordinate System - West Zone) along the south line of said Northwest Quarter 60.11 feet to the westerly right of way line of South Sixth Street (60 feet wide); thence along said right of way line North 02 degrees 41 minutes 10 seconds West 595.41 feet; thence departing said right of way line South 87 degrees 18 minutes 50 seconds West 84.05 feet; thence North 03 degrees 02 minutes 32 seconds West 335.44 feet to the Point of Beginning of the herein described easement; thence continuing North 03 degrees 02 minutes 32 seconds West 100.00 feet; thence North 87 degrees 18 minutes 50 seconds East 86.75 feet to said right of way line; thence along said right of way line South 02 degrees 41 minutes 10 seconds

East 100.00 feet; thence deporting said right of way line South 87 degrees 18 minutes 50 seconds West 86.13 feet to the Point of Beginning.

PIN: 19-2-08-27-10-101-002 (Ground Surface Down to Elevation 428 Feet MSL)



B-147R-CA-78
Attachment 3
Location of Engineered Barriers
Portion of Area 2 Retained by BP

Recorder's Certificate of Photocopy

STATE OF ILLINOIS)
) SS
COUNTY OF MADISON)

I, Linda A. Andreas, the duly elected RECORDER in and for the County and State aforesaid, do hereby certify that the foregoing copy of a certain ENVIRONMENTAL DISCLOSURE is the true and correct photocopy of said ENVIRONMENTAL DISCLOSURE from BP PRODUCTS NORTH AMERICA to NOTICES including the Certificate of Acknowledgment bearing date the 24th day of APRIL A.D. 2024 as the same appears in the records of my office in Document **# 2017R18529** recorded on the 5th day of JUNE A.D. 2017

GIVEN under my hand and OFFICIAL SEAL of the RECORDER at Edwardsville, Illinois, this 24th day of APRIL A.D. 2024.

Linda A. Andreas
RECORDER
in and for
MADISON COUNTY, ILLINOIS

Illinois Environmental Protection Agency

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

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 Facility Identification

Name: BP Wood River Main Plant Property
County: Madison
Street Address: 301 Evans Avenue
Site No. (IEPA): 1191150001
City: Wood River
Site No. (USEPA): ILD980700967

2.0 Owner Information

Name: BP Products North America Inc.
Mail Address: 301 Evans Avenue
City: Wood River
State: IL Zip Code: 62095
Contact Name: Michelle Knapp
Contact Title: Liability Manager
Phone: 847.346.7112

3.0 Operator Information

Name: BP Products North America Inc.
Mail Address: 301 Evans Avenue
City: Wood River
State: IL Zip Code: 62095
Contact Name: Michelle Knapp
Contact Title: Liability Manager
Phone: 847.346.7112

4.0 Type of Submission (check applicable item and provide requested information, as applicable)

☐ RFI Phase I Workplan/Report
☐ RFI Phase II Workplan/Report
☐ CMP Report;
☑ Other (describe): Area 2 - Certified True Copy of ELUC Recordings

IEPA Permit Log No. B-147R-M-17 and 18
Date of Last IEPA Letter on Project: November 20, 2023
Log No. of Last IEPA Letter on Project: B-147R-CA-122

Does this submittal include groundwater information: ☐ Yes ☑ No

Date of Submittal: May 1, 2024

5.0 Description of Submittal: (briefly describe what is being submitted and its purpose)

Resubmittal of one original certified true copy of each of two ELUCs for Main Plant Area 2 (previously submitted to Illinois EPA in June 2017) identified as officially lost files by Illinois EPA.

6.0 Documents Submitted (identify all documents in submittal, including cover letter; give dates of all documents)

Area 2 – Police Station Donation Parcel II and BP Retained Parcel Certified True Copy of ELUC Recordings 2017R18528 and 2017R18529 and this LPC 632 Form, both dated May 1, 2024.

7.0 Certification Statement

(This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below). The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. 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.

7.1 Owner/Operator Certification

(Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used).

Owner Signature: _____ Date: 5/1/2024

Title: _____

Operator Signature: _____ Date: 5/1/2024

Title: _____

7.2 Professional Certification (if necessary)

Work carried out in this submittal 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. No one is relieved 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.

Any 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 5/44(h))

Professional's Signature: _____ Date: _____

Professional's Name _____

Address _____ Professional's Seal:

City _____

State _____ Zip Code _____

Phone _____

7.3 Laboratory Certification (if necessary)

The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA.

Name of Laboratory _____

_____ Date: _____

Signature of Laboratory Responsible Officer

Mailing Address of Laboratory

Address _____

City _____

State _____ Zip Code _____

_____

Name and Title of Laboratory Responsible Officer