Illinois Environmental Protection Agency
2520 West Iles Avenue • P.O. Box 19276 • Springfield, Illinois • 62794-9276 • 217-782-3397

JB Pritzker, Governor **James Jennings**, Director

217/524-3301

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AUG 10 2026

Chevron Environmental Management Company
Attn: Henry Stremlau
301 West 2nd Street
Lockport, Illinois 60441

Re: 1970500012 -- Will County
Chevron Environmental Management Company
ILD041518861
Log No. B-38R2
RCRA Permits Administrative Record - 24D
Permit Draft

Dear Mr. Stremlau:

Attached is a draft renewed Resource Conservation and Recovery Act (RCRA) Post-Closure Permit (draft Permit) and fact sheet for the above-referenced facility. The draft Permit is based on the administrative record contained in the files of the Illinois Environmental Protection Agency (Illinois EPA). The contents of the administrative record are described in Title 35 Illinois Administrative Code (35 IAC) 705.144.

Under the provisions of 35 IAC 705.141(d), the draft Permit, and administrative record must be publicly noticed and made available for public review and comment. The Illinois EPA must also provide an opportunity for a public hearing. Copies of the draft Permit, fact sheet, and permit application are available for review at the White Oak Library District: Lockport Branch, located at 121 East 8th Street, Lockport, Illinois. 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 September 28, 2026.

During the comment period, the applicant or any interested party may submit comments to the Illinois EPA on the draft Permit. At the close of the comment period, the Illinois EPA will prepare a response to significant comments. Comments on the draft Permit may be submitted to:

Sarah Brubaker, Office of Community Relations (#5)
Illinois Environmental Protection Agency
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

The Illinois EPA will issue a final renewed RCRA Post-Closure 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.

For questions regarding this letter, please contact Thomas Nguyen by phone at 217/786-0753 or by email at Thomas.Nguyen@Illinois.gov. For questions regarding groundwater-related matters, please contact Dana Austin, P.G., by phone at 217/785-7427 or by email at Dana.Austin@Illinois.gov.

Sincerely,

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

JLR: TMN: 1970500012-RCRA-B38R2-Draft.docx
TMN TNH DMA

Attachments: Fact Sheet
Draft Renewed RCRA Post-Closure Permit

cc: Scott Bick, Trihydro Corporation
Justin Thomas, Trihydro Corporation

FACT SHEET
for
DRAFT RENEWED RCRA POST-CLOSURE PERMIT
Chevron Environmental Management Company
Lockport, Illinois
STATE ID NO. 1970500012
FEDERAL ID NO. ILD041518861
RCRA PERMIT LOG NO. B-38R2

This fact sheet has been prepared pursuant to the requirements of Title 35 Illinois Administrative Code (35 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) post-closure permit (draft Permit). This draft Permit requires Chevron Environmental Management Company (CEMC) to continue to provide post-closure care for the former Land Treatment Unit (LTU) closed as a hazardous waste landfill, referred to as LF-2, and a corrective action management unit (CAMU). 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 CEMC facility (formerly Texaco) in Lockport, Illinois, is a closed crude oil refinery located adjacent to the City of Lockport in Will County. The former refinery operated by processing crude oil into gasoline, diesel, and other fuels, as well as lubricants and petroleum coke from 1911 until shutdown in 1981. The site originally included 931 acres of total land, which included leased land from the Illinois Department of Natural Resources (IDNR) of approximately 41 acres, from the Metropolitan Water Reclamation District of Greater Chicago (MWRD) of approximately 40 acres, and from former Equilon Enterprises, LLC (now under ownership of Shell Pipeline Company) of approximately 140 acres.

The Illinois Environmental Protection Agency (Illinois EPA) issued a RCRA Post-Closure Permit to the former Texaco facility in 2001, which had been in negotiation since 1993, for the post-closure care of five former hazardous waste land disposal areas. Upon issuance of this initial Permit, the permitted site boundary was approximately 580 acres. Upon completion of further corrective action activities, the amount was revised to 554 acres. Then in 2013, this initial Permit was subsequently renewed, and the permitted site boundary was further revised to approximately 148 acres. These RCRA Permits outlined closure of the former hazardous waste land disposal areas, post-closure care requirements (i.e., groundwater monitoring, inspection, etc.) for LF-2, and construction, operation, and closure/post-closure of an on-site CAMU for the management of remediation wastes. As a part of the RCRA Post-Closure Permit, the facility has been required to conduct hazardous waste cleanup, known as corrective action, on a number of solid waste management units (SWMUs) located at the facility.

To date, except for investigation areas denoted as 7A-1 and 7A-2, all investigation areas at the former refinery and proximate area have received a focused No Further Action (NFA) determination for soil, sediment, and surface water. All nine surface water bodies that intersect the former refinery have been remediated and received NFA determinations. The facility is currently engaged in a Detection Monitoring Program, two Groundwater Corrective Action Programs, and two specialized Interim Groundwater Measures. Of the six groundwater investigation areas (GWIAs) at the facility, two GWIAs have received an NFA determination to date (GWIAs A and C). In addition, groundwater monitoring still continues under the approved GMZ.

This draft Permit also has a conditional approval to eventually remove up to approximately 57 acres from the definition of the Permitted Facility covered by the RCRA permit, from 148 acres to 91 acres. The 91-acre area consists of LF-2, CAMU, and their proximate areas only. Once approval of the pending NFA for vapor intrusion evaluation and/or land use institutional controls for soils are obtained from the Illinois EPA for remaining subareas of Area 7A, up to approximately 57 acres will be removed from the definition of the Permitted Facility through a Class 1* permit modification request(s) to the renewed Permit and will be available for alternative future uses as allowed in accordance with the Illinois EPA's NFA approval letters and other governmental authorities. Groundwater at the facility will continue to be addressed though RCRA corrective action in accordance with the requirements of 35 IAC 724.201 until NFA for every GWIA is obtained from the Illinois EPA.

II. OVERVIEW OF FACILITY

A. Site Description

The CEMC facility is located at 301 West 2nd Street, Lockport, Illinois, within the Chicago Metropolitan area and is part of Will County. The current RCRA permitted site boundary of approximately 148 acres. Once the NFA for pending corrective action submittals for the 57-acre areas associated with addressing indoor vapor exposure routes and associated with institutional controls for land use are approved by the Illinois EPA, the permitted facility will be allowed to be redefined to 91 acres through a Class 1* permit modification request.

The newly defined 91-acre Permitted Facility will consist of parcels with Tax Property Index Numbers (PIN) of 11-04-14-100-014-0000, 11-04-11-300-012-0000, 11-04-11-200-009-0000, and 11-04-11-400-023-0000. Within this permitted site boundary includes investigation areas 7A-1, 7A-2, and 7A-6, with small portions of 7A-3 and 7A-4. Furthermore, this area includes the locations of the CAMU/LF-1 and LF-2.

The current 148-acre Permitted Facility is shown in Attachment 1 to this Fact Sheet. The future 91-acre redefined Permitted Facility is shown in Attachment 2 to this Fact Sheet.

B. General Discussion of RCRA-Regulated Aspects of the Facility

The Lockport plant, a former oil refinery under ownership of Texaco Inc. (Texaco), was initially constructed in 1911 and ceased refinery operations in 1981. The operating units associated with the facility generated wastes that included RCRA listed hazardous wastes such as heat exchanger bundle cleaning solids (Waste Code: K050), API separator sludges (Waste Code: K051), leaded tank bottoms (Waste Code: K052), and possibly characteristic hazardous wastes such as cooling tower sludges and incinerator ashes. In addition to these wastes, significant quantities such as brick, coke fines, lime and spent catalyst were generated on-site. Placement and treatment of these wastes was done in five on-site landfarm areas designated as Landfarm #1 (LF-1), Leaded Landfarm (LLF), Land Application Area (LAA), Cooling Tower (CT), and Landfarm #2 (LF-2).

The wastes in LF-1, LLF, LAA, and CT were transferred to LF-2 and afterwards LF-1, LLF, LAA, and CT were certified closed as land treatment units (LTUs) by the Illinois EPA on October 5, 1988. After wastes from around the refinery were placed in LF-2, a final cover system was installed over the unit and the Illinois EPA accepted certification of closure of LF-2 as a landfill on October 5, 1988. On September 28, 2001, the Illinois EPA issued a RCRA Post-Closure Permit requiring that all of the above-referenced hazardous waste management units receive post-closure care for at least 30 years.

As allowed by 35 IAC 724.210(c), the CT, LAA, and LLF units are now being addressed as part of the corrective action program required to be implemented at this facility. For the remaining aforementioned closed units (LF-1 and LF-2), at a minimum, groundwater monitoring must continue through the post-closure care period for established monitoring wells. Facility inspections during this post-closure period must identify any maintenance needed, including, but not limited to: (1) the final cover system and vegetation on LF-2; and (2) groundwater monitoring wells. It must be noted that LF-1 is located beneath the CAMU discussed below and post-closure care of LF-1 is being coordinated with the required activities at that unit. A written record of the post-closure inspections and maintenance activities performed must be kept at the facility.

This draft Permit also requires the Permittee to investigate and remediate as necessary, SWMUs present at this facility. Furthermore, this draft Permit requires that the Permittee investigate and remediate, as necessary, all contamination present at the entire facility. This latter requirement is being performed voluntarily by the Permittee. The goal of this overall effort is to leave the entire former refinery in a condition that will allow for possible future industrial, commercial or recreational development.

III. OVERVIEW OF EXISTING RCRA PERMIT

A. Post-Closure Care

The RCRA Post-Closure Permit currently in effect requires that the three closed LTUs still of concern at the facility (LF-1, LLF, and LAA) and the LF-2 landfill receive post-closure care for at least 30 years. The post-closure care period began on October 5, 1988, the date that the Illinois EPA approved closure certification for the subject units. At a minimum, groundwater monitoring must continue through the post-closure care period. It must be noted that LF-1 is located beneath the CAMU discussed below and post-closure of LF-1 is being coordinated with the required activities for that unit.

For LF-2 post-closure care, facility inspections during this post-closure period must identify any maintenance needed for, including, but not limited to, the final cover system and vegetation on LF-2, leachate collection and gas venting systems, and the groundwater monitoring wells. A written record of the post-closure inspections and maintenance activities performed must be kept at the facility. Leachate and landfill gas must be continued to be monitored on a quarterly basis and reported annually to the Illinois EPA.

B. Corrective Action Management Unit (CAMU)

On February 14, 2003, the Illinois EPA authorized CEMC to construct a CAMU in support of ongoing and planned remedial activities under the RCRA Corrective Action Program at the former refinery. On June 3, 2008, the Illinois EPA approved CEMC's proposal to reconfigure the previously approved footprint of the CAMU. This unit functions as a permanent depository for the wastes excavated or otherwise generated during corrective action activities at and adjacent to the site. Although the wastes to be deposited in the unit have been identified as non-hazardous, petroleum-contaminated waste, the CAMU has been designed to accommodate placement of hazardous wastes.

The materials managed at the CAMU consist primarily of petroleum contaminated soil; contaminated demolition materials such as concrete and bricks; coke-soil mixtures that do not meet product performance criteria for use as fuel; and wastewater treatment residues associated with remediation of the site. The 2008 approved CAMU footprint occupies approximately 38 acres. Approximately 1,958,000 cubic yards of waste were placed in the CAMU, which was permitted for 2,200,000 cubic yards.

The CAMU design includes a bottom liner system; top cover system; eight passive vents along the crown and a leachate collection system embedded into the drainage layers just above the lower high-density polyethylene (HDPE) liner. The CAMU is currently subject to post-closure care for at least 30 years. At a minimum, groundwater monitoring at established monitoring wells must continue through the post-closure care period. Facility inspections during this post-closure period must identify any maintenance needed, including, but not limited to, the final cover system and vegetation on the CAMU. A written record of the post-closure inspections and maintenance activities performed must be kept at the facility.

C. <u>Corrective Action</u>

The facility's existing RCRA Post-Closure Permit requires CEMC to investigate and remediate, as necessary, all contamination present at the entire facility. The goal of this overall corrective action effort is to leave the entire former refinery property in a condition that allows for re-development. Groundwater investigation and remediation required under corrective action is being conducted at the entire area of the former refinery and some of the adjacent areas of the former refinery.

The corrective action program is being accomplished by dividing the property into several investigation areas then focusing on these areas in a phased manner until all areas at the facility have been properly investigated and remediated. This has allowed both the Illinois EPA and the Permittee to use their resources more effectively. The Illinois EPA has and will continue to review and approve workplans/reports associated with all aspects of these efforts. The Illinois EPA has and will continue to issue NFA determinations when investigation/remediation of a given area is completed to its satisfaction.

D. <u>Groundwater Monitoring Programs</u>

There are currently four groundwater monitoring programs at the Lockport facility as follows:

1. <u>Detection Monitoring Program</u>

Chemical and physical groundwater parameters monitored during interim status in the uppermost aquifer below LF-1, one of the four closed land treatment units, indicate that no groundwater impacts have occurred. Therefore, a detection monitoring program meeting the requirements of 35 IAC 724.198 has been implemented at this LTU. CEMC is and will continue to be required to report groundwater quality to the Illinois EPA on a semi-annual basis. It must be noted that LF-1 is located beneath the CAMU, therefore the program has been implemented to monitor groundwater beneath the CAMU as well.

2. <u>Groundwater Corrective Action Program at LF-2</u>
CEMC is required to maintain hydraulic control of the flow of groundwater in the uppermost aquifer beneath and around the LF-2 landfill. This acts to prevent off-site migration of potentially contaminated groundwater. The effectiveness of the corrective action is evaluated based on the quality of groundwater samples obtained from the LF-2 Point of Compliance. At this time, the groundwater impacts that have been detected in these monitoring wells are considered to represent residual impacts due to releases prior to closure and encapsulation of LF-2 in 1988. Analysis of LF-2 groundwater monitoring data since closure and encapsulation of the unit has indicated a decrease in hazardous waste constituent concentrations.

3. <u>Groundwater Management Zone</u>
A Groundwater Management Zone (GMZ) is a three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contamination into groundwater. A facility-wide GMZ was established in accordance with 35 IAC 620.250 on February 14, 2003 based on ongoing and continued management of the corrective action processes in a timely and appropriate manner. CEMC maintains the obligation to properly investigate and remediate groundwater beneath all former refinery property removed from the Permit. All of the removed parcels remain subject to the requirements of the GMZ, except for approximately 38 acres of historically undeveloped property north of the CAMU, which has never been included in the GMZ, and the approximately 145 acres known as GWIA C, due to the January 23, 2025 issuance of a NFA letter by the Illinois EPA (Log No. B-38R-CA-17, 52, and 53).

As part of the approved facility-wide corrective action program, CEMC has dismantled and removed the subsurface structures associated with past refinery operations. In addition, CEMC's approved corrective action activities include excavation, stabilization, consolidation, and containment of contaminated soils and sediments. Furthermore, CEMC is required to operate and maintain a groundwater interceptor trench and two sumps in the southwest corner of the facility. This acts to prevent off-site migration of potentially contaminated groundwater.

Concentration limits for hazardous constituents in groundwater samples obtained from "GMZ Perimeter Wells" located at the hydraulically downgradient perimeter (i.e. western and southwestern property boundaries) must meet 35 IAC 620, Class I, Groundwater Quality Standards or 35 IAC 742, Tier 1, Class I, Groundwater Remediation Objectives. In addition, CEMC is required to monitor the quality of groundwater obtained from "GMZ Observation Wells" located within the interior portions of the facility to establish and observe trends associated with the concentrations detected in these wells.

IV. DESCRIPTION OF MODIFICATIONS

This section describes the notable modifications being made in CEMC's draft Permit. In general, many of the requirements of the existing Permit are contained in the draft Permit.

A. Revision of RCRA Permitted Boundary

CEMC has progressively acquired NFA determinations and established institutional controls in the form of an environmental land use control (ELUC) from the Illinois EPA for several parcels within the permitted site boundary. Based upon the status of each parcel and approval from the Illinois EPA, the current permitted amount of 148 acres will be allowed to be revised to 91 acres through a Class 1* permit modification request and upon approval by the Illinois EPA.

B. Change the boundary of the Groundwater Management Zone (Log No. B-38R2)

The permit renewal application proposes removal of approximately 145 acres from the GMZ due to the January 23, 2025 Illinois EPA focused NFA letter issued for GWIA C. This proposal allows GWIA C, located in the north central portion of the former refinery, to be removed from the limits of the GMZ. The proposal also modifies the existing GMZ groundwater monitoring network by removing three monitoring wells from the network. The draft Permit has been updated accordingly.

C. Post-Closure Care Period and Financial Assurance for LF-2 and CAMU

As the post-closure care for LF-2 reached the minimum post-closure care period of 30 years in 2018, the post-closure care period has already been extended beyond the initial 30 years. This draft Permit requires that, for both the LF-2 and

CAMU, the Permittee must provide post-closure care until such time as no unacceptable risks to human health and the environment are present in these units, as determined by the Illinois EPA. For the CAMU, one year prior to the post-closure care 30-year anniversary date, the Permittee must submit a Class 2 permit modification request to extend the post-closure care period to continue providing necessary care for the CAMU as long as the potential for unacceptable risks are present. In addition, a rolling 30-year post-closure care cost estimate for financial assurance for both the LF-2 and CAMU must be maintained by the Permittee under this draft Permit.

D. Updated Analytical Parameters for Leachate and Groundwater Due to Recent Updates in 35 IAC Part 620

As new constituents were recently added to 35 IAC Part 620, CEMC is required to submit an Applicability Determination to the Illinois EPA to evaluate which new constituents apply to the facility. Leachate and groundwater monitoring requirements for applicable new constituents will be included in the Permit after Illinois EPA review and approval of the Applicability Determination.

V. CONSIDERED PERMIT ACTIONS OTHER THAN RCRA

A. 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 wastewater treatment units and system at the facility have a Permit from the Illinois EPA's Bureau of Water (NPDES Permit No. IL0002305).

B. Air

No permits associated with discharge to the atmosphere are required for LF-2 and CAMU to date, provided that the required monitoring at gas vents will continued at both units.

VI. PROCEDURES FOR REACHING A FINAL DECISION

Pursuant to 35 IAC 705.162(a)(2), the public is given at least 45 days to review the application and draft Permit and provide comments on the draft Permit conditions prior to the Illinois EPA taking any final permitting action on the application for this draft Permit. The comment period will begin on August 14, 2026, the date of the first publication of the public notice in the newspaper of general circulation in the area. The comment period will end on September 28, 2026.

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

White Oak Library District: Lockport Branch
121 East 8th Street
Lockport, Illinois 60441

The administrative record contains the permit application, draft Permit, fact sheet, and other supporting documents and correspondence submitted to the Illinois EPA. The administrative record can be made available for public inspection by appointment only at the Illinois EPA's Springfield headquarters from 9:00 a.m. to 5:00 p.m., Monday through Friday. Inspections of the administrative record must be scheduled in advance by contacting Ms. Sarah Brubaker of the Illinois EPA at the address listed below.

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

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

Sarah Brubaker, Office of Community Relations #5
Illinois Environmental Protection Agency
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276
(217) 786-0790

When the Illinois EPA makes a 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 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 – Current and Future Redefined RCRA Permitted Site Boundary Map
Attachment 2 – Original RCRA Permitted Site Boundary Map

Attachment 1

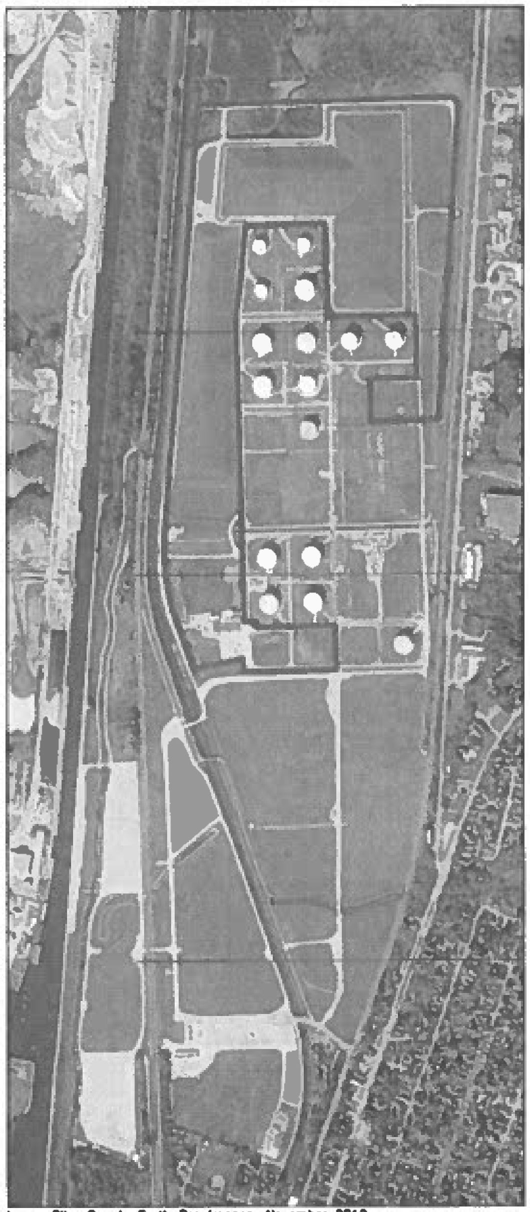
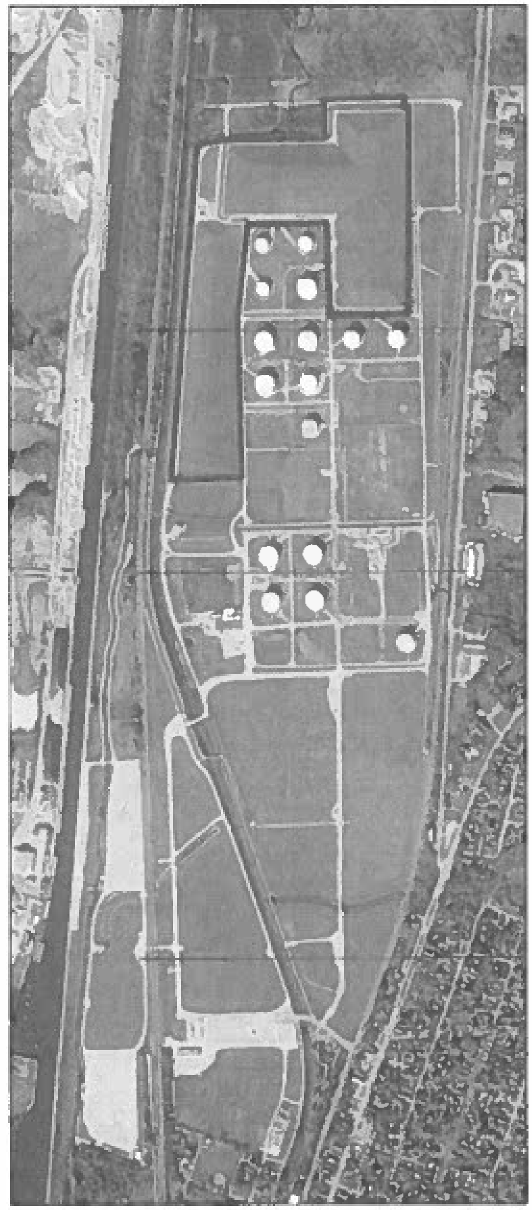


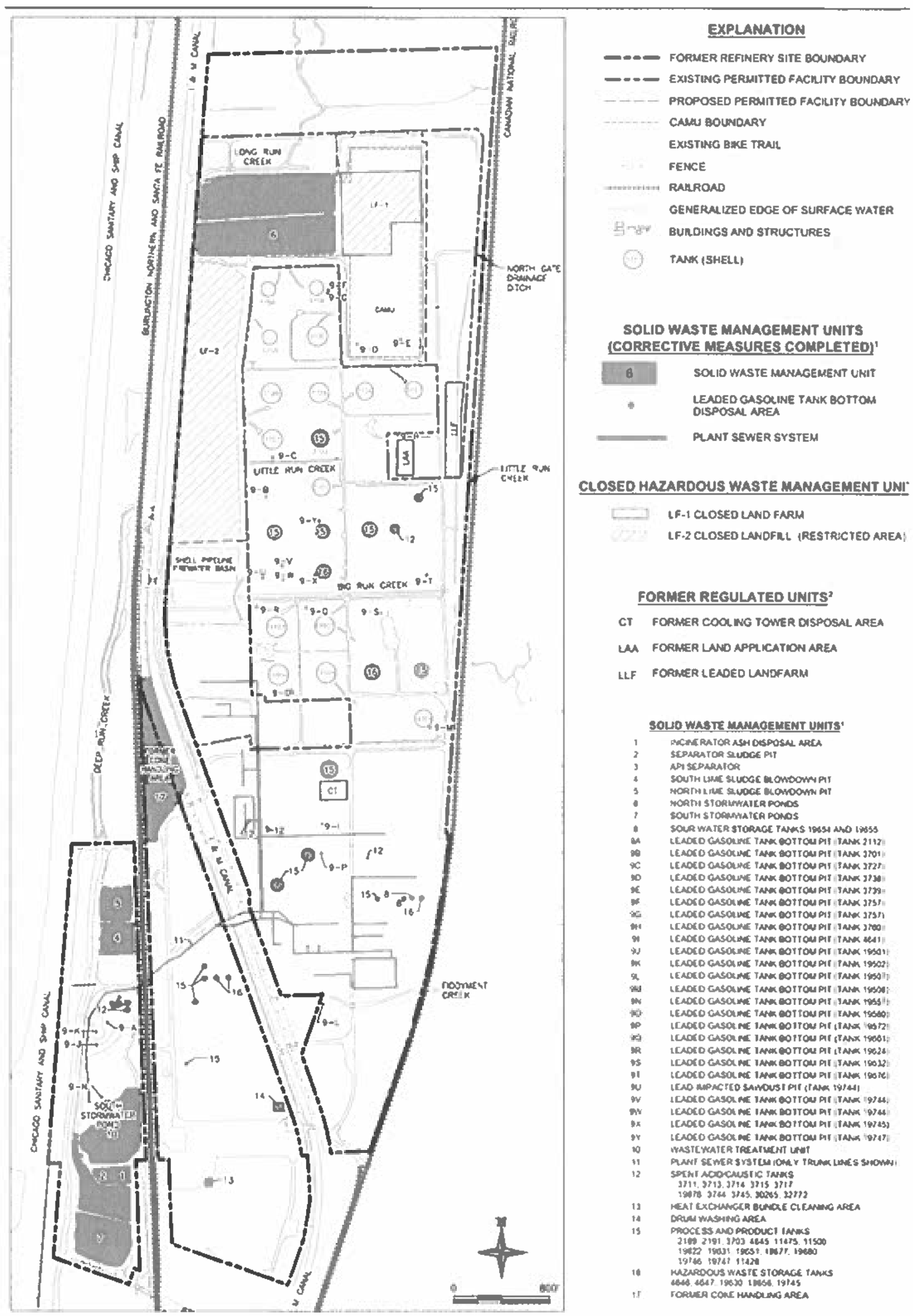
Image Cite: Google Earth Pro Imagery November 2019

1 EXISTING PERMITTED FACILITY BOUNDARY
SCALE: 1" = 1,500'



2 PROPOSED PERMITTED FACILITY BOUNDARY
SCALE: 1" = 1,500'

Attachment 2



Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield, Illinois • 62794-9276 • 217-782-3397

JB Pritzker, Governor **James Jennings**, Director

RCRA POST-CLOSURE PERMIT

1970500012 -- Will County	Issue Date: DRAFT
Chevron Environmental Management Company	Effective Date: DRAFT
ILD041518861	Expiration Date: DRAFT
Permit Log No. B-38R2	
RCRA Permits Administrative Record - 24D	
Permit Draft	

PERMITTEE
Chevron Environmental Management Company
Attn: Mr. Henry Stremlau
301 West 2nd Street
Lockport, Illinois 60441

FACILITY LOCATION
301 West 2nd Street
Lockport, Illinois 60441

A renewed Resource Conservation and Recovery Act (RCRA) post-closure permit is hereby issued to Chevron Environmental Management Company (CEMC), as 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 RCRA Permit requires CEMC to conduct the following hazardous waste activities in accordance with the approved permit application and the conditions in this Permit:

1. **Corrective Action:** Soil, surface water, sediments, and groundwater for original 554 acres of site
2. **Groundwater:** Detection Monitoring and Corrective Action Programs
3. **Post-Closure Care:** LF-1/CAMU, LF-2

This RCRA Permit consists of the conditions contained herein and those in sections and attachments in this RCRA 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 Permit.

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

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

JLR: TMN: 1970500012-RCRA-B38R2-Draft.docx

RCRA Post-Closure Permit

Chevron Environmental Management Company

Lockport, Illinois

Permit Log No. B-38R2

State ID No. 1970500012

Federal ID No. ILD041518861

RCRA Post-Closure Permit
Chevron Environmental Management Company

TABLE OF CONTENTS

LIST OF ATTACHMENTS

SECTION I - GENERAL FACILITY DESCRIPTION

A. OWNER AND OPERATOR

The facility is owned and operated by Chevron Environmental Management Company (CEMC), herein referred to as the "Permittee". (Title 35 Illinois Administrative Code (35 IAC) 702.121, 702.123, and 703.181)

Chevron Environmental Management Company
301 West 2nd Street
Lockport, Illinois 60441

B. LOCATION

1. Location of Facility
   The CEMC facility is located at 301 West 2nd Street, Lockport, Illinois, within the Chicago Metropolitan area and is part of Will County.

2. Facility Map
   The general location of the facility and a site layout map are provided in Attachment B of this Permit.

C. FACILITY HISTORY

The Lockport plant, a former oil refinery under ownership of Texaco Inc. (Texaco), was initially constructed in 1911 and ceased refinery operations in 1981. The operating units associated with the facility generated wastes that included RCRA listed hazardous wastes such as heat exchanger bundle cleaning solids (Waste Code: K050), API separator sludges (Waste Code: K051), leaded tank bottoms (Waste Code: K052), and possibly characteristic hazardous wastes such as cooling tower sludges and incinerator ashes. In addition to these wastes, significant quantities such as brick, coke fines, lime and spent catalyst were generated on-site. Placement and treatment of these wastes was done in five on-site landfarm areas designated as Landfarm #1 (LF-1), Leaded Landfarm (LLF), Land Application Area (LAA), Cooling Tower (CT), and Landfarm #2 (LF-2).

The wastes in LF-1, LLF, LAA, and CT were transferred to LF-2 and afterwards LF-1, LLF, LAA, and CT were certified closed as land treatment units by the Illinois Environmental Protection Agency (Illinois EPA) on October 5, 1988. After wastes from around the refinery were placed in LF-2, a final cover system was installed over the unit and the Illinois EPA accepted certification of closure of LF-2 as a landfill on October 5, 1988. On September 28, 2001, the Illinois EPA issued a RCRA Post-Closure Permit requiring that all of the above-referenced hazardous waste management units receive post-closure care for at least 30 years.

As allowed by 35 IAC 724.210(c), the CT, LAA, and LLF units are now being addressed as part of the corrective action program required to be implemented at this facility. For the remaining aforementioned closed units (LF-1 and LF-2), at a minimum, groundwater monitoring must continue through the post-closure care period for established monitoring wells. Facility inspections during this post-closure period must identify any maintenance needed, including, but not limited to: (1) the final cover system and vegetation on LF-2; and (2) groundwater monitoring wells. It must be noted that LF-1 is located beneath the Corrective Action Management Unit (CAMU) discussed below and post-closure care of LF-1 is being coordinated with the required activities at that unit. A written record of the post-closure inspections and maintenance activities performed must be kept at the facility.

This Permit also requires the Permittee to investigate and remediate as necessary, solid waste management units present at this facility. Furthermore, this Permit requires that the Permittee investigate and remediate, as necessary, all contamination present at the entire facility. This latter requirement is being performed voluntarily by the Permittee. The goal of this overall effort is to leave the entire former refinery in a condition that will allow for possible future industrial, commercial or recreational development.

In order to manage remediation waste generated during the site-wide remediation effort described above, the Permittee has established an on-site CAMU designed as a permanent repository. The materials managed at the CAMU consist primarily of petroleum contaminated soil; contaminated demolition materials such as concrete and bricks; coke-soil mixtures that do not meet product performance criteria for use as fuel; and wastewater treatment residues associated with remediation of the site.

The CAMU footprint consists of four phases, A, B, C and D, and occupies approximately 38 acres. The CAMU design includes a bottom liner system; top cover system; eight passive air (gas) vents along the crown and a leachate collection system. Approximately 1,958,000 cubic yards of waste were placed in the CAMU, which was permitted for 2,200,000 cubic yards.

After the CAMU closed in 2015, the unit was subject to post-closure care for at least 30 years. At a minimum, groundwater monitoring must continue through the post-closure care period for established monitoring wells. Facility inspections during this post-closure period must identify any maintenance needed, including, but not limited to, the final cover system and vegetation on the CAMU. A written record of the post-closure inspections and maintenance activities performed must be kept at the facility.

A Groundwater Management Zone (GMZ) was established for the area generally equivalent to the former refinery boundary on February 14, 2003. A GMZ is a three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contamination. The Permittee proposed a facility-wide GMZ to manage contaminated groundwater in disparate parts of the former refinery, since contamination is not attributable to a single source or a specific release. Authorization of a GMZ is required to be re-evaluated every five years. The re-evaluation of this GMZ was approved on September 29, 2015. Source removal and groundwater withdrawal are the basis for the continued authorization of the GMZ. The GMZ boundary continues to be generally equivalent to the former refinery boundary. This GMZ boundary is shown in Figure C-2 of the approved permit application.

D. PERMITTED FACILITY BOUNDARY

Approximately 406 acres of the former refinery were removed from the originally defined 554-acre facility covered by the Permit (Log No. B-38R), as corrective action was completed for the surface water, sediment and soil throughout that acreage; these areas have been slated for redevelopment or re-use. The groundwater beneath these portions of the former refinery must still be addressed as part of the corrective action program for the permitted facility in accordance with the off-site provisions of 35 IAC 724.201 and this Permit.

The current boundaries of the facility covered by this Permit is approximately 148 acres. This 148-acre area is shown in Attachment B-2 of this Permit. Of the 148 acres, up to approximately 57 acres may be removed from the permitted boundary upon future corrective action approvals by the Illinois EPA, which must be followed by a Class 1* permit modification request(s) to remove the specified soil investigation area(s). Such process is defined in Special Condition VIII.D of this Permit. The final permitted facility will eventually consist of a total of approximately 91 acres in size; this future 91-acre facility boundary, as well as the original 554-acre, is shown in Attachment B-2 of this Permit. It must be noted that CEMC also addressed some 41 acres of Illinois Department of Natural Resources (IDNR) property along the I&M Canal (which were adjacent to the former refinery) under corrective action provisions of this Permit; the boundaries of this area are also shown in Attachment B-3.

SECTION II - POST-CLOSURE CARE FOR LF-2

A. SUMMARY

The permitted unit that consists of the closed hazardous waste management unit (HWMU) where waste is left in-place (LF-2) must receive post-closure care. The post-closure care period for LF-2 began on October 5, 1988 (the date Illinois EPA approved closure certification for the subject unit). The LF-2 identified in this Permit must continue to receive post-closure care. Activities required during post-closure care include but are not limited to: (1) maintenance of the LF-2 final cover; (2) management and maintenance of the leachate collection system; (3) groundwater monitoring and corrective action as necessary; and (4) providing financial assurance for post-closure activities pursuant to 35 IAC Part 724, Subpart H.

B. UNIT IDENTIFICATION

1. The Permittee must provide post-closure care for the following HWMU, subject to the terms and conditions of this Permit:

Unit Designation/ Type	Capacity (cubic yards)	Surface Area Dimensions of Unit	Description of Waste and Hazardous Waste No.
Closed hazardous waste landfill, LF-2 (D80)	~428,800	2,324 feet (north to south) by 390 feet (east to west) at the north end and 540 feet (east to west at the south end	Oily wastes, contaminated soils, incinerator ash, and miscellaneous sludges from refinery operations (Waste Code: F039)

2. This HWMU is a former 25-acre landfarm that was used for disposal of oily wastes, contaminated soils, incinerator ash, and miscellaneous sludges from refinery operations. As previously mentioned, LF-2 has been closed as a landfill.

3. A grout curtain was installed around the perimeter of the unit during closure by temporarily removing the wastes present in the unit to point where the shallow bedrock beneath the unit was exposed. The grout curtain was installed to a depth of approximately 46 feet below ground surface (bgs) and had a tested permeability of approximately 10^{-5} centimeters per second (cm/sec). The grout curtain acts as a physical barrier to groundwater migration.

4. A leachate collection system beneath the unit was installed following the grout curtain installation. The leachate collection system consists of 4,965 linear ft of trench, which is cut two to three ft into bedrock underlying the unit, and associated perforated HDPE piping and gravel pack. The leachate collection system includes five east to west lateral segments within the bottom of the unit which slope to the west (down-gradient) and a south-sloping trunk line along the west side of the unit. Three sumps, referred to as the North Sump, Middle Sump and South Sump, were installed along the trunk line. The leachate collection system is also intended to act as a hydraulic barrier to groundwater migration. Leachate is collected and removed from the South Sump. The leachate is considered to be a combination of landfill leachate and underlying groundwater. The leachate is piped to the facility's wastewater treatment unit, treated and discharged under National Pollutant Discharge Elimination System (NPDES) Permit No. IL0002305. The piping, wastewater treatment unit (WTU) and discharge are regulated under the Clean Water Act.

5. The liner system on the bottom and sides of the HWMU consist of the following layers, described from the top to bottom:

   - 12-inch sand drainage layer
   - Geocomposite drainage material (HDPE drainage net in-between two layers of geotextile material)
   - 60-mil HDPE textured geomembrane
   - Geosynthetic clay liner (GCL)
   - 24-inch thick compacted cohesive soil layer

6. The cover system present on top of the HWMU consists of the following layers, described from top to bottom:

   - 6 inches of vegetive support layer (top soil)
   - 30 inches of protective cover soil
   - Geocomposite drainage material (HDPE drainage net in-between two layers of geotextile material)
   - 40-mil linear low-density polyethylene (LLDPE) textured geomembrane liner
   - 12 inches working surface soil buffer soil

7. The stockpiled LF-2 wastes were stabilized with fly ash, clay, and/or cement kiln dust and compacted into place. Waste from various other locations at the facility, including the land treatment units (LTUs), were also placed in LF-2 in this manner. A two-foot clay cap was placed and compacted atop the waste. A clay lateral containment dike and subsurface clay cutoff wall were constructed around the perimeter of the unit and keyed into the overlying clay cap and

underlying grout curtain. A 40-mil HDPE liner, drainage grid fabric and 18-inch layer of top soil was installed above the clay cap in ascending order. The top soil was seeded with local grasses.

8. Five passive gas vents were installed in the crown of the unit.

C. POST-CLOSURE CARE PERIOD

1. The Permittee must conduct post-closure care for the LF-2 identified in Permit Condition II.B.1 beginning on October 5, 1988, the date the Illinois EPA approved certification of closure. Post-closure care of this landfill has continued beyond the initial 30 years of post-closure, which was reached on October 5, 2018.

2. The Permittee must continue the post-closure care of the LF-2 until such time as no unacceptable risks to human health and the environment are present in the LF-2, as determined by the Illinois EPA.

3. Prior to the completion of the post-closure care period, the Illinois Pollution Control Board (Board) will extend, or the Illinois EPA may require the Permittee to submit a Class 2 permit modification request in accordance with 35 IAC 703.241(a)(2) and 35 IAC 703, Appendix A, (E)(2) to extend the post-closure care period if it finds that the extended period is necessary to protect human health and the environment (e.g., hazardous waste remains in place, leachate or groundwater monitoring results indicate a potential for migration of waste at levels which may be harmful to human health and the environment).

4. The Illinois EPA may include restrictions upon the future use of the site if necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment. After administrative and judicial challenges to such restrictions have been exhausted, pursuant to the Uniform Environmental Covenants Act (UECA), the Illinois EPA shall file such restrictions of record in the Office of the Recorder of the county in which the hazardous waste disposal site is located.

5. The Permittee must not allow the property where the LF-2 areas identified in Permit Condition II.B.1 are located to be used in a way that could disturb the integrity of the final cover, liners, any components of the containment system, or function of the facility's monitoring systems unless the Illinois EPA finds, by way of a permit modification, that such use is necessary for either of the following reasons:

a. It is necessary to the proposed use of the property, and will not increase the potential hazard to the public health or the environment; or

b. It is necessary to reduce a threat to human health or the environment.

6. The Permittee must submit a permit application to authorize a change in the approved post-closure plan. This request must be in accordance with applicable requirements of 35 IAC Parts 702, 703, and 724 and must include a copy of the amended post-closure plan for approval by the Illinois EPA.

D. MONITORING, MAINTENANCE, AND RECORDKEEPING

1. The Permittee must not allow any use of LF-2 which will disturb the integrity of the final cover, liners, or any components of the containment system; or the function of the facility's monitoring systems during the post-closure care period unless such use is necessary to protect public health or the environment.

2. The Permittee must implement the approved post-closure plan contained in the approved permit application and required in this Permit. All post-closure care activities must be conducted in accordance with the provisions of the approved post-closure plan as modified by the conditions of this Permit.

3. The Permittee must maintain the components, structures, and equipment at the LF-2 in accordance with the maintenance plan contained in Section E of the approved permit application

4. The Permittee must comply with the requirements for landfills as follows:

   a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, cracking, or other events. If any of these events occur, then corrective action shall be taken in accordance with Section G of the approved permit application and the approved conditions of this Permit.

   b. Corrective action must be taken if ponding has been observed, if cracks or erosion channels greater than one inch wide have formed for whatever reason and if gas, odor, vegetative, or vector problems arise, if leachate popouts or seeps are present, or if vegetation with tap roots is found to be growing in areas which are not designed to accommodate such.

c. Prevent run-on and run-off from eroding or otherwise damaging the final cover.

d. Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 35 IAC 724, Subpart F (Groundwater Protection) during the post-closure period.

e. Protect and maintain surveyed benchmarks used in complying with surveying and recordkeeping requirements.

f. Continue to operate the leachate collection and removal system until leachate is no longer detected.

g. Management of LF-2 leachate collection must be conducted so as not to cause exceedances of the Permittee's NPDES permit discharge limits.

5. The Permittee must provide groundwater monitoring for the LF-2 in accordance with the approved permit application, and with Section VI of this Permit.

E. INSPECTIONS

1. Inspections of security control devices, the final cover system, the integrity of run-on and run-off control systems, groundwater monitoring well conditions, the leachate collection and removal system, the gas collection system vents, and benchmark integrity must be carried out in accordance with the approved permit application.

2. The Permittee must inspect the components, structures, and equipment associated with LF-2 in accordance with the post-closure inspection plan contained in Section E.6 of the approved permit application.

3. The Permittee must inspect the LF-2 areas identified in Permit Condition II.B.1 at least monthly and within 72 hours of any rainfall event of three or more inches in a 24-hour period for evidence of any of the following:

   a. Deterioration, malfunctions, or improper operation of run-on and run-off systems.

   b. The deterioration of the cover system, which includes evidence of settling, subsidence, erosion, cracking, stress, or other events. Cracks or erosion channels that may penetrate the final cover or are greater than one inch wide.

4. A survey of elevation must be conducted at least once every five years to check for settling or shifting.

5. Appropriate corrective action must be taken if problems, including erosion, blockage of channels, slope failure, etc. are observed at any time. If corrective action is taken, the area involved must be reinspected one month following completion of the work to ensure the corrective actions have adequately corrected the problem(s) noted.

6. Results of all inspections and a description of any remedial actions taken must be documented in the facility's operating record and maintained for the entire post-closure care period.

7. The Permittee must use the inspection log forms provided in Appendix D-1 of the approved permit application, which are also provided in Attachment C of this Permit.

F. NOTICES AND CERTIFICATION

1. During the post-closure, the person or office specified in the approved post-closure plan must keep a written copy of the plan during the remainder of the post-closure period.

2. If the Permittee or any subsequent Owner or Operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then the individual must request a modification to this post-closure permit in accordance with the applicable requirements in 35 IAC Parts 703, 705, and 724. The Owner or Operator must at a minimum demonstrate that the removal of hazardous wastes will satisfy the criteria of 35 IAC 724.217(c) except as otherwise authorized by law or regulations.

3. No later than 60 days after completion of the established post-closure care for LF-2, the Permittee must submit to the Illinois EPA, by registered mail, a certification that the post-closure care for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the Owner or Operator and a qualified Illinois-licensed Professional Engineer (P.E.). Documentation supporting the P.E.'s certification must be furnished to the Illinois EPA upon request until the Illinois EPA releases the Permittee from the financial assurance requirements for post-closure care.

G. LEACHATE AND SUBSURFACE GAS MANAGEMENT

1. Leachate Management

The Leachate Collection and Removal Systems must be inspected on a weekly basis and maintained in operating condition for the duration of this Permit. In addition, the Permittee shall:

a. Collect semi-annual leachate samples and analyze for oil & grease (O&G), and total organic carbon (TOC).

b. Collect semi-annual leachate samples and analyze for the following constituents:

Acenaphthene	Chrysene	Benzene
Acenaphthylene	Dibenzo (a,h) anthracene	Ethylbenzene
Anthracene	Fluoranthene	Toluene
Benzo (a) anthracene	Fluorene	Xylene
Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Phenanthrene
3,4 Benzofluoranthene	Naphthalene	Lead
Benzo (ghi) perylene	Chromium (total)	
Benzo (k) fluoranthene	Pyrene	

c. Record daily flow of leachate produced by LF-2.

d. Submit semi-annual reports summarizing the results of the activities required by Permit Conditions II.G.1.a through II.G.1c. The subject reports must be submitted to the Illinois EPA on January 15 and July 15 of each year for the duration of this Permit.

e. Management of LF-2 leachate must be conducted so as not to cause exceedances of the Permittee's NPDES permit discharge limits.

2. Subsurface Gas Management

a. The Permittee must inspect and sample each of the five gas collection system vents associated with LF-2 on a quarterly basis. Sampling is to be conducted for total organic vapors by use of a portable photo ionization detector (PID).

In the event of any of the occurrences listed below, the Permittee must, within 30 days of the occurrence, submit to the Illinois EPA, a corrective action plan to modify the facility's existing gas collection system for LF-2 or demonstrate that the facility is not the cause of the occurrence.

i. Total organic vapor concentration(s) in the pipe outlet(s) at any of the five LF-2 vents exceeds 100 parts per million (ppm).

ii Malodors attributed to LF-2 are detected beyond the property boundary.

b. The results from gas monitoring for each calendar year must be submitted to the Illinois EPA. The subject reports must be submitted to the Illinois EPA on July 15 of each year for the duration of this Permit.

H. <u>FINANCIAL ASSURANCE</u>

1. The approved post-closure care cost (including groundwater monitoring) for these units is $3,563,585 (in 2026 dollars), which includes groundwater monitoring, a 15% adjustment for engineering administration fee, and a 5% adjustment for contingencies, as identified in Attachment E of this Permit.

2. In accordance with Permit Condition VII.K, the Illinois EPA may request from CEMC, a revised cost estimate based on any modification(s) to any component of CEMC's groundwater monitoring well network. This includes, but is not limited to the following: (1) the need for extended groundwater monitoring and/or remediation beyond the post-closure care period; (2) the addition, deletion, and/or replacement of groundwater monitoring wells; (3) changes in sample collection/analyses procedures; and (4) extended groundwater monitoring beyond CEMC's proposed one-year period for the investigation areas.

3. Financial assurance meeting the requirements of 35 IAC Part 724, Subpart H must be established for post-closure care of LF-2 within 60-day of the Illinois EPA's cost estimate approval.

4. Post-closure care costs are determined by multiplying annual costs by the 30-year post-closure care period and by adding any other one-time costs associated with post-closure care. The financial assurance sufficient to meet the requirements of 35 IAC 724, Subpart H for post-closure care costs must be maintained at all times.

SECTION III - POST-CLOSURE CARE FOR LF-1/CAMU

A. SUMMARY

For the purpose of implementing remedies under 35 IAC 724.201, the Illinois EPA has designated a unit at the facility as a CAMU. Construction and operation of the CAMU is part of the facility's required corrective action program, which has the goal of facility-wide reduction of toxicity, mobility, and volume of material impacted by hazardous constituents. All monitoring, maintenance, and recordkeeping of the CAMU must be conducted in accordance with Section III.D of this Permit and Appendix F-3 of the approved permit application, the requirements contained in this Permit, and the regulations at 35 IAC 724.652. The CAMU has "grandfathered" status and is therefore subject to the provisions of the 1993 CAMU Rule. As such, placement of remediation waste into or within a CAMU does not constitute land disposal of hazardous waste. Consolidation or placement of remediation wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology standards.

The CAMU identified in this Permit must continue to receive post-closure care for at least 30 years. Activities required during post-closure care include, but are not limited to: (1) maintenance of final cover; (2) monitoring of the groundwater and corrective action as necessary; (3) management and maintenance of the leachate collection system; and (4) providing financial assurance for post-closure activities pursuant to 35 IAC Part 724, Subpart H.

B. UNIT IDENTIFICATION

1. The Permittee must provide post-closure care for the following CAMU, subject to the terms and conditions of this Permit:

Unit Designation/ Type	Capacity (cubic yards)	Surface Area Dimensions of Unit	Description of Waste
Corrective Action Management Unit (CAMU) with Landfarm No. 1 (LF-1)*	2.2 million (permitted)	38 acres	On-site remediation waste

*CAMU is referred to as the corrective action management unit described in Section III but also included LF-1 (former landfarm area) underneath of the CAMU.

2. The CAMU encompasses the former Landfarm No. 1 (LF-1), the area south of LF-1 (including the area of the North Tank Farm that was formerly the location of

tanks 3738, 3739, 3758, and 3759), the area east of LF-1 to the location of the active crude oil transmission piping that is operated by the pipeline breakout facility, the area west of LF-1 encompassing approximately the eastern 800 feet of the former North Stormwater Ponds footprint (a former SWMU). The CAMU is comprised of four phases (A, B, C and D).

3. This unit holds remediation wastes generated from the remediation of SWMUs and other recognized environmental conditions at the facility.

4. The general location of the CAMU is shown in the site map included in Attachment B of this Permit. The top-of-liner grades are considered to be equivalent to the sub-base grades and shall range from 578 to 596 ft mean sea level (ft MSL). The sumps in the CAMU must not be constructed below an elevation of 578 ft MSL. The interior side slopes in the CAMU must not be steeper than 3:1 (3 ft horizontal to 1 ft vertical). The slopes of the final cover on the CAMU must not be steeper than 3:1 on the perimeter slopes constructed of contaminated soils. The CAMU must be designed and constructed to achieve a minimum static slope factor of safety greater than or equal to 1.5. Any modification to these design parameters must be the subject of a permit modification.

5. The liner system on the bottom and sides of the CAMU must continue to be constructed of and maintained in the following layers, described from the top to bottom:

- 12-inch sand drainage layer with a minimum hydraulic conductivity of 0.001 cm/sec
- Geocomposite drainage material (HDPE drainage net sandwiched between two layers of geotextile material) with a minimum transmissivity of 0.0001 meters squared per second (at 10,000 pounds per square foot
- 60-mil HDPE geomembrane (textured on both sides)
- GCL
- 24-inch thick compacted cohesive soil layer having a maximum hydraulic conductivity of 0.00001 cm/sec

6. The cover system on the top of the CAMU must continue to be constructed of and maintained in the following layers, described from the top to bottom:

- 6 inches of vegetative support layer (topsoil)
- 30 inches of protective cover soil

- Geocomposite drainage layer (HDPE drainage net sandwiched between two layers of geotextile material) with a minimum transmissivity of 0.0001 meters squared per second at 4,000 pounds per square foot
- 40-mil textured LLDPE geomembrane liner
- 12 inches working surface soil buffer soil (site-impacted soils clean of rubble and other oversize material - maximum particle size to be 2 inches).

7. The GCL used below the HDPE geomembrane of the bottom liner in the CAMU must consist of bentonite between two layers of geotextile, one woven, one non-woven that have been needle punched for additional internal strength enhancement that can withstand moisture absorption without any loss of integrity.

8. The geomembrane panels made of polyethylene resins must be welded by fusion welding machines for all linear seams. Corners, butt seams, and long repairs must be fusion welded where possible. Extrusion or fusion welding must be used for all other repairs, detail work and patches. The Illinois EPA Bureau of Land Permit Section approval must be obtained prior to use of any other welding method for either panel seaming, repairs or construction details.

C. <u>POST-CLOSURE CARE PERIOD</u>

1. The Permittee must conduct post-closure care for the CAMU/LF-1 identified in Permit Condition III.B.1 beginning on December 10, 2015, the date the Illinois EPA approved certification of closure. Post-closure care of this CAMU must continue for at least 30 years after the date.

2. Post-closure care must continue to be extended until such time that no unacceptable risks to human health and the environment are present in the CAMU/LF-1, as determined by the Illinois EPA.

3. On or prior to December 10, 2044 (one year before December 10, 2045), the Permittee must submit a Class 2 permit modification request in accordance with 35 IAC 703.241(a)(2) and 35 IAC 703, Appendix A, (E)(2) to extend the post-closure care period if it finds that the extended period is necessary to protect human health and the environment (e.g., hazardous waste remains in place, leachate or groundwater monitoring results indicate a potential for migration of waste at levels which may be harmful to human health and the environment), as specified in Permit Condition III.C.2.

4. The Illinois EPA may include restrictions upon the future use of the site if necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment. After administrative and judicial challenges to such restrictions have been exhausted, the Illinois EPA shall file such restrictions of record in the Office of the Recorder of the county in which the hazardous waste disposal site is located.

5. The Permittee must not allow the property where the CAMU area identified in Permit Condition III.B.1 is located to be used in a way that could disturb the integrity of the final cover, liners, any components of the containment system, or function of the facility's monitoring systems unless the Illinois EPA finds, by way of a permit modification, that such use is necessary for either of the following reasons:

   a. It is necessary to the proposed use of the property, and will not increase the potential hazard to the public health or the environment, or

   b. It is necessary to reduce a threat to human health or the environment.

6. The Permittee must submit a permit application to authorize a change in the approved post-closure plan. This request must be in accordance with applicable requirements of 35 IAC Parts 702, 703, and 724 and must include a copy of the amended post-closure plan for approval by the Illinois EPA.

D. <u>MONITORING, MAINTENANCE, AND RECORDKEEPING</u>

1. The Permittee must adhere to the requirements of the post-closure care period as specified in Permit Conditions III.C.1 through III.C.6.

2. The Permittee must implement the approved post-closure plan contained in the approved permit application and as required in the Permit. All post-closure care activities must be conducted in accordance with the provisions of the approved permit application and the conditions in this Permit.

3. The Permittee must maintain the components, structures, and equipment at the site in accordance with the maintenance plan contained in Section F.8 and Appendix F-3 of the approved permit application.

4. The Permittee must comply with the following requirements for the CAMU:

a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, cracking, or other events.

b. Corrective action must be taken if ponding has been observed, if cracks or erosion channels greater than one inch wide have formed for whatever reason and if gas, odor, vegetative, or vector problems arise, if leachate popouts or seeps are present, or if vegetation with tap roots is found to be growing in areas which are not designed to accommodate such.

c. Prevent run-on and run-off from eroding or otherwise damaging the final cover.

d. Maintain and monitor the groundwater monitoring system in accordance with the approved permit application and Section V of this Permit.

e. Protect and maintain surveyed benchmarks used in complying with surveying and recordkeeping requirements.

f. Continue to operate the leachate collection and removal system until leachate is no longer detected.

g. Management of CAMU leachate collection must be conducted so as not to cause exceedances of the Permittee's NPDES permit discharge limits.

5. The leachate collection and removal system must be designed and operated to ensure that the depth of leachate over the liner does not exceed more than 1 ft (30 cm).

6. The person or office of contact for the facility specified in the approved post-closure plan must keep a written copy of the plan during the remainder of the post-closure period.

E. <u>INSPECTIONS</u>

1. Inspections of security control devices, the final cover system, the integrity of run-on and run-off control systems, groundwater monitoring well conditions, the leachate collection and removal system, the gas collection system vents, and benchmark integrity must be carried out in accordance with the approved permit application.

2. The Permittee must inspect the components, structures, and equipment associated with CAMU in accordance with the post-closure inspection plan contained in Section F.6 of the approved permit application.

3. The Permittee must inspect the CAMU identified in Permit Condition III.B.1 at least monthly and within 72 hours of any rainfall event of three or more inches in a 24-hour period for evidence of any of the following:

   a. Deterioration, malfunctions, or improper operation of run-on and run-off systems.

   b. The deterioration of the cover system, which includes evidence of settling, subsidence, erosion, cracking, stress, or other events. Cracks or erosion channels that may penetrate the final cover or are greater than one inch wide.

4. A survey of elevation must be conducted at least once every five years to check for settling or shifting.

5. Appropriate corrective action must be taken if problems, including erosion, blockage of channels, slope failure, etc. are observed at any time. If corrective action is taken, the area involved must be reinspected one month following completion of the work to ensure the corrective actions have adequately corrected the problem(s) noted.

6. Results of all inspections and a description of any remedial actions taken must be documented in the facility's operating record and maintained for the entire post-closure care period.

7. The Permittee must use the inspection log forms provided in Appendix D-1 of the approved permit application, which are also provided in Attachment C of this Permit.

F. NOTICES AND CERTIFICATION

1. A request to change the post-closure plan must be submitted in the form of a permit modification request. This request must be in accordance with applicable requirements of 35 IAC Parts 702, 703, and 724, and must include a copy of the amended post-closure plan for approval by the Illinois EPA.

2. If the Permittee or any subsequent Owner or Operator of the land upon which the CAMU is located wishes to remove wastes and waste residues, the liner, or

contaminated soils, they must request a modification to this Permit in accordance with the applicable requirements in 35 IAC Parts 703, 705, and 724. At a minimum, the Owner or Operator must demonstrate that the removal of wastes, if determined to be hazardous wastes, will satisfy the criteria of 35 IAC 724.217(c).

3. No later than 60 days after completion of the established post-closure care period for the CAMU, the Permittee must submit to the Illinois EPA Bureau of Land Permit Section, by registered mail, a certification that the post-closure care for the CAMU was performed in accordance with the specifications in the approved post-closure plan in the approved permit application and the conditions in this Permit. This certification must acknowledge that the closed LTU previously identified as LF-1 is located below Phase A of the CAMU. The certification must be signed by the Owner and Operator and a qualified Illinois-licensed P.E. Documentation supporting the P.E.'s certification must be furnished to the Illinois EPA upon request until the Illinois EPA releases the Permittee from the financial assurance requirements for post-closure care.

4. Within 60 days after receiving certifications from the Owner or Operator and a qualified Illinois-licensed P.E. that the post-closure care period has been completed for the CAMU in accordance with the approved post-closure plan, the Illinois EPA shall notify the Owner or Operator that it is no longer required to maintain financial assurance for post-closure care of that unit unless the Illinois EPA determines that post-closure care has not been in accordance with the approved post-closure plan. The Illinois EPA shall provide the Owner or Operator with a detailed written statement of any such determination that post-closure care has not been in accordance with the approved post-closure plan.

5. The Illinois EPA may include restrictions upon the future use of the site if necessary to protect public health and the environment, including permanent prohibition of the use of the site for purposes which may create an unreasonable risk of injury to human health or the environment. After administrative and judicial challenges to such restrictions have been exhausted, the Illinois EPA shall file such restrictions of record in the Office of the Recorder of the county in which the unit is located.

G. <u>LEACHATE AND SUBSURFACE GAS MANAGEMENT</u>

1. Leachate Management

The Leachate Collection and Removal Systems must be inspected on a weekly basis and maintained in operating condition for the duration of this Permit. In addition, the Permittee must:

a. Collect semi-annual leachate grab samples and analyze for O&G and TOC using the methods specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, third edition (SW-846) and finalized updates.

b. Collect semi-annual leachate samples and analyze for the following constituents:

Acenaphthene	Chrysene	Benzene
Acenaphthylene	Dibenzo (a,h) anthracene	Ethylbenzene
Anthracene	Fluoranthene	Toluene
Benzo (a) anthracene	Fluorene	Xylene
Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Phenanthrene
3,4 Benzofluoranthene	Naphthalene	Lead
Benzo (ghi) perylene	Chromium (total)	
Benzo (k) fluoranthene	Pyrene	

c. Record daily flow of leachate produced by the CAMU.

d. Submit semi-annual reports summarizing the results of the activities required by Permit Conditions III.G.1.a through III.G.1.c. The subject reports must be submitted to the Illinois EPA on January 15 and July 15 of each year for the duration of this Permit.

e. Management of CAMU leachate must be conducted so as not to cause exceedances of the Permittee's NPDES permit discharge limits.

2. Subsurface Gas Management

a. The Permittee must inspect and sample each of the eight gas collection system vents associated with the CAMU on a quarterly basis. Sampling is to be conducted for total organic vapors by use of a portable PID.

In the event of any of the occurrences listed below, the Permittee must, within 30 days of the occurrence, submit to the Illinois EPA, a corrective action plan to modify the facility's existing gas collection system for the CAMU or demonstrate that the facility is not the cause of the occurrence.

i. Total organic vapor concentration(s) in the pipe outlet(s) at any of the eight CAMU vents exceeds 100 ppm.

ii. Malodors attributed to the CAMU are detected beyond the property boundary.

b. The results from gas monitoring for each calendar year must be submitted to the Illinois EPA. The subject reports must be submitted to the Illinois EPA on July 15 of each year for the duration of this Permit.

H. <u>FINANCIAL ASSURANCE</u>

1. The approved post-closure care cost for these units is $4,025,214 (in 2026 dollars), which includes groundwater monitoring, a 15% adjustment for engineering administration fee, and a 5% adjustment for contingencies, as identified in Attachment E of this Permit.

2. In accordance with Permit Condition VII.K, the Illinois EPA may request from CEMC, a revised cost estimate based on any modification(s) to any component of CEMC's groundwater monitoring well network. This includes, but is not limited to the following: (1) the need for extended groundwater monitoring and/or remediation beyond the post-closure care period; (2) the addition, deletion, and/or replacement of groundwater monitoring wells; (3) changes in sample collection/analyses procedures; and (4) extended groundwater monitoring beyond CEMC's proposed one-year period for the investigation areas.

3. Financial assurance meeting the requirements of 35 IAC Part 724, Subpart H must be established for post-closure care of the CAMU within 60 days of the Illinois EPA's cost estimate approval.

4. Post-closure care costs are determined by multiplying annual costs by the 30-year post-closure care period and by adding any other one-time costs associated with post-closure care. The financial assurance sufficient to meet the requirements of 35 IAC 724, Subpart H for post-closure care costs must be maintained at all times.

SECTION IV - POST-CLOSURE CARE FOR OTHER CLOSED LTUS

A. SUMMARY

The former operating units associated with this facility generated wastes that included RCRA listed hazardous wastes such as heat exchanger bundle cleaning solids (K050), API separator sludges (K051), leaded tank bottoms (K052), and possibly characteristic hazardous wastes such as cooling tower sludges and incinerator ashes. In addition to these wastes, significant quantities of nonhazardous wastes such as brick, coke fines, lime and spent catalyst were generated on-site. Placement and treatment of these wastes was done, among other places, in five on-site landfarm areas designated as LF-1, LF-2, LLF, LAA, and CT.

In the mid-1980s, the wastes in LF-1, LLF, LAA and CT were transferred to LF-2 and subsequently those landfarm areas were certified closed as land treatment units by the Illinois EPA on October 5, 1988. After wastes from around the refinery were also placed in LF-2, a final cover system was installed over the unit and the Illinois EPA accepted certification of closure of LF-2 on October 5, 1988. These units then received post-closure care under an Illinois EPA approved plan until September 28, 2001 when the Illinois EPA issued a RCRA Part B Post-Closure Permit requiring that these units receive post-closure care until at least October 5, 2018. On November 30, 2020, CEMC submitted a Class 1 permit modification request (Log No. B-38R-M-30) with annual updates to Permit Attachment F and cost estimates for post-closure care and corrective action. This subject request was approved by the Illinois EPA on November 30, 2021, which modified Permit Condition I.G.4 of the Permit (Log No. B-38R) to require a minimum of 10 years of post-closure care costs to be maintained at all times starting in 2022 for LF-2 and the CAMU/LF-1 at the permitted facility.

B. UNIT DESCRIPTION

A brief description of the above-referenced HWMUs is as follows:

LF-1 - This HWMU was a 9.2-acre landfarm used for disposal of oily waste and contaminated soils from refinery operations. This area was excavated down to bedrock. The excavated soil was placed in LF-2. This unit is located under Phase A of the CAMU. The capacity of this unit was 121,000 cubic yards of waste.

LLF - This HWMU was a 2.2-acre landfarm used for disposal of leaded gasoline tank bottoms from refinery operations. This unit was excavated down to bedrock. The excavated soil was placed in LF-2. The capacity of this unit was 4,700 cubic yards of waste.

LAA - This HWMU was a 1.6-acre land spreading area used for disposal of wastewater treatment residues. This area was excavated down to bedrock. The excavated soil was placed in LF-2. This HWMU has been closed as a land treatment unit. The capacity of this unit was 2,200 cubic yards of waste.

CT - This HWMU was a 0.8-acre spreading area used for dewatering and disposal of cooling tower sediments including chromium precipitates. This area was excavated down to bedrock. The excavated soil was placed in LF-2. The capacity of this unit was 5,700 cubic yards of waste.

C. CURRENT STATUS OF THE CLOSED LAND TREATMENT FACILITIES

1. As allowed by 35 IAC 724.210(c), the CT, LAA, and LLF units are still being addressed as part of the corrective action program that is implemented at this facility.

2. LF-1 is located beneath the CAMU and post-closure care of LF-1 is being coordinated with the required activities at that unit as set forth in Section III of this Permit.

3. As indicated above, LF-2 has been closed as a landfill and is receiving post-closure in accordance with the requirements of this Permit.

SECTION V - GROUNDWATER DETECTION MONITORING PROGRAM

A. SUMMARY

Groundwater parameters monitored in the uppermost aquifer below the regulated units indicate that, at the present time, no groundwater impacts have occurred. Therefore, a Groundwater Detection Monitoring Program meeting the requirements of 35 IAC 724.198 must be implemented at LF-1 and the CAMU. "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 Permittee's Lockport facility has nine existing groundwater monitoring wells in the Groundwater Detection Monitoring Program for its closed LTU, designated as LF-1, and a Corrective Action Management Unit, designated as the CAMU. It must be noted that LF-1 is located beneath the CAMU and existing groundwater monitoring wells associated with the CAMU are the same wells associated with LF-1. These wells, consisting of seven downgradient and two upgradient, are located in such a manner as to provide independent monitoring of groundwater quality in the uppermost aquifer in the vicinity of these units. Additionally, there are four wells used to determine groundwater elevations.

B. IMPLEMENTATION

1. The Permittee must implement the Groundwater Detection Monitoring Program upon the effective date of this Permit. On that date, the groundwater monitoring requirements set forth in this Permit must supersede those previously established.

2. The Permittee must carry out the detection monitoring specified in this Permit on the groundwater beneath and in the vicinity of the CEMC facility in Lockport, Illinois. The uppermost aquifer in the vicinity of the facility has been identified as a thin layer of unconsolidated material overlying fractured dolomite. For the purposes of this Permit and in accordance with the 35 IAC Part 620 regulations, the uppermost aquifer has been designated Class I: Potable Resource Groundwater.

3. The Point of Compliance, defined as the vertical surface located at the hydraulically downgradient limit of the waste management areas (LF-1 and the CAMU) that extends down into the uppermost aquifer underlying the regulated units, is delineated by the wells identified as the Point of Compliance wells in

Permit Condition V.C.1 and illustrated in Figure C-2 of the approved permit application.

C. WELL LOCATION AND CONSTRUCTION

1. The Permittee must install and maintain the groundwater monitoring wells and piezometers at the locations specified in the table below to allow for the collection of groundwater samples and elevations from the uppermost aquifer. The location of these wells and piezometers is specified in Figure C-2 of the approved permit application.

IEPA Well No.	**CEMC Well No.**	**Well Depth (Ft bgs[#])**	**Well Depth Elevation (Ft MSL[&])**	**Well Screen Interval (Ft MSL)**
LF-1 and CAMU Upgradient Wells				
G11A	PM-11RR	15.1	570.6	580.7-570.7
G108	B-8	18.0	569.0	579.0-569.0
LF-1 and CAMU Point of Compliance Wells				
R115	CAMU-1R	21.5	568.8	578.7-568.8
G116	CAMU-2	21.0	565.5	575.5-565.5
G117	CAMU-3	22.0	564.2	574.2-564.2
G118	CAMU-4	17.0	567.2	577.2-567.2
G119	CAMU-5	25.5	563.3	573.2-563.6
G120	CAMU-6	28.0	560.8	570.8-561.2
G122	CAMU-8	26.9	561.2	571.8-561.8

Monitoring Wells/Piezometers for Groundwater Elevations Only

IEPA Well No.	CEMC Well No.	Well Depth (Ft bgs)	Well Depth Elevation (Ft MSL)	Well Screen Interval (Ft MSL)
R104	B-4R	20.5	561.2	571.2-561.2
R105	PM-5R	12.0	556.7	567.2-557.2
R112	PM-12R	10.0	556.6	564.6-556.6
B001	R-1RR	11.9	556.0	564.0-556.0

Note: # "Ft bgs" refers to feet below ground surface.

& "Ft MSL" refers to feet above mean sea level.

2. 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.

3. The Permittee must notify the Illinois EPA within 30 days in writing if any of the wells identified in Permit Condition V.C.1 are damaged or the structural integrity has been compromised. A proposal for the replacement of the subject well must accompany this notification. The well must 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 must obtain written approval from the Illinois EPA regarding the proposed installation procedures and construction.

4. Should any well become consistently dry or unserviceable; a replacement well must be provided within 10 feet of the existing well. This well must monitor the same geologic zone as the existing well and be constructed in accordance with the current Illinois EPA groundwater monitor well construction standards at the time that the well is replaced. A well which is more than 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.

5. The Permittee must submit boring logs, construction diagrams, and data sheets from installation and development of a new or replacement well to the Illinois EPA at the address below within 30 days of the date that the installation of the well is completed. In addition, the Permittee must submit certification that plugging and abandonment of a well was carried out in accordance with the approved procedures to the Illinois EPA at the included address within 30 days of the date that the well is plugged and abandoned. All information must be submitted to the appropriate State Agencies.

Illinois Environmental Protection Agency
Bureau of Land - #33
Permit Section
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

6. All wells/piezometers must be clearly identified and must be equipped with protective caps and locks. Monitoring wells or piezometers located in high traffic areas must be protected with bumper guards or alternative barriers.

7. All groundwater monitoring wells and piezometers not utilized in the approved groundwater monitoring system, but retained by the Permittee, 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 Permit Condition V.C.3.

D. MONITORING PARAMETERS

1. The Permittee must determine groundwater quality at the groundwater monitoring wells identified in Permit Condition V.C.1, at both the Upgradient and Point of Compliance locations, semi-annually during the active life (including closure and post-closure care period) of LF-1 and the CAMU. Samples collected during the semi-annual sampling events of each year must be analyzed for the field parameters and hazardous constituents below. Total (unfiltered) values must be used for comparison with groundwater quality standards. Dissolved (filtered) must be used for statistical analysis.

Field Parameters	STORET Number	Reporting Units
pH	00400	S.U.
Specific Conductance	00094	µmhos/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 years, or at the request of the Illinois EPA, or whenever the elevation changes as required by Permit Condition V.I.5.

Hazardous Waste Constituents	STORET Number	Reporting Units
Volatile Organic Compounds		
Benzene	34030	mg/L
Chlorobenzene	34301	mg/L
Ethylbenzene	78113	mg/L
Toluene	34010	mg/L
Xylenes (total)	81551	mg/L
Semivolatile Base/Neutral Extractable Organics		
Acenaphthene	34205	mg/L
Anthracene	34220	mg/L
Benzo(a)anthracene	34526	mg/L
Benzo(a)pyrene	34247	mg/L
Benzo(b)fluoranthrene	34230	mg/L
Chrysene	34320	mg/L
Dibenz(a,h)anthracene	34556	mg/L
Fluoranthene	34376	mg/L
Fluorene	34381	mg/L
1-Methylnaphthalene	77418	mg/L
2-Methylnaphthalene	77416	mg/L
Naphthalene	34696	mg/L
Pyrene	34469	mg/L
Phenanthrene	34461	mg/L
Semivolatile Acid Extractable Organics		
2,4-Dimethylphenol	34606	mg/L
2-Methylphenol (*o*-Cresol)	77152	mg/L
Phenols	32730	mg/L
Inorganics (dissolved)		
Antimony	01095	mg/L
Arsenic	01000	mg/L
Beryllium	01010	mg/L

Cadmium	01025	mg/L
Chromium	01030	mg/L
Lead	01049	mg/L
Mercury	71890	mg/L
Nickel	01065	mg/L
Vanadium	01085	mg/L

<u>Inorganics (total)</u>

Antimony	01097	mg/L
Arsenic	01002	mg/L
Beryllium	01012	mg/L
Cadmium	01027	mg/L
Chromium	01034	mg/L
Lead	01051	mg/L
Mercury	71900	mg/L
Nickel	01067	mg/L
Vanadium	01087	mg/L

Note: All dissolved constituents must be determined using groundwater samples which have been filtered through a 0.45-micron filter.

2. The Permittee must establish background values in accordance with the procedures specified in Section C of the approved permit application.

3. Should a constituent be detected in groundwater and found to be statistically above background, the subsequent monitoring event must include total (unfiltered) analysis and a comparison to the appropriate 35 IAC Part 620 Groundwater Quality Standard must then take place (see Permit Condition V.E.1). "Detected" shall mean a concentration equal to or above the LLOQ listed in the current version of USEPA's <u>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods</u>, Third Edition (SW-846) and finalized updates for the applicable analytical methods specified in Section C.6.4 of the approved permit application.

4. Alternate concentration limits may be established where the Permittee can determine that 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 Permittee must apply for an adjusted standard as outlined in Section 28.1 of the Environmental Protection Act.

b. For those hazardous constituents without a 35 IAC Part 620 standard, the alternate concentration limit(s) proposed by the Permittee must be approved by the Illinois EPA.

E. DETECTION MONITORING PROGRAM

1. The Permittee must determine groundwater quality at each of the LF-1 and CAMU monitoring wells identified in Permit Condition V.C.1 semi-annually during the active life of the regulated units (including closure and post-closure care period) for constituents found in Permit Condition V.D.1. The Permittee must express the groundwater quality at each monitoring well in a form necessary for the determination of statistically significant increases (or decrease, in the case of pH) (i.e., means, variances, etc.).

2. The Permittee may resample a well within 30 days for constituents whose concentrations exceed the lower limit of quantitation (LLOQ) listed for the approved analytical method(s) specified in USEPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition (SW-846) and finalized updates. The results of the second round of analyses will be used to make the determinations required by Permit Condition V.E.4, unless resampling is not conducted. If resampling is not conducted, the first round analytical data will be used for the determinations required by Permit Condition V.E.4. "Lower limit of quantitation" or "LLOQ" means the minimum concentration of a substance that can be measured or reported under USEPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition (SW-846) and finalized updates.

3. The Permittee must determine the groundwater flow rate and direction in the uppermost aquifer at least annually, and report this data to the Illinois EPA at least annually, from the monitoring wells and piezometers identified in Permit Condition V.C.1.

4. The Permittee must determine whether there is a statistically significant increase (or decrease, in the case of pH) over background values for each parameter identified in Permit Condition V.D.1 each time groundwater quality is determined at each well. In determining whether such an increase has occurred, the Permittee must compare the groundwater quality at each monitoring well specified in Permit Condition V.C.1 to the background value derived in accordance with the statistical procedures specified in Section C of the approved permit application.

5. The Permittee must evaluate the results of the analyses required by Permit Conditions V.E.1 and 3 and identify:

   a. The concentration of any organic or total (unfiltered) inorganic constituent listed in Permit Condition V.E.1 detected which is above the LLOQ listed in the approved analytical method(s) specified in USEPA SW-846 (latest version).

   b. The concentration of any constituent listed in Permit Condition V.E.1 that was detected which was not detected during the previous sampling event.

   c. The concentration of any constituent listed in Permit Condition V.E.1 that exhibits a progressive increase over two consecutive sampling events. "Progressive Increase" shall mean an increase in the concentration of a constituent in successive sampling events.

6. With respect to sampling performed in accordance with Section VI, the Permittee must:

   a. Move from List D4 in Permit Condition VI.D.1 to the list in Permit Condition V.D.1 any constituent identified on List D4 that has been detected above the LLOQ in samples collected from any LF-1/CAMU Upgradient or Point of Compliance well identified in Permit Condition V.D.1 and confirmed through resampling, provided that resampling is conducted within 30 days of receipt of the results from the initial round of analyses. This request must be in the form of a Class 1 permit modification.

   b. Develop background values using the procedures specified in Section C of the approved permit application for any constituents moved to the list in Permit Condition V.D.1 pursuant to Permit Condition V.E.6.a.

F. <u>GROUNDWATER ELEVATION</u>

1. The Permittee must determine the groundwater surface elevation referenced to MSL at each well each time groundwater is sampled in accordance with Permit Condition V.I.3.

2. The Permittee must determine the surveyed elevation of the "stick-up" referenced to MSL when the well is installed (reported in as-built diagrams) and every five years, or at the request of the Illinois EPA, or whenever the elevation

changes in accordance with Permit Condition V.I.5. "Stick-up" refers to the height of the referenced survey datum. This point is determined within ±0.01 foot in relation to MSL, which in turn is established by reference to an established National Geodetic Vertical Datum.

3. Elevation, as referenced to MSL, of the bottom of each monitoring well (STORET 72020) is to be reported at least annually, or at the request of the Illinois EPA, or whenever the elevation changes in accordance with Permit Condition V.I.6. The mandatory measurements must be taken during the first semi-annual sampling event each year.

G. SAMPLING AND ANALYSIS PROCEDURES

The Permittee must use the techniques and procedures described in Section C of the approved permit application, except as modified, when obtaining and analyzing samples from the groundwater monitoring wells described in Permit Condition V.C.1:

1. Samples must be collected by the techniques described in Section C of the approved permit application.

2. Samples must be preserved, shipped, and handled in accordance with the procedures specified in Section C of the approved permit application.

3. Samples must be analyzed according to the procedures specified in Section C of the approved permit application. Groundwater analysis must be conducted 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 must be tracked and controlled using the chain-of-custody procedures specified in Section C of the approved permit application.

H. STATISTICAL PROCEDURES

The Permittee must use the statistical procedures described in Section C of the approved permit application, except as modified herein, when evaluating results in accordance with Permit Condition V.E.3. These procedures are in keeping with USEPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance (March 2009).

I. REPORTING AND RECORD KEEPING

1. The Permittee must enter all monitoring, testing and analytical data obtained in accordance with Permit Conditions V.D, V.E, V.F, V.G, and V.H in the operating record. The data must include all computations, calculated means, variances, t-statistic values, and t-statistic results or results of statistical tests that the Illinois EPA has determined to be equivalent.

2. Samples collected to meet the requirements of the groundwater monitoring program described in Permit Conditions V.D, V.E, V.F, V.G, and V.H must be collected and reported, as identified in the included table. All additional information collected for the groundwater monitoring program (as specified in Permit Conditions V.D, V.E, V.F, V.G, and V.H) must also be submitted to the Illinois EPA at the address found in Permit Condition V.C.5 in accordance with this schedule.

Samples to be Sampling Event Of Calendar Year	Results Submitted Collected During the Months of	to the Illinois EPA by the Following
First Semi-annual	April - June	July 15
Second Semi-annual	October - December	January 15

3. Groundwater surface elevation data, measured pursuant to Permit Condition V.F.1, must be collected at least semi-annually and submitted semi-annually to the Illinois EPA as identified in the table in Permit Condition V.I.2.

4. The Permittee must report the groundwater flow rate and direction in the uppermost aquifer, as required by Permit Condition V.E.3, during the first semi-annual sampling event of each year.

5. The Permittee must report the surveyed elevation, as required by Permit Condition V.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 Permit Condition V.C.1, every five years (during the first 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 must be made every five years (during the first semi-annual sampling event), or at the request of the Illinois EPA, or whenever the elevation changes.

6. Elevation of the bottom of each monitoring well identified in Permit Condition V.C.1, referenced to MSL, is to be reported at least annually. This measurement (STORET 72020) must be taken during the first semi-annual sampling event in accordance with Permit Condition V.F.3.

7. Information required by Permit Conditions V.I.2, V.I.3, V.I.5, and V.I.6 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 webpage titled, Electronic Reporting of Groundwater Data, in accordance with the schedule found in Permit Condition V.I.2. Additional guidance regarding the submittal of the information in an electronic format can be found on the Illinois EPA website.

8. The Permittee must 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 permit for identification purposes. Only one copy of the LPC-592 must accompany the submittal. However, the Permittee must submit one original and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two copies of each notice or report submitted to the Illinois EPA. The form is not to be used for permit modification requests.

9. The Permittee must 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.

10. If the Permittee determines, pursuant to Permit Condition V.E.4, that there is a statistically significant increase (or decrease, in the case of pH) for any of the parameters specified in Permit Condition V.D.1 at any monitoring well at the compliance point, the Permittee must:

    a. Notify the Illinois EPA in writing indicating which parameters and which wells have shown statistical increases and provide all statistical calculations. This notification must be submitted to the Illinois EPA within seven days of the date that the increase is discovered.

    b. Sample the groundwater in all Upgradient and Point of Compliance wells listed in Permit Condition V.C.1 and determine the concentration of all constituents identified in Appendix I of 35 IAC Part 724 and 35 IAC Part 620. The results must accompany the permit modification required by Permit Condition V.I.10.d.

c. For any 35 IAC 724, Appendix I and 35 IAC Part 620 constituents detected in the analysis pursuant to this condition, the Permittee may resample within one month and repeat the analysis for those constituents detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the Permittee does not resample for the constituents pursuant to this condition, the hazardous constituents found during the initial Appendix I analysis will form the basis for compliance monitoring.

d. Submit to the Illinois EPA an application for a permit modification to establish a compliance monitoring program meeting the requirements of 35 IAC 724.199. The application must be submitted to the Illinois EPA within 90 days of the date that the increase is discovered. Furthermore, the application must include the following information:

 (1) An identification of the concentration of any 35 IAC 724, Appendix I and 35 IAC Part 620 constituents detected in the groundwater at each monitoring well at the compliance point;

 (2) Any proposed changes to the groundwater monitoring system necessary to meet the requirements of 35 IAC 724.199;

 (3) Any proposed changes to the monitoring frequency, sampling and analysis procedures, or methods or statistical procedures used at the facility necessary to meet the requirements of 35 IAC 724.199; and

 (4) For each hazardous constituent detected at the compliance point, a proposed concentration limit under 35 IAC 724.194(a)(1) or (2), or a notice of intent to seek an alternate concentration limit for a hazardous constituent under 35 IAC 724.194(b).

e. Submit to the Illinois EPA a corrective action feasibility plan to meet the requirements of 35 IAC 724.200 unless the concentration of all hazardous constituents identified under Permit Condition V.I.10.b are listed in 35 IAC 620.410 and their concentrations do not exceed the respective Groundwater Quality Standards or the Permittee has sought an alternate concentration limit under Permit Condition V.I.10.d.4. This plan must be submitted to the Illinois EPA within 180 days of the date that the increase is discovered.

f. Submit to the Illinois EPA all data necessary to justify any alternate concentration limit for a hazardous constituent sought under Permit Condition V.I.10.d.4. This plan must be submitted to the Illinois EPA within 180 days of the date that the increase is discovered.

11. If the Permittee determines, pursuant to Permit Condition V.E.3 that there is a statistically significant increase (or decrease, in the case of pH) above the background values for the parameters specified in Permit Condition V.D.1, the Permittee may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. The Permittee must submit a permit modification application in accordance with Permit Condition V.I.10.d unless the demonstration successfully shows that a source other than a regulated unit caused the increase or that the increase resulted from errors in sampling, analysis, or evaluation, and the Illinois EPA concurs.

    To make this demonstration, the Permittee must:

    a. Notify the Illinois EPA in writing that they intend to make this demonstration. This notification must be submitted to the Illinois EPA within seven days of the date that the increase is discovered.

    b. Submit a report to the Illinois EPA which demonstrates that a source other than a regulated unit caused the increase, or that the increase resulted from an error in sampling, analysis or evaluation. This report must be submitted within 90 days of the date that the increase is discovered.

    c. Submit to the Illinois EPA an application to make any appropriate changes to the Groundwater Detection Monitoring Program. This application must be submitted within 90 days of the date that the increase is discovered.

    d. Continue to monitor in accordance with the Groundwater Detection Monitoring Program stipulated by this Permit.

J. <u>REQUEST FOR PERMIT MODIFICATION</u>

1. If the Permittee determines that the Groundwater Detection Monitoring Program no longer satisfies the requirements of 35 IAC 724.198, then within 90

days, the Permittee must submit an application for a permit modification to the Illinois EPA to make any appropriate changes to the program which will satisfy the regulations.

2. Permit conditions in this section of the Permit may be modified in accordance with 35 IAC 705.128 if there is cause for such modification, as defined in 35 IAC 703.271. Causes for modification identified in this section 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 issuance, and new regulations.

SECTION VI - GROUNDWATER CORRECTIVE ACTION PROGRAM

A. SUMMARY

The groundwater corrective action program requirements of this Permit include the implementation of: (1) a Groundwater Corrective Action Program at LF-2; and (2) a Groundwater Management Zone (GMZ) which has a boundary that is generally equivalent with the former refinery site boundary. The GMZ boundary is shown in Figure C-2 of the approved permit application.

1. Hazardous waste constituents have been detected in groundwater monitoring wells at LF-2 at concentrations above the interim status assessment monitoring groundwater quality objectives. Therefore, a Groundwater Corrective Action Program meeting the requirements of 35 IAC 724.200 must be implemented at LF-2.

   At this time, the groundwater impacts that have been detected in the LF-2 monitoring wells are considered to represent residual impacts due to releases prior to closure and encapsulation of LF-2 in 1988. Analysis of LF-2 groundwater monitoring data since closure and encapsulation of the unit has indicated a decrease in hazardous waste constituent concentrations.

   The Groundwater Corrective Action Program at LF-2 required by this Permit includes:

   a. Hydraulic control of the flow in the uppermost aquifer beneath and around LF-2 such that groundwater flow is adequately controlled. This control will be accomplished by the presence of the grout curtain surrounding the unit and by withdrawing sufficient quantities of leachate/groundwater from the LF-2 Leachate Collection System to maintain a water level in the Leachate Collection System which is lower than the groundwater elevation in the LF-2 monitoring wells.

   b. Verification that the flow of groundwater is adequately controlled as required by Permit Condition VI.A.1.a.

   c. Monitoring the quality of groundwater in the uppermost aquifer at the LF-2 compliance point as defined by Permit Condition VI.C.1 to determine the effectiveness of the Groundwater Corrective Action Program.

2. The GMZ is defined as the three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contaminant(s)

that are subject to corrective action or for which the owner/operator undertakes adequate corrective action(s) in a timely and appropriate manner and provides written confirmation to the Illinois EPA.

The groundwater corrective action program requirements for the GMZ include:

a. Assessment of the quality of groundwater in the uppermost aquifer by monitoring GMZ Perimeter wells at the perimeter of the GMZ.

b. Assessment of the quality of groundwater in the uppermost aquifer by monitoring GMZ Observation wells within the interior of the GMZ boundary.

B. IMPLEMENTATION

1. The Permittee must implement the Groundwater Correction Action Program upon the effective date of this Permit. On that date, the groundwater monitoring and corrective action requirements set forth in this Permit must supersede those previously established.

2. The Permittee must carry out the Groundwater Corrective Action Program specified in this Permit on the groundwater beneath and in the vicinity of the CEMC facility in Lockport, Illinois. The uppermost aquifer in the vicinity of the facility has been identified as unconsolidated alluvial and colluvial material, weathered dolomite, and unweathered dolomite in descending order, as described in Section C.3 of the approved permit application. For the purposes of this Permit and in accordance with 35 IAC Part 620 regulations, the uppermost aquifer has been designated Class I: Potable Resource Groundwater.

3. The Point of Compliance, defined as the vertical surface located at the hydraulically downgradient limit of the waste management area(s) that extends down into the uppermost aquifer underlying the regulated unit, is delineated by the wells identified as the LF-2 Point of Compliance wells in Permit Condition VI.C.1 and illustrated in Figure C-2 the approved permit application.

4. The Permittee must continue corrective action measures during the compliance period to the extent necessary to ensure that the groundwater protection standard is not exceeded. If the Permittee is conducting corrective action at the end of the compliance period, the Permittee must continue that corrective action for as long as necessary to achieve compliance with the groundwater protection standard. The Permittee may terminate corrective action measures taken beyond the period equal to the active life of the waste management area

(including the closure period) if the Permittee can demonstrate, based on data from the groundwater monitoring program pursuant to 35 IAC 724.200(f), that the groundwater protection standards found in Permit Condition VI.D.1 have not been exceeded for a period of three consecutive years.

5. The Point of Compliance will be postponed until such time as the GMZ monitoring wells have attained the applicable concentration limits that comprise the groundwater protection standard found in Permit Condition VI.D.1 and the GMZ expires. At that time, the facility must submit a proposal for the establishment of a Point of Compliance which satisfies the regulatory requirements found in 35 IAC 724, Subpart F and reflects current conditions at the facility.

C. WELL AND SUMP LOCATION AND CONSTRUCTION

1. The Permittee must install and maintain the groundwater monitoring wells and piezometers at the locations specified in this table to allow for the collection of groundwater samples and elevations from the uppermost aquifer. The location of these wells is specified in Figure C-2 of the approved permit application.

IEPA Well No.	CEMC Well No.	Well Depth (Ft bgs)	Well Depth Elevation (Ft MSL)	Well Screen Interval (Ft MSL)
LF-2 Point of Compliance Wells				
Shallow				
R109	PM-9R	13.1	568.2	578.2-568.2
G113	PM-13	7.5	573.9	579.3-574.3
G15S	PM-15	8.7	573.3	578.7-573.7
GA1S	PM-21	7.9	573.6	579.0-574.0
Deep				
G114	PM-14R	23.8	557.6	562.9-557.9
G17D	PM-17	28.4	553.5	558.9-553.9
RA2M	PM-22R	19.0	562.9	568.3-563.3

2. The Permittee must maintain the LF-2 Leachate Collection Sumps identified in the included table to allow for the withdrawal of leachate/groundwater from the LF-2 Leachate Collection System, as well as the measurement of water levels to

verify the flow of groundwater is adequately controlled as required by Permit Condition VI.A.1.b.

CEMC Sump Name	Sump Depth (Ft bgs)	Sump Depth Elevation (Ft MSL)
North Sump	10.3	573.3
Middle Sump	11.2	571.9
South Sump	12.1	570.7

Note: All leachate/groundwater is routed to the South Sump for withdrawal; the North and Middle Sumps are used to measure water levels only and clean out (if and as necessary).

3. The Permittee must install and maintain the groundwater monitoring wells and piezometers at the locations specified in this table to allow for the collection of groundwater samples and elevations from the GMZ. The location of these wells is specified in Figure C-2 of the approved permit application.

IEPA Well No.	CEMC Well No.	Well Depth (Ft bgs)	Well Depth Elevation (Ft MSL)	Well Screen Interval (Ft MSL)
GMZ Perimeter Wells				
GA0D	PM-20*	28.3	552.4	557.8-552.8
GA5D	PM-25*	28.2	552.0	557.4-552.4
R2W1	2W-1R*	16.0	554.9	560.4-555.4
R2W5	2W-5R*	17.4	550.1	555.7-550.7
R4B1	4BW-1R*	21.5	564.9	570.5-565.5
G4B2	4BW-2*	21.0	564.4	569.4-564.4
G4B3	4BW-3*	23.0	561.8	566.8-561.8
G4B4	4BW-4*	23.0	561.4	566.4-561.4
G7B3	7BW-3*	16.2	549.2	554.2-549.2
G77D	7BW-7D*	16.3	549.0	554.0-549.0
G77S	7BW-7S*	9.4	556.1	561.1-556.1
G13S	7BW-13S*	22.0	545.0	555.5-545.5
G13D	7BW-13D*	33.5	533.6	544.1-534.1
G5A8	5AW-8*	28.1	554.3	559.2-554.4
G5A9	5AW-9*	27.6	554.4	559.8-554.5
G510	5AW-10*	28.9	553.8	558.7-553.8

G511	5AW-11*	28.2	554.3	559.2-554.4
G4B6	4BW-6*	24.8	557.5	562.4-557.6
G4B7	4BW-7*	23.5	561.0	565.9-561.0
R4B8	4BW-8R*	25.6	560.4	564.8-560.4
G4B9	4BW-9*	11.1	556.5	562.1-557.1

GMZ Observation Wells

R109	PM-9R*	13.1	568.2	578.2-568.2
G113	PM-13*	7.5	573.9	579.3-574.3
G114	PM-14R*	23.8	557.6	562.9-557.9
G15S	PM-15*	8.7	573.3	578.7-573.7
G17D	PM-17*	28.4	553.5	558.9-553.9
GA1S	PM-21*	7.9	573.6	579.0-574.0
RA2M	PM-22R*	19.0	562.9	568.3-563.3
BA4M	PM-24RRR*	17.5	562.7	568.2-563.2
G108	B-8*	18.0	569.0	579.0-569.0
G11A	PM-11RR*	15.1	570.6	580.7-570.7
G116	CAMU-2	21.0	565.5	575.5-565.5
G117	CAMU-3	22.0	564.2	574.2-564.2
G118	CAMU-4	17.0	567.2	577.2-567.2
R115	CAMU-1R	21.5	568.8	578.7-568.8
G119	CAMU-5	25.5	563.3	573.2-563.6
G120	CAMU-6	28.0	560.8	570.8-561.2
G122	CAMU-8	26.9	561.2	571.8-561.8
A104	PM-4RR*	11.6	571.2	576.5-571.5
R79S	7BW-9SR*	11.2	555.8	561.3-556.3
R79D	7BW-9DR*	21.0	546.1	551.6-546.6
G8B4	8BW-4*	18.0	558.2	568.2-558.2
R104	B-4R**	20.5	561.2	571.2-561.2
R105	PM-5R**	12.0	557.1	567.6-557.6
R112	PM-12R**	10.0	557.3	565.3-557.3
B001	R-1RR**	11.9	556.0	564.0-556.0
G3A6	3AW-6**	17.0	565.6	570.6-565.6
G3A7	3AW-7**	16.0	567.4	572.4-567.4
G3B2	3BW-2**	22.0	562.9	572.9-562.9
G3B3	3BW-3**	15.0	569.1	579.1-569.1
R4A1	4AW-1R**	17.9	557.7	562.6-557.7
R4A5	4AW-5R**	10.5	562.6	568.1-563.6
R4A9	4AW-9R**	11.0	561.0	566.5-561.5
G5A2	5AW-2**	22.0	560.3	570.3-560.3
R7B1	7BW-1R**	7.0	561.9	567.4-562.4

R7B2	7BW-2R**	7.0	562.3	567.8-562.8
G8B1	8BW-1**	11.1	565.8	570.8-565.8
G8B2	8BW-2**	10.2	566.7	571.7-566.7
G8B3	8BW-3**	12.0	567.0	572.0-567.0

Note:
* Groundwater analytical results obtained from groundwater samples from these wells will be compared to Lists D1 and D2.
** Groundwater analytical results obtained from groundwater samples from these wells will be compared to Lists D1 and D3.

4. 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 the Illinois EPA "Field Boring Log" form located on the Illinois EPA website, unless otherwise approved by the Illinois EPA.

5. The Permittee must notify the Illinois EPA within 30 days in writing if any of the wells identified in Permit Conditions VI.C.1 and VI.C.3 are damaged or the structural integrity has been compromised. A proposal for the replacement of the subject well must accompany this notification. The well must 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 must obtain written approval from the Illinois EPA regarding the proposed installation procedures and construction.

6. Should any well become consistently dry or unserviceable; a replacement well must be provided within 10 feet of the existing well. This well must monitor the same zone as the existing well and be constructed in accordance with the current Illinois EPA groundwater monitor well construction standards at the time that the well is replaced. A well which is more than 10 feet from the existing well or which does not monitor the same geologic zone must be approved by the Illinois EPA and designated as a new well.

7. Monitoring well and piezometer construction must comply with the minimum standards set forth in 77 IAC Part 920. The Permittee must 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 30 days of the date that the installation of the well is completed. In addition, the Permittee must 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 30 days of the date that the well is plugged and abandoned. All information must be submitted to the appropriate State Agencies.

Illinois Environmental Protection Agency
Bureau of Land - #33
Permit Section
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

8. All wells/piezometers must be clearly identified and must be equipped with protective caps and locks. Monitoring wells or piezometers located in high traffic areas must be protected with bumper guards or alternative barriers.

9. All groundwater monitoring wells and piezometers not utilized in the approved groundwater monitoring system, but retained by the Permittee, must be constructed and maintained in accordance with 77 IAC Part 920. Monitoring wells and piezometers that are improperly constructed must be abandoned in accordance with Permit Condition VI.C.5.

D. GROUNDWATER PROTECTION STANDARD

1. The following hazardous constituents and concentration limits comprise the groundwater protection standards for the groundwater monitoring wells found in Permit Conditions VI.C.1 and VI.C.3. Total (unfiltered) values will be used for comparison with concentration limits. Samples collected during the semi-annual sampling events of each year must be analyzed for the field parameters and the hazardous waste constituents below.

LIST D1

Field Parameters	STORET Number	Reporting Units
pH	00400	S.U.
Specific Conductance	00094	µmhos/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 years, or at the request of the Illinois EPA, or whenever the elevation changes as required by Permit Condition VI.I.5.

LIST D2 (GROUNDWATER – SEMI-ANNUAL)

Hazardous Waste Constituents	STORET Number	Concentration Limits
Volatile Organic Compounds		
Benzene	34030	0.005
Ethylbenzene	78113	0.7
Toluene	34010	1.0
Xylenes (total)	81551	10.0
Semivolatile Base/Neutral Extractable Organics		
Acenaphthene	34205	0.23
Anthracene	34220	1.2
Benzo(a)anthracene	34526	0.00025
Benzo(a)pyrene	34247	0.0002
Benzo(b)fluoranthene	34230	0.00025
Benzo(k)fluoranthene	34242	0.0025
Chrysene	34320	0.025
Fluoranthene	34376	0.15
Fluorene	34381	0.15
1-Methylnaphthalene	77418	0.27
2-Methylnaphthalene	77416	0.015
Pyrene	34469	0.12
Phenanthrene*	34461	0.21
Inorganics (Totals)		
Arsenic**	01002	0.010
Barium	01007	2.0
Chromium	01034	0.1

Lead	01051	0.0075
Nickel	01067	0.077

Note:
* No promulgated 35 IAC 620, Class I, Groundwater Quality Standard or 35 IAC 742, Tier 1, Class I, Groundwater Remediation Objective exists for these constituents. Therefore, provisional Class I groundwater objectives, provided by the Illinois EPA Office of Toxicity Assessment, are used.
** Or approved intrawell 95% Upper Prediction Limit developed in accordance with Appendix C-11 of the approved permit application.

LIST D3 (GROUNDWATER – ANNUAL)

Hazardous Waste Constituents	STORET Number	Concentration Limits
Volatile Organic Compounds		
Benzene	34030	0.005
Carbon disulfide	77041	0.38
Chlorobenzene	34301	0.1
Chloroform	32106	0.07
1,2-Dichloroethane	34531	0.005
Ethylbenzene	78113	0.7
Ethylene dibromide	77651	0.00005
Styrene	77128	0.1
Toluene	34010	1.0
Xylenes (total)	81551	10.0
Semivolatile Base/Neutral Extractable Organics		
Acenaphthene	34205	0.23
Anthracene	34220	1.2
Benzo(a)anthracene	34526	0.00025
Benzo(b)fluoranthene	34230	0.00025
Benzo(k)fluoranthene	34242	0.0025
Benzo(a)pyrene	34247	0.0002
Bis(2-ethylhexyl)phthalate	39100	0.006
Butyl benzyl phthalate*	34292	1.4
Chrysene	34320	0.025
Dibenzo(a,h)anthracene	34556	0.0001
1,2-Dichlorobenzene	34536	0.6

1,4-Dichlorobenzene	34571	0.075
Diethyl phthalate	34336	3.1
Di-n-butyl phthalate	39110	0.38
Di-n-octyl phthalate*	34596	0.14
Fluoranthene	34376	0.15
Fluorene	34381	0.15
1-Methylnaphthalene	77418	0.27
2-Methylnaphthalene	77416	0.015
Naphthalene	34696	0.077
Phenanthrene**	34461	0.21
Pyrene	34469	0.12

<u>Semivolatile Acid-Extractable Organics</u>

2-Methylphenol (*o*-Cresol)	77152	0.19
2-4-Dimethylphenol*	34606	0.14
2-4-Dinitrophenol*	34616	0.014
Phenols	32730	0.1

<u>Inorganics (Totals)</u>

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	0.0012
Lead	01051	0.0075
Mercury	71900	0.002
Nickel	01067	0.077
Selenium	01147	0.02
Silver	01077	0.058
Vanadium	01087	0.00027
Zinc	01092	1.2

Note:
*No promulgated 35 IAC 620, Class I, Groundwater Quality Standard exists for these constituents. Therefore, 35 IAC 742, Tier 1, Class I, Groundwater Remediation Objectives are used.
**No promulgated 35 IAC 620, Class I, Groundwater Quality Standard or 35 IAC 742, Tier 1, Class I, Groundwater Remediation Objective exists for these

constituents. Therefore, provisional Class I groundwater objectives, provided by the Illinois EPA Office of Toxicity Assessment, are used.

LIST D4 (GROUNDWATER – See Permit Conditions VI.E.4.B and VI.E.5.B)

Hazardous Waste Constituents	STORET Number	Reporting Units
Volatile Organic Compounds		
Isobutyl alcohol	77033	mg/L
Semivolatile Base/Neutral Extractable Organics		
Acenaphthylene	43200	mg/L
Benzyl alcohol	77146	mg/L
Bis(2-ethylhexyl)phthalate	39100	mg/L
Diethyl phthalate	34336	mg/L
Semivolatile Acid-Extractable Organics		
2-4-Dimethylphenol	34606	mg/L
Phenol	32730	mg/L

a. In addition to meeting the individual Class I groundwater protection standards indicated in this table, an evaluation for mixtures of similar-acting substances must be conducted for non-carcinogenic substances, to meet the requirements of 35 IAC 620.615.

b. In addition to meeting the individual Class I groundwater protection standards indicated in this table, the requirements of 35 IAC 620.615 must be met for carcinogenic substances.

c. Calculations to meet Permit Conditions VI.D.1.a and b must be based on the most current information to remain protective of human health and the environment.

2. Alternate concentration limits may be established where the Permittee can determine that 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 Permittee must apply for an adjusted standard as outlined in Section 28.1 of the Environmental Protection Act.

b. For those hazardous constituents without a 35 IAC Part 620 standard, the alternate concentration limit(s) proposed by the Permittee must be approved by the Illinois EPA.

3. The compliance period (post-closure period) during which the groundwater protection standard applies must be extended until the Permittee demonstrates that the groundwater protection standard has not been exceeded for three consecutive years.

E. GROUNDWATER CORRECTIVE ACTION PROGRAM

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

1. Upon the effective date of this Permit: (1) the Groundwater Corrective Action Program at LF-2 must continue to be maintained; and (2) the GMZ must continue to be maintained.

2. The Permittee must collect, preserve, and analyze groundwater samples pursuant to Permit Condition VI.G.

3. The Permittee must determine groundwater quality at each of the LF-2 Point of Compliance wells identified in Permit Condition VI.C.1 and the GMZ Perimeter wells identified in Permit Condition VI.C.3 semi-annually, and at each of the GMZ Observation wells identified in Permit Condition VI.C.3 annually during the active life of LF-2 and the GMZ (including closure and post-closure care period). The Permittee may resample a well within 30 days for constituents whose concentration exceeds the LLOQs listed for the approved analytical method(s) specified in USEPA's SW-846 (latest version). The results of the second round of analyses will be used to make the determinations required by Permit Condition VI.E.7, unless resampling is not conducted. If resampling is not conducted, the first round analytical data will be used for the determinations required by Permit Condition VI.E.7

4. Samples collected from the LF-2 Point of Compliance wells identified in Permit Condition VI.C.1 and GMZ Perimeter wells identified in Permit Condition VI.C.3 must be analyzed as follows:

a. Samples must be analyzed for the constituents identified in Permit Condition VI.D.1 (List D1 and D2) during the first and second semi-annual sampling events of each year.

b. Samples must be analyzed for the additional constituents identified in Permit Condition VI.D.1 (List D4) once every 10 years beginning in 2026. These samples must be collected during the first semi-annual sampling event of the applicable year.

5. Samples collected from the GMZ Observation wells identified in Permit Condition VI.C.3 must be analyzed as follows:

a. Samples must be analyzed for the constituents identified in Permit Condition VI.D.1 (Lists D1 and D2 or D1 and D3 as noted in Permit Condition VI.C.3) during the first semi-annual sampling event of each year.

b. Samples must be analyzed for the additional constituents identified in Permit Condition VI.D.1 (List D4) once every 10 years beginning in 2026. These samples must be collected during the first semi-annual sampling event of the applicable year.

6. The Permittee must determine the groundwater flow rate and direction in the uppermost aquifer at least annually from the monitoring wells listed in Permit Conditions VI.C.1 and VI.C.3.

7. The Permittee must evaluate the results of the analyses required by Permit Conditions VI.E.3, VI.E.4 and VI.E.5 and identify:

a. The concentration of any organic constituent detected which is above the appropriate concentration limit listed in Permit Condition VI.D.1.

b. The concentration of any total (unfiltered) inorganic constituents detected which is above the appropriate concentration limit listed in Permit Condition VI.D.1.

c. The concentration of any constituent listed in Permit Condition VI.D.1 that was detected which was not detected during the previous sampling event.

d. The concentration of any constituent listed in Permit Condition VI.D.1 that exhibits a progressive increase over two consecutive sampling events.

8. The Permittee must move from List D4 to List D2 and/or D3 in Permit Condition VI.D.1 any constituent identified on List D4 that has been detected above the LLOQ and confirmed through resampling, provided that resampling is conducted within 30 days of receipt of the results from the initial round of analyses. This request must be in the form of a Class 1 permit modification. At that time, the Permittee must propose appropriate concentration limits for any constituent moved to Lists D2 or D3. This proposal must be in the form of a Class 1* permit modification request.

9. The Groundwater Corrective Action Program at LF-2 must maintain hydraulic control of the flow of groundwater present in the uppermost aquifer and the Permittee must determine the following:

   a. Semi-annual monitoring of groundwater elevations in the wells and Leachate Collection System Sumps identified in Permit Conditions VI.C.1 and VI.C.2, respectively, to verify that the flow of groundwater is adequately controlled throughout the contaminated area requiring corrective action in the uppermost aquifer as required by Permit Conditions VI.A.1.a and b.

   b. The pumping rate for the Leachate Collection System in order to calculate monthly average of withdrawals of leachate/groundwater.

   c. The amount of leachate/groundwater withdrawn each day by the Leachate Collection System Sumps.

   d. The improvement in the quality of groundwater at LF-2 which has resulted from the corrective action.

10. If the facility determines the total arsenic intrawell value requires revision, intrawell upper prediction limit (UPL) values for total arsenic in the GMZ Perimeter wells must be re-evaluated in accordance with Chapter 5 of USEPA's "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance" (March 2009)(Unified Guidance) and submitted for Illinois EPA review and approval.

    a. In accordance with Chapter 5.3.1 of the Unified Guidance, UPLs may be revised to include additional data from a minimum of four new and consecutive semi-annual sampling events. The approved UPLs will remain effective until subsequent UPLs are approved by the Illinois EPA. These evaluations must be submitted as Class 1* modification requests to the Permit.

b. A potential update is predicated on there being no statistically significant increase (SSI) determined for total arsenic in the well under evaluation, including since the last update. Each update must include trend analyses to determine if an SSI has occurred.

c. UPLs need only be submitted as a permit modification if the calculated UPL value is greater than the concentration limit for total arsenic.

F. GROUNDWATER ELEVATIONS

1. The Permittee must determine the groundwater surface elevation referenced to MSL at each well each time groundwater is sampled in accordance with Permit Condition VI.I.3.

2. The Permittee must determine the surveyed elevation of the "stick-up" referenced to MSL once every five years, or at the request of the Illinois EPA, or whenever the elevation changes in accordance with Permit Condition VI.I.5.

3. Elevation, as referenced to MSL, of the bottom of each monitoring well (STORET 72020) is to be reported at least annually. The mandatory measurements must be taken during the first semi-annual sampling event each year.

G. SAMPLING AND ANALYSIS PROCEDURES

The Permittee must use the techniques and procedures described in Section C of the approved permit application, except as modified herein, when obtaining and analyzing samples from the groundwater monitoring wells described in Permit Conditions VI.C.1 and VI.C.3:

1. Samples must be collected by the techniques described in Section C of the approved permit application.

2. Samples must be preserved, shipped, and handled in accordance with the procedures specified in Section C of the approved permit application.

3. Samples must be analyzed according to the procedures specified in Section C of the approved permit application. Groundwater analysis must be conducted 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 must be tracked and controlled using the chain-of-custody procedures specified in Section C of the approved permit application.

H. STATISTICAL PROCEDURES

The Permittee must use the statistical procedures described in Section C of the approved permit Application, except as modified herein, when evaluating results in accordance with Permit Condition VI.E. These are in keeping with USEPA's "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance" (March 2009).

I. REPORTING AND RECORDKEEPING

1. The Permittee must enter all monitoring, testing and analytical data obtained in accordance with Permit Conditions VI.D, VI.E, VI.F, VI.G, and VI.H in the operating record. The data must include, as applicable, all computations, calculated means, variances, t-statistic values, and t-statistic results or results of statistical tests that the Illinois EPA has determined to be equivalent.

2. Samples collected to meet the Groundwater Corrective Action Program requirements described in Permit Conditions VI.D, VI.E, VI.F, VI.G, and VI.H must be collected and reported, as identified in the included table. The result of the analyses conducted on the groundwater quality samples must be submitted in accordance with this schedule. All additional information collected for the Groundwater Corrective Action Program (as specified in Permit Conditions VI.D, VI.E, VI.F, VI.G, and VI.H) must also be submitted to the Illinois EPA in accordance with this schedule.

Samples to be Collected During the Months of	Results Submitted to the Illinois EPA by the Following	Constituents
April - June*	July 15*	Lists D1, D2, D3, and D4**
October - December	January 15	Lists D1 and D2

* Observation Well Sampling Schedule
**List D4 analyzed in accordance with the schedules specified in Permit Conditions VI.E.4.b and VI.E.5.b.

3. Groundwater surface elevation data, measured pursuant to Permit Condition VI.F.1, must be collected at least semi-annually and submitted to the Illinois EPA as identified in the table above.

4. The Permittee must report the groundwater flow rate and direction in the uppermost aquifer, as required by Permit Condition VI.E.6, during the first semi-annual sampling event of each year.

5. The Permittee must report the surveyed elevation, as required by Permit Condition VI.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 Permit Conditions VI.C.1 and 3, every five years (during the first 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 must be made every five years (during the first semi-annual sampling event) or whenever the elevation changes.

6. Elevation of the bottom of each monitoring well identified in Permit Conditions VI.C.1 and VI.C.3, referenced to MSL, must be reported annually. This measurement must be taken during the first semi-annual sampling event (STORET 72020).

7. Information required by Permit Conditions VI.I.2, VI.I.3, VI.I.5, and VI.I.6 must be submitted in an electronic format. The information is to be submitted, as fixed-width text files formatted as found in the form titled, "Formatting Requirements for the 01 (and 02) Record of the Electronically Submitted Groundwater and Leachate Data" (LPC 160) located on the Illinois EPA website titled, "Electronic Reporting of Groundwater Data," and in accordance with the schedule found in Permit Condition VI.I.2. Additional guidance regarding the submittal of the information in an electronic format can be found on the Illinois EPA website.

8. The Permittee must 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 permit for identification purposes. Only one copy of the LPC-592 must accompany the submittal. However, the Permittee must submit one original and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two copies of each notice or

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

9. The Permittee must 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.

10. The Permittee must submit a written report to the Illinois EPA, in accordance with the schedule found in Permit Condition VI.I.2, which discusses the effectiveness of the Groundwater Corrective Action Program. The report must include, but is not limited to the following information:

    a. Address the information requirements in Permit Conditions VI.D, VI.E, VI.F, VI.G, and VI.H.

    b. Provide a discussion of any improvement in the quality of groundwater beneath LF-2 and within the GMZ which has resulted from the corrective action.

    c. The ability of the program to control groundwater flow at LF-2 as required by Permit Condition VI.E.9.

11. If the Permittee determines that groundwater flow is not being adequately controlled, the Permittee must:

    a. Notify the Illinois EPA in writing within seven days of the date that this determination is made.

    b. Take actions as necessary to regain control of groundwater flow as required by Permit Condition VI.E.9.

    c. Submit a written report to the Illinois EPA within 30 days describing the actions taken to regain control of groundwater flow. In addition, the notification must contain information that demonstrates that groundwater flow is being adequately controlled.

    d. Submit a request for permit modification to the Illinois EPA within 90 days describing any changes which must be made to the Groundwater Corrective Action Program to ensure that the groundwater flow is being adequately controlled.

12. If groundwater analytical results associated with the GMZ Perimeter wells listed in Permit Condition VI.C.3 confirm, through resampling, the detection of any constituent listed in Permit Condition VI.D.1 above its applicable concentration limit, provided that resampling is conducted within 30 days of receipt of the results from the initial round of analyses, or, in the case of arsenic, after resampling confirmed to be above the approved 95% UPL for that well as described in Section C.8.4 and Appendix C-11 of the approved permit application, the Permittee must:

    a. Notify the Illinois EPA in writing within seven days of the date that this determination is made.

    b. Submit a written report to the Illinois EPA within 30 days describing additional groundwater activities that will be conducted to determine the source and/or extent of impact above the applicable concentration limits. The report may also include, as applicable, a demonstration that a source other than a facility-related source caused the exceedance or the exceedance resulted from an error in sampling, analysis, or evaluation.

    c. Submit a request for permit modification to the Illinois EPA within 90 days describing any changes which must be made to the Groundwater Corrective Action Program to ensure that the concentration limits are not being exceeded at the GMZ boundary.

J. REQUEST FOR PERMIT MODIFICATION

1. If the Permittee determines that the Groundwater Corrective Action Program no longer satisfies the requirements of 35 IAC 724.200, then within 90 days, the Permittee must submit a permit modification to the Illinois EPA to request any appropriate changes to the program which will satisfy the regulations.

2. Permit Conditions in this section of the Permit may be modified in accordance with 35 IAC 705.128 if there is cause for such modification, as defined in 35 IAC 703.271. Causes for modification identified in this section 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 issuance, and new regulations.

SECTION VII - CORRECTIVE ACTION

A. INTRODUCTION

1. In accordance with Sections 3004(u) and (v) of RCRA and 35 IAC 724.201, the Permittee must institute such corrective action, now referred to as hazardous waste cleanups, as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any solid waste management unit (SWMU), recognized environmental conditions (RECs), also referred to as areas of concern (AOCs) in this Permit, at the facility. This section contains the conditions which must be followed to ensure these requirements are met.

2. The Permittee must conduct, as appropriate: (1) a RCRA Facility Investigation (RFI) to characterize each REC or SWMU of concern at the facility; (2) determine whether releases of hazardous wastes and hazardous constituents have occurred from each SWMU of concern, and if so, the nature and extent of the release(s); and (3) gather other data, as necessary, to be used in determining the need, scope and design of a Corrective Measures Program (CMP).

3. Based upon the results of the RFI, the Permittee must develop and implement a CMP to protect human health and the environment from any of the SWMUs, RECs/AOCs at the facility.

4. The Permittee must provide hazardous waste cleanups, as appropriate, for: (1) any newly discovered SWMUs and RECs/AOCs; and/or (2) future releases for existing SWMUs at the facility.

5. The Permittee must carry out interim measures in accordance with the terms, conditions and requirements of this Permit, as appropriate, to address existing contamination at the facility until such time as a final corrective measure can be developed and implemented.

6. The requirements of 35 IAC Parts 620 and 742 must be met, when applicable, in establishing remediation objectives for hazardous waste cleanups. In addition, all hazardous waste cleanup efforts must meet the requirements of 35 IAC 724.201.

7. The Permittee must incorporate, as necessary, climate change resilience and adaptation considerations into the hazardous waste cleanups required at this facility.

8. All Illinois EPA final decisions regarding RCRA corrective action at this facility are subject to the appeal provisions of the Illinois Environmental Protection Act (Act).

9. Unless there is a desire to modify specific requirements set forth in Section VII of this Permit, information submitted to the 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.

    a. A completed Illinois EPA RCRA Corrective Action Certification (LPC-632) form must accompany all corrective action-related information submitted to the Illinois EPA.

    b. To allow for proper review of all corrective action-related information submitted to the Illinois EPA, the original and two copies of the information must be submitted.

B. GENERAL CORRECTIVE ACTION PROGRAM REQUIREMENTS

1. The goal of this corrective action program is to investigate and remediate, as necessary, all areas of the former refinery where contamination may be present in the soils, surface water, sediment and groundwater and obtain NFA determinations from the Illinois EPA.

2. The groundwater beneath the former refinery must still be addressed as part of the corrective action program for the permitted facility in accordance with the off-site provisions of 35 IAC 724.201 and this Permit. The currently permitted boundaries of the facility covered by this Permit are shown in Attachment B-1 of this Permit.

3. Conduct and complete comprehensive environmental investigations to evaluate all SWMUs and RECs at the former refinery in accordance with plans approved by the Illinois EPA. These investigations must address the soil, sediments, and surface water within the former refinery. This task has been completed for all of the soil investigation areas except for some areas in Area 7A.

    a. The Illinois EPA will issue a NFA letter for an investigation area in accordance with 35 IAC Parts 742 and 620, as applicable, if it determines that the information in the investigation report demonstrates: (1) there is no potential for unacceptable release from that investigation area to the environmental media of interest; and (2) there has been no unacceptable release of hazardous wastes or hazardous constituents to the environmental media of interest from or within that investigation area.

b. The Illinois EPA will require the Permittee to conduct additional area-specific investigation(s), interim measures and/or corrective measures (if no further investigation is needed) if the Illinois EPA determines that the information in the investigation report indicates: (1) there has been an unacceptable release to any environmental media of interest, (2) there currently is an unacceptable release to any environmental media of interest, or (3) the data associated with a given investigation area is inconclusive. The additional site-specific and/or activity-specific investigations must address the environmental media of interest, including groundwater, if appropriate.

c. The Permittee must properly address the groundwater beneath the former 554-acre oil refinery in accordance with the terms and conditions of this Permit. This will be accomplished by breaking the former facility up into six groundwater investigation areas (GWIAs) and then addressing the groundwater present in each GWIA. The boundaries of these GWIAs are shown in Figure C-3 of the approved permit application. The procedures for conducting an investigation of the groundwater in these GWIAs were approved by the Illinois EPA on April 8, 2011.

d. The Permittee must develop and implement Interim Measure Programs (IMPs) or CMPs as necessary to protect human health and the environment from contaminants detected at the former refinery above acceptable levels established in accordance with applicable regulations. These programs must address, as necessary, the soils, surface waters, sediments, and groundwater at the former refinery.

e. Once the soil, sediment, and surface water in soil investigation area have been remediated to the remedial objectives approved by the Illinois EPA, the Permittee may submit a request to modify the Permit and remove such an area from the definition of the facility covered by the Permit. The groundwater beneath any areas removed from the definition of the facility covered by this Permit must still be addressed under the provisions of the Permit and 35 IAC 724.201.

4. The Permittee must provide one copy of each document for which a public comment period will be held, and one copy of plans and reports and other pertinent correspondence regarding corrective action activities to the Lockport Branch - White Oak Library District so that they may be replaced in the

Information Repository established there for information regarding RCRA activities at the facility, as follows:

a. Permit applications and permit modification requests must be submitted to the repository that is concurrent with the public notice provided to the facility mailing list.

b. Reports must be submitted to the repository that is concurrent with submittal to the Illinois EPA.

c. Work plans required by the Permit, and each work plan modification and/or response to the Illinois EPA approval letter to the public repository along with the Illinois EPA approval letter following receipt of that Illinois EPA approval letter.

5. The terms and conditions of this section do not apply to the former hazardous waste units referred to as LF-1 and LF-2. Activities at these units must meet the requirements of Sections II, III, IV, V, and VI of this Permit.

6. Three former interim status hazardous waste LTUs, known as the CT, LAA, and LLF units were present in Area 7A of the facility. All waste was removed from these units; however, the Illinois EPA required that they receive post-closure care. From 1988 to 2001, these units received post-closure care in accordance with 35 IAC 725, Subpart G, and an approved interim status post-closure care plan.

a. Between 2001 and 2007, the CT unit was covered by Sections I, II, III, and IV of this Permit. On June 3, 2008, the Illinois EPA determined that in accordance with 35 IAC 724.210(c), this unit could be addressed under the corrective action provision of this Permit as set forth in this section.

b. Between 2001 and 2011, the LAA and LLF units were covered by Sections I and II of this Permit. However, in accordance with 35 IAC 724.210(c), these units may now be addressed under the corrective action provisions of this Permit as set forth in this section.

c. The basis for the re-designations set forth in (a) and (b) is that each of the units are located near other SWMUs and RECs at the facility which makes it difficult, if not impossible, to separate any potential soil/groundwater associated with the SWMUs/RECs from any potential soil/groundwater contamination associated with the CT, LAA, or LLF. Remedial activities at these units under the corrective action program will meet remediation objectives that will adequately protect human health and the environment and will satisfy the closure performance standard of 35 IAC 724.211(a) and (b).

C. IDENTIFICATION OF THE SOIL INVESTIGATION AREAS AND SWMUS WHICH COMPRISE THE FORMER REFINERY

1. To allow for an efficient and flexible corrective action program, the former oil refinery was divided into 19 soil investigation areas based on environmental and land use considerations, listed in Permit Condition VII.C.2 and as shown in Attachment D-1 to this Permit. Furthermore, surface water bodies that intersect the former refinery are identified subject to corrective action requirements of this section. These areas are to be investigated and remediated under the corrective action requirements of this Permit in a phased approach (implemented in series or in parallel) until such time as the entire former facility has been investigated and remediated.

   a. The investigation area boundaries are shown in Figure G-2 of the approved permit application and are further discussed in Permit Condition VII.C.2.

   b. The investigation area boundaries may be modified if:

      i. It becomes necessary to carry investigation and/or remediation activities beyond the currently defined boundaries to delineate the extent of and/or clean up a potential release; and/or

      ii. Redevelopment or lease issues necessitate changes to the boundaries.

   c. Changes or modifications to investigation or land use area boundaries will not constitute formal permit modifications but are subject to the Illinois EPA review and approval.

   d. Final investigation area boundaries will be specified in area-specific work plans, submitted for the Illinois EPA review and approval. Each area-specific work plan must contain an updated discussion of the Permittee's plan and schedule for ensuring the entire facility is eventually investigated.

   e. A summary of corrective action completed to date is set forth in Attachment F of this Permit.

2. The soil investigation areas which comprise the former refinery are shown in Attachment D-1 to this Permit (as further discussed in Attachment F of this Permit, some areas are no longer part of the facility covered by this Permit):

   a. Area 1A consists of an 11.9-acre strip of land along the east perimeter of the former refinery which has been designated for utilities and similar infrastructure.

   b. Area 1B is a 37.8-acre parcel of undeveloped property at the north end of the former facility. GWIA A encompasses the entirety of Area 1B.

   c. Area 2 is a 21.6-acre parcel of land in the far southern portion of the facility, between the I&M Canal and the BNSF (formerly Santa Fe Railroad).

   d. Area 3A consists of approximately 43.3 acres in the southern portion of the former refinery, which is comprised of utility and roadway corridors.

   e. Area 4A is approximately 18.4 acres in size and is located in the southwestern portion of the facility. This area is comprised of two sub-areas: 4A North (12.9-acre) and 4A South (5.5-acre); however, for the purpose of this section, Area 4A is counted as a single investigation area. It must be noted that prior to June 30, 2009, Area 4D (discussed below) was a portion of Area 4A. This area was acquired by the City of Lockport.

   f. Area 4B consists of approximately 7.6 acres in the southwestern portion of the facility along the Sanitary and Ship Canal. This area was acquired by the City of Lockport.

   g. Area 4C is a 3-acre parcel of land in the far southwestern portion of the facility and is part of the South Stormwater Ponds. This area was acquired by the City of Lockport.

   h. Area 4D is located in the southern portion of the facility and consists of approximately 16 acres. It includes the footprint of WTU #1 and the area between the berms that contain the former Process Wastewater Channel associated with the former refinery. It must be noted that prior to June 30, 2009, Area 4D was a portion of Area 4A. This area was acquired by the City of Lockport.

i. Area 5 consists of the 90-foot-wide strips of land on either side of the I&M Canal (the 90-foot strips are collectively referred to as the I&M Canal Reserve) and three small parcels of adjacent property. This area was divided into five portions, chronologically designated as Areas 5A through 5E.

  i. Areas 5A, 5B, and 5C are leased properties from the IDNR. These areas were never used for refining purposes and thus were not part of the definition of the former permitted facility. CEMC chose to address these areas as part of the overall corrective action program for the former refinery and included as investigation areas:

    (1) Area 5A is approximately 17 acres in size and is utilized as a bike trail by IDNR. Area 5A runs along the western side of the I&M Canal approximately 6,400 feet south from the northern boundary of the former refinery to a point where the bicycle trail crosses the I&M Canal and then extends another 2,700 feet south along the eastern side of the canal. This area is leased from IDNR.

    (2) Area 5B is approximately 20 acres in size and the 90-foot-wide strip along the I&M Canal which is on the opposite side of Area 5A. This area is leased from IDNR.

    (3) Area 5C consists of an approximately 2-acre triangular shaped area located in the southern portion of the facility. This is a leased area from IDNR.

  ii. Area 5D consists of approximately 1.8 acres located in the far southern portion of the former refinery. This area was a part of the former permitted boundaries of the former 554-acre refinery.

  iii. Area 5E consists of approximately 0.3 acres in the far southern portion of the former refinery. Area 5E is anticipated to be used as a parking area for the existing bike trail along the I&M Canal. This area was a part of the former permitted boundaries of the former 554-acre refinery.

j. Area 6 consists of an approximately 128.6-acre parcel of property in the north-central portion of the former refinery. It includes the North Tank Farm and surrounding property; this parcel is also referred to as the

"Pipeline Breakout Facility" and is now owned and operated by Shell Pipeline Company.

k. Area 7A includes approximately 156 acres in the north-central portion of the facility. Area 7A includes two separate portions: (1) a 147-acre area of the permitted facility, which includes closed hazardous waste landfill referred to as LF-2, the remediation waste CAMU, the closed former hazardous waste LTU referred to as LF-1, two closed former LTUs, LAA and LLF (now addressed under this section of the Permit), and the new wastewater treatment facility; and (2) an 8.8-acre area located south of the permitted facility area, which includes former CT unit.

l. Area 7B is a 10.8-acre parcel located in the far southwestern portion of the facility which was part of the facility's former South Stormwater Ponds.

m. Area 8A consists of an approximately 49-acre parcel of land in the south-central portion of the facility.

n. Area 8B is located just north of Area 8A and is approximately 6.7 acres in size. The former coke handling area is located in this area.

3. Surface water within/immediately adjacent to the facility include Shell Fire Water Basin, Long Run Creek, North Gate Drainage Ditch, Santa Fe Drainage Ditch, Little Run Creek, Big Run Creek, Fiddyment Creeks, the I&M Canal, and Deep Run Creek.

4. There are 17 SWMUs listed below and identified in Section G.4.2.1 of the approved permit application and require corrective action at the former refinery.

SWMU No.	Name	Soil Investigation Area	Date of NFA
1	Incinerator Ash Disposal Area	4C/7B	9/17/2012
2	Separator Sludge Pit	4C/7B	9/17/2012
3	API Separator	4D	3/14/2012
4	South Lime Sludge Blowdown Pit	4A-North	6/30/2009
5	North Lime Sludge Blowdown Pit	4A-North	6/30/2009
6	North Stormwater Ponds	7A	4/25/2008
7	South Stormwater Ponds	4C/7B	9/17/2012
8	Sour Water Storage Tanks 19654 and 19655	3B	1/5/2006

9	Leaded Gasoline Tank Bottom Disposal Areas (including those at Tanks 2112, 3757, 19508, 19557, and 19560 discovered in January 2000)	Site-wide	10/12/2001
10	Wastewater Treatment Unit	4D	3/14/2012
11	Plant Sewer System	Site-wide	7/16/2001 2/27/2002 5/7/2003 1/12/2004 1/5/2006 3/21/2007 3/14/2012 9/13/2012 9/17/2012
12	Spent Acid/Caustic Tanks 3711, 3713, 3714, 3715, 3717, 19678, 3744, 3745, 30265, and 32772	4A-South, 4D, 6, 3A, 3B	7/16/2001 1/5/2006 3/31/2007 6/30/2009
13	Heat Exchanger Bundle Cleaning Area	2	1/18/2006
14	Drum Washing Area	8A	9/13/2012
15	Process and Product Tanks 2189, 2191, 3703, 4645, 11475, 11500, 19622, 19631, 19651, 19677, 19680, 19746, 19747, and 11428	3A, 3B, 6, 8A	7/16/2001 2/27/2002 1/5/2006 3/21/2007 9/30/2009 9/13/2012
16	Hazardous Waste Storage Tanks 4646, 4647, 19630, 19656, and 19745	8A, 6, 3B	1/5/2006 3/21/2007 9/13/2012 6/21/2007
17	Former Coke Handling Area	8B	11/22/2004

*Note: A portion of Plant Sewer System is still located within the Permitted Facility boundary in Area 7A.

D. IDENTIFICATION OF THE GROUNDWATER INVESTIGATION AREAS WHICH COMPRISE THE FORMER REFINERY

1. To allow for an efficient and flexible corrective action program to address groundwater beneath the approximately 554-acre former oil refinery and its adjacent areas, the former refinery site was divided up into six GWIAs. The groundwater beneath these areas must be investigated and remediated under

the corrective action requirements of this Permit in a phased approach (implemented in series or in parallel) until such time as groundwater beneath the entire former refinery site has been investigated and remediated.

2. The six GWIAs which comprise the former refinery are shown in Figure C-3 of the approved permit application and Attachment D-2 of this Permit. These areas are generally described in Permit Conditions VII.D.2.a through VII.D.2.f. The descriptions provided are intended for informational purposes only and do not include any enforceable conditions or requirements of the Permit.

   a. GWIA A consists of the groundwater beneath approximately 50 acres of historically undeveloped land, located in the northern portion of the former refinery site. This area was not developed for refining operations, significant structures, or petroleum-related sources. The groundwater quality is considered to represent background conditions for the site. Most of this property is owned by the Permittee, except for 4.25 acres that is owned by the IDNR and leased to the Permittee. These acres are part of the I&M Canal Reserve, which refers to 90-foot-wide property corridors on either side of I&M Canal. A public-use bike trail, which is part of the Grand Illinois Trail System, passes through the entirety of the former refinery site within the I&M Canal Reserve. In GWIA A, the bike trail is on the west side of the I&M Canal throughout the extent of the area. The Permittee has no plans to develop the property in GWIA A. Most of GWIA A has been removed from the permitted facility.

   b. GWIA B is divided into five sub-areas (designated GWIAs B1 through B5) and consists of the groundwater beneath approximately 147 acres in the northern and western portions of the historically developed property. It includes LF-2, the CAMU/LF-1, the Shell Fire Water Basin, the North Stormwater Pond, and WTU #2. The LF-2 and the CAMU/LF-1 are located within GWIA B1. Some of GWIA B will be retained by the Permittee for the post-closure care of LF-2 and the CAMU, either as the actual units or for support operations, such as treatment of leachate. Small portions of this property may be considered for redevelopment in the future. The bike trail is on the west side of the I&M Canal throughout the extent of GWIA B. GWIA B4 lying west of the I&M Canal has been removed from the permitted facility. All of the property on the east side of the I&M Canal within GWIA B remains within the permitted facility. GWIAs B2, B3, and B5 may be removed from the permitted facility after approval of the pending NFA for vapor intrusion evaluation and land use institutional controls for soils are obtained from the Illinois EPA for remaining subareas of soil investigation area 7A.

c. GWIA C consists of the groundwater beneath approximately 146 acres formerly referred to as the North Tank Farm. Most of this area is owned by Shell Pipeline Company and operated by them as a petroleum pipeline breakout facility. Remaining property within GWIA C is likely to become part of that facility in future. Remaining infrastructure (consisting of petroleum storage tanks and pipelines) is utilized by Shell Pipeline Company for operation of the pipeline breakout facility. GWIA C also contains the former LTUs, LAA and LLF, which were moved from post-closure care to the corrective action portion of the Permit in 2008 and currently remain within the permitted facility. Most of GWIA C has been previously removed from the permitted facility. The remaining portion of GWIA C may be removed from the permitted facility after approval of the pending NFA for vapor intrusion evaluation and land use institutional controls for soils are obtained from the Illinois EPA for remaining subareas of soil investigation area 7A.

d. GWIA D consists of the groundwater beneath 110 acres in the southeastern portion of the former refinery site. The boundaries of GWIA D are approximately the same as those of the Business Park 1, which is being marketed to developers as the future site for an industrial/commercial business park. GWIA D contains the footprint of the former CT unit, which was moved from post-closure care to the corrective action portion of the Permit in 2008. The bike trail runs along the east side of the I&M Canal for approximately three-quarters of the length of GWIA D. All of the property within GWIA D has been removed from the permitted facility.

e. GWIA E consists of the groundwater beneath approximately 90 acres in the south-central portion of the former refinery site. GWIA E includes the former Central Tank Farm property, the Former Coke Handling Area, and the main office building and garage/storage facilities which are still in use. The boundaries of GWIA E are approximately the same as those of Business Park 2. The I&M Canal Reserve runs along the east side of the GWIA throughout its extent, but the bike trail only passes through this area in the northern portion. All of the property within GWIA E has been removed from the permitted facility.

f. GWIA F consists of the groundwater beneath approximately 81 acres of property located on the southwest side of the former refinery site. The southern half of the 81 acres was historically developed as part of the former refinery, while the northern half was historically undeveloped.

The south end of this GWIA was historically used for wastewater treatment activities. Currently, the South Stormwater Pond constructed in 2011 manages stormwater for most of the southern portion of the former refinery site. In the southwest corner, there is an interceptor trench operating as an Interim Groundwater Measure. GWIA F contains a paleo-karst feature unearthed during source removal in late 2010 and early 2011. Hydrogeological investigation of this feature and the rest of GWIA F is being carried out under the Illinois EPA approved GWIA F Work Plan. Most of the property within GWIA F is owned by the City of Lockport and is leased to the Permittee. The City of Lockport has expressed interest in developing this area. All of the property within GWIA F has been removed from the permitted facility.

3. Much of the property delineated by the GWIAs is presently not a part of the permitted facility, however, the Permittee retains the obligation to properly address the groundwater beneath the entirety of the former refinery site under the off-site corrective action provisions of this Permit, 35 IAC 724.201 and Section 3004(v) of RCRA.

E. <u>REQUIREMENT TO UPDATE CORRECTIVE ACTION EFFORTS COMPLETED TO DATE</u>

1. The Illinois EPA shall issue an NFA letter for the various media within an investigation area when sufficient information has been provided by the Permittee that the media of interest has been adequately remediated within the identified area.

2. As required by 35 IAC 742.1000(a), an institutional control approved by the Illinois EPA must be established for property or media that have been remediated in accordance with 35 IAC Part 742 as necessary.

3. Attachment F of this Permit contains summary information regarding corrective action efforts completed to date for soil investigation areas, surface water bodies, and GWIAs at the former refinery site. It also provides summary information regarding any institutional controls that have been established for a specific area. The contents of Attachment F in this Permit are provided for informational purposes only and do not include any enforceable conditions or requirements of the Permit.

    a. Section II of Attachment F summarizes the corrective action activities completed to date at each soil investigation area identified in Permit Condition VII.C.2:

(1) Identification of Investigation Area/Unit;

(2) Parcel Identification;

(3) Summary of Corrective Action Effort Completed to Date;

(4) Date of NFA determination by the Illinois EPA and County Recorder's Document Number for NFA;

(5) Descriptions of ELUC Established for the Parcel/Area; and

(6) Will County Recorder's Document Number for ELUC Established

b. Section III of Attachment F summarizes the corrective action activities completed to date for the surface water bodies identified in Permit Conditions VII.C.3. NFA letters have been issued for all surface waters identified in Permit Condition VII.C.3.

c. Section IV of Attachment F summarizes the corrective action activities completed to date for the GWIAs identified in Permit Condition VII.D.

4. Attachment F of the Permit must be updated annually by the Permittee, at the time that the Permittee must submit an updated estimate for the cost of completing corrective action for the facility as required by Permit Condition VII.M.1, or at other times as may be requested by the Permittee. The updated Attachment F must be combined with the updated cost estimate required by Permit Condition VII.M.1 and submitted in the form of a Class 1* permit modification.

5. As indicated in Permit Condition VII.C.4, previously identified SWMUs have been issued for NFA determinations for soil, sediments, and surface water within the investigation areas removed from the definition of the permitted facility. However, if any newly identified SWMU(s) or REC(s) are discovered, Attachment F must be updated to reflect the addition of a newly identified SWMU/REC to the corrective action requirements of this section.

F. <u>SOIL INVESTIGATION AREAS AND SUBAREAS REMOVED FROM THE DEFINITION OF THE PERMITTED FACILITY</u>

1. During the previous RCRA Permit renewal under Log No. B-38R, the Permittee completed the required environmental investigation and remedial activities

associated with the corrective action for soil, sediment, and surface water at 18 of the 19 investigation areas and at the surface water bodies identified in Section VII.C.3. As discussed in the Section VII.E, NFA determinations for soil, sediment, surface water, and the 17 SWMUs have been made at the 18 soil investigation areas and a portion of Area 7A, which includes the former CT Unit, by the Illinois EPA; the list of the 18 investigation areas and a portion of Area 7A are listed in Permit Condition VII.F.2.

2. As of August 2026, the following investigation areas have been issued NFA determinations by the Illinois EPA for soil, sediment, and surface water, and the NFA letters have been recorded with the Will County Recorder's Office as shown in the table below. Furthermore, all SWMUs once present in these 17 investigation areas have been properly removed/remediated, and also received NFA determinations as described in Permit Condition VII.C.2. Thus, as allowed in Permit Conditions VII.B.3.e of this Section, the following areas have either been: (1) removed from the facility covered by this Permit; or (2) can only be removed once Permit Condition VIII.D is fulfilled for that designated parcel:

Area	Size (Acres)	Parcel Designation	Date of NFA Letter	County Recorder's No. for ELUC
1A	1.492	1A - First Parcel	February 25, 2005	R2012140287 R2017040834
	4	1A - Second Parcel	February 25, 2005	R2005048908
	3.85	1A - Third Parcel	January 5, 2006	R2012140287
	2.69	1A - Fourth Parcel	December 14, 2011	R2012141493 R2025019825
1B	37.8	1B	August 1, 2008	R2012141492
2	21.6	2	January 18, 2006	R2011141495 R2017040835

Area	Size (Acres)	Parcel Designation	Date of NFA Letter	County Recorder's No. for ELUC
3A	10	3A - First Parcel	July 16, 2001	R2012140287 R2017040834
	10.903	3A - Second Parcel	February 27, 2002	R2012140287 R2017040834
	9.812	3A - Third Parcel	May 14, 2003	R2012140287 R2017040834
	12.6	3A - Fourth Parcel	January 12, 2004	R2012140287 R2017040834
3B	1.3	3B - First Parcel	January 12, 2004	R2004016308
	5.919	3B - Second Parcel	February 27, 2004	R2012140287 R2017040834
	5	3B - Third Parcel	February 25, 2005	R2012140287 R2017040834
	27	3B - Fourth Parcel	January 5, 2006	R2012140287 R2017040834
4A	18.5	4A	June 30, 2009	R2013014285

Area	Size (Acres)	Parcel Designation	Date of NFA Letter	County Recorder's No. for ELUC
4B	7.6	4B	June 30, 2009	R2013014285
4C	3.3	4C	September 17, 2012	R2013014285
4D	14.8	4D	March 14, 2012	R2013014285
5A	17.03	5A	May 7, 2003	**See Note 1 below*
	3.5	5A - Buffer Zone	November 26, 2012	**See Note 1 below*
5B	19.3	5B	November 26, 2012	**See Note 1 below*
5C	1.95	5C	August 11, 2003	**See Note 1 below*
5D	1.789	5D	November 3, 2003	R2012140287 R2017040834
5E	0.3	5E	May 7, 2003	R2012140287 R2017040834
6	128.6	6	May 10, 2010	R2010050334 R2012141491

Area	Size (Acres)	Parcel Designation	Date of NFA Letter	County Recorder's No. for ELUC
7A	8	7A - First Parcel	May 31, 2007	R2012140287 R2017040834
	0.8	7A - Third Parcel	September 30, 2009	R2012140287 R2017040834
	8.47	7A-1 (3 Sub parcels)	March 12, 2025	To be established
	32	7A-2	April 25, 2008	To be established
	11.3	7A-3	January 10, 2017	To be established
	9.7	7A-4	January 31, 2017	R2017015715
	9.2	7A-5	January 31, 2017	R2017015716
	3	7A-7	October 7, 2016	To be established
	8.2	7A-8	October 11, 2016	To be established
	6.095	7A-9	November 2, 2016	To be established
	6.566	7A-10	September 12, 2016	R2016087103
7B	10.4	7B	September 17, 2012	R2012141494
8A	50.001	8A	September 13, 2012	R2011141495 R2017040835

Area	Size (Acres)	Parcel Designation	Date of NFA Letter	County Recorder's No. for ELUC
8B	6.73	8B	November 22, 2004	R2011141495 R2017040835
Roadway/ Utility Corridor	1.492 12.6 1.3	1A - First Parcel 3A - Fourth Parcel 3B - First Parcel	January 12, 2004	R2012140287 R2017040834

*Note: 1 - This area is a leased Parcel from IDNR and maintained by the Permittee. Institutional controls must be established for the area(s) in accordance with Permit Condition VII.G.2.

3. Land use restrictions required as permit conditions for a NFA determination for each area must be established as an ELUC and recorded at Will County Recorder's Office for the parcel. The document numbers for ELUCs already have been recorded at the Will County Recorder's Office are provided in the table above.

4. Specific land use restrictions established in the ELUC for each area are summarized in Attachment F of this Permit.

5. For Area 5A, 5B, and 5C, which are leased areas from the IDNR, Permit Condition VII.G.2 must be met.

6. The groundwater beneath any areas described in Section VII.D and listed in the table in Permit Condition VII.F.2 must still be addressed under the provisions of the Permit and 35 IAC 724.201, except for Area 6.

G. CORRECTIVE ACTION WHICH MUST STILL BE COMPLETED

1. Corrective Action Which Must be Conducted for Groundwater

a. Groundwater beneath the entire 554-acre former oil refinery was broken up into six GWIAs. The procedures for conducting an investigation of the groundwater in these GWIAs was approved by the Illinois EPA on April 8, 2011. The following table describes the current status for each GWIA:

GWIA	Status
A	- Workplan for GWIA A was approved by the Illinois EPA on October 23, 2019. - NFA for groundwater was approved by the Illinois EPA on October 23, 2019.
B	- Workplan for GWIA B was approved by the Illinois EPA on October 3, 2012. - NFA determination is required for GWIA B
C	- Workplan for GWIA C was approved by the Illinois EPA on January 24, 2012. - NFA for groundwater was approved by the Illinois EPA on January 23, 2025.
D	- Workplan for GWIA D was approved by the Illinois EPA on May 8, 2012. - NFA determination is required for GWIA D
E	- Workplan for GWIA E was approved by the Illinois EPA on October 3, 2012. - NFA determination is required for GWIA E
F	- Workplan for GWIA F was approved by the Illinois EPA on October 23, 2012. - NFA determination is required for GWIA F

2. Land use restrictions must be established on the future land use at Investigation Areas 5A, 5B, and 5C; these areas were not included in the boundaries of the

facility covered by CEMC's original Permit. However, as these areas were located directly to the west of the former oil refinery, CEMC remediated the soils, sediments, and surface water in the area to the satisfaction of the Illinois EPA.

Investigation Areas 5A, 5B, and 5C are leased parcels from the IDNR (Lease Agreement No. 5286; Site Name: Illinois & Michigan Canal; Location Code: 50-3021-2). The Permittee must establish an institutional control developed in accordance with 35 IAC 742, Subpart J. To support the NFA letters associated with these areas, this institutional control must, at a minimum, place the following restrictions on each area:

a. Groundwater beneath the property may not be used as potable water supply in any fashion;

b. CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the property required of CEMC by the RCRA Permit for the CEMC facility; and

c. Soil excavated during construction/demolition/excavation activities within the property must be evaluated to determine if it is contaminated;

   (1) If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal.

   (2) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the property. However, procedures must be in place to ensure that this material remains on the property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal.

   (3) Documentation of all these activities must be placed in the property owner's (or any subsequent property owner's or property owner's 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, at the time of the activity) operating record.

3. The establishment of institutional controls is required upon issuance of NFA determinations, in the form of an ELUC. Several parcels identified in Permit Condition VII.F.2 still need the establishment and approval of an ELUC from the Illinois EPA.

4. CEMC has completed a substantial amount of corrective action at the facility. The remaining actions are detailed in Table G-1 of the approved permit application and Section VII and Attachment F of this Permit.

H. TARGET REMEDIATION OBJECTIVES FOR CORRECTIVE MEASURES

1. Should the Permittee wish to propose target soil, groundwater, surface water and/or sediment remediation objectives for interim measures of corrective measures, such a proposal may be submitted at any time during the corrective action process. These objectives may be proposed on an area-specific basis or a facility-wide basis, provided they are developed in accordance with the applicable regulations. Such a request must:

   a. Consider distance from the subject SWMU(s) and/or impacted media to potential receptors, 35 IAC Part 620 groundwater quality standards, 35 IAC Part 302 surface water quality standards, and 35 IAC Part 742 remediation objectives requirements.

   b. Provide a risk-based assessment of potential threats to human health and the environment in proposing soil, surface water, or groundwater target clean up objectives (i.e., the proposal should include a site- and contaminant-specific risk assessment which ensures that alternative target clean up objectives will not allow the groundwater quality or surface water quality standards to be exceeded, or pose a threat to human health and/or the environment).

   c. Contain sufficient information demonstrating that the applicable regulations were met in the development of the remediation objectives (including all data and calculations).

   Any proposed remediation objectives are subject to the Illinois EPA review and approval.

2. The target remediation objectives for groundwater at the facility perimeter will be equivalent to the groundwater remediation objectives listed in 35 IAC Part 742 (Appendix B, Table E) for Class I groundwater, unless the Permittee can demonstrate that another groundwater classification is appropriate.

3. Any institutional control proposed to be used in developing remediation objectives must meet the requirements of 35 IAC Part 742, Subpart J. The only institutional control which can be used to restrict the future use of the portion of the facility to industrial/commercial is an ELUC. ELUCs must be developed in accordance with 35 IAC 742.1010 and must be approved by the Illinois EPA before they can be filed with the Will County Recorder. In accordance with 35 IAC 742.1010, ELUCs submitted to the Illinois EPA for review must be signed by the Owner of the property on which a restriction is being placed before the Illinois EPA can approve the ELUC.

4. If the Permittee wishes to propose clean up objectives for an industrial/commercial/recreational scenario, then it may be necessary to place restrictions in the deeds conveying the property requiring that the property be used only for industrial/commercial/recreational activities in the future.

5. The Illinois EPA will establish clean up objectives for corrective measures in accordance with applicable regulations if no objectives are proposed by the Permittee.

6. All Illinois EPA actions regarding remediation objectives are subject to the appeal provisions of Section 39(d) and 40(a) of the Act.

7. The Permittee must take appropriate action to ensure the approved remediation objectives are achieved within each investigation area at the facility for all contamination found to be resulting from previous refinery operations or current activities at the facility.

I. INTERIM GROUNDWATER MEASURES

1. Hazardous constituents released from the area of the former South Stormwater Ponds, designated as SWMU No. 7 and located within GWIA F, and the Former Coke Handling Area, designated as SWMU No. 17 and located in GWIA E, have been detected in the groundwater above the groundwater protection standard and background values. Therefore, the Permittee chose to establish an Interim Groundwater Measure in accordance with 35 IAC 724.201. This Interim Groundwater Measure must be continued until such time as environmental investigations are completed for these areas and a final corrective measure is selected in accordance with the terms and conditions of the Permit.

   The Interim Groundwater Measures Program required by this Permit includes:

a. Annual groundwater monitoring events at groundwater monitoring wells PM-5R, PM-12R, R-1R, and B-4R. Well B-4R is the designated upgradient well for the Interim Groundwater Measure. Well details are located in Permit Condition VI.C.3. Well locations are shown in Figure C-2 of the approved permit application;

b. Groundwater monitoring frequency may not be reduced without written Illinois EPA approval;

c. The concentration limits, groundwater monitoring procedures, and reporting provisions associated with the GMZ Observation wells in Section VI of this Permit must be followed for the Interim Groundwater Measures Program. Discussion of the effectiveness of the Interim Groundwater Measures Program must be included in the required report, including the following:

   1) Details associated with the maintenance and operation of the Interceptor Trench and the two sumps installed to intercept groundwater in the southwest corner of GWIA F and the treatment of the recovered groundwater in a permitted on-site wastewater treatment unit.

   2) The pumping rate for the two sumps in order to calculate monthly average of withdrawals of groundwater.

   3) The amount of groundwater withdrawn monthly from the two sumps.

   4) The ability of the Interim Groundwater Measures Program to adequately intercept groundwater in the southwest corner of GWIA F and/or treat the recovered groundwater in a permitted on-site WTU.

   5) This evaluation may include consideration of off-site, non-refinery related sources, if applicable.

d. Maintenance and operation of the interim measure consisting of an Interceptor Trench and two sumps installed to intercept groundwater in the southwest corner of GWIA F and the treatment of the recovered groundwater in a permitted on-site WTU.

e. The treatment of recovered groundwater at a permitted on-site WTU will be determined to be adequate based on compliance with the NPDES Permit effluent limits; the NPDES Permit governs the treatment of the recovered groundwater.

2. If it is determined that the Interim Groundwater Measures Program is not adequately intercepting groundwater in the southwest corner of GWIA F and/or the treatment of the recovered groundwater in a permitted on-site WTU is not adequate, the Permittee must:

   a. Notify the Illinois EPA within seven days of the date that this determination is made.

   b. Take actions as necessary to adequately intercept groundwater in the southwest corner of GWIA F and/or treat the recovered groundwater in a permitted on-site WTU (e.g., sump repair).

   c. Submit a written report to the Illinois EPA within 30 days of the date that this determination is made describing the actions taken to adequately intercept groundwater in the southwest corner of GWIA F and/or treat the recovered groundwater in a permitted on-site WTU. The written report must contain information which demonstrates that the actions are adequately intercepting groundwater in the southwest corner of GWIA F and/or treating the recovered groundwater in a permitted on-site WTU.

   d. If the action does not adequately intercept groundwater in the southwest corner of GWIA F and/or treat the recovered groundwater in a permitted on-site WTU, the Permittee must submit a Proposed Revised Interim Groundwater Measures Plan within 90 days of the date this determination is made describing any changes that must be made to the Interim Groundwater Measures Program to allow adequate recovery and/or treatment of groundwater.

J. <u>INTERIM CORRECTIVE MEASURES REQUIREMENTS</u>

1. The Permittee may, at any time during the required corrective action program initiate interim measures for the purpose of preventing/mitigating a release from a SWMU or REC or for the purpose of assessing the contribution from an off-site, non-facility related source to on-site conditions, prior to completing the corrective action program described in Permit Condition VII.B.3.

2. Prior to implementing any interim measures, the Permittee must submit detailed information regarding the proposed action to the Illinois EPA for review and approval. This information must include, but need not be limited to:

    a. Background information about the SWMU or REC for which the interim measure is being proposed;

    b. A brief overview of the proposed interim measure and a discussion of the objectives of the interim measures;

    c. A discussion of how the interim measure will prevent/mitigate the release of concern;

    d. Design, construction, and maintenance requirements;

    e. Schedules for design and construction;

    f. Schedules for progress reports;

    g. A discussion of whether the proposed interim measure is the expected final corrective measure; and

    h. A discussion of any further investigative efforts or remedial efforts necessary to achieve remediation objectives in accordance with Permit Condition VII.H for the SWMU or REC being addressed in the interim measure; or (2) bring corrective measures to completion.

3. If, in accordance with the terms and conditions of this Permit, it is determined that corrective measures must be taken in response to releases at a SWMU, REC, or investigation area evaluated during the required environmental investigations, then the Permittee must develop and implement a CMP unless the Permittee and the Illinois EPA otherwise agree as stated above. The purpose of this program is to develop and evaluate corrective measures alternatives and then implement corrective measures which will satisfy the target clean up objectives specified by the Illinois EPA. The proposed corrective measures must be sufficient to protect human health and the environment from the observed release. The Permittee must develop the CMP and may propose establishment of an area-specific or facility-wide GMZ in accordance with the provisions of 35 IAC 620.250(a).

4. The Illinois EPA will approve, modify and approve, or disapprove and provide comments to the Permittee as to the corrections or modifications needed for any interim measure or CMP.

5. If the Illinois EPA determines that a long-term groundwater monitoring program must be established for certain SWMUs, RECs, or investigation areas, then the Permittee must submit such an area-specific groundwater plan within 90 days after receiving this notification. This plan may include a proposal for establishment of an area-specific or facility-wide GMZ as set forth in 35 IAC 620.250(a). The Permittee may also use the provisions of 35 IAC 740.415 and 740.435 to propose focused groundwater plans. The Illinois EPA will approve, approve with conditions or modifications, or disapprove and provide comments to the Permittee as to corrections or modifications needed for the program.

6. The Illinois EPA action and/or conclusions on corrective measures made in accordance with Permit Condition VII.J shall be subject to the appeal provisions of Sections 39(d) and 40(a) of the Act.

K. <u>REQUIREMENTS FOR ADDRESSING NEWLY-IDENTIFIED RELEASES</u>

1. The Permittee must notify the Illinois EPA in writing of any newly-identified SWMU or REC discovered during the course of groundwater monitoring, field investigations, environment audits, or other means, no later than 30 days after discovery. Such a notification must also be made if the Permittee becomes aware of a release from an existing SWMU/REC. The notification must provide the following information, if available and as applicable:

    a. The location of the newly-identified SWMU/REC in relation to other SWMUs on a scaled map 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/REC, 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 constituents from the newly-identified SWMU/REC, the Illinois EPA may request, in writing, that the Permittee prepare a SWMU Assessment Plan (Plan) and a proposed schedule of implementation and completion of the Plan for any additional SWMU(s)/REC(s) discovered subsequent to the issuance of this Permit.

3. Within 90 days after receipt of the Illinois EPA request for a plan, the Permittee must prepare a plan consistent with the requirements of Permit Conditions VII.E.5 and VII.G. This plan must also propose investigations, including field investigations if necessary, to determine the release potential to specific environmental media for the newly-identified SWMU/REC. The plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste and hazardous constituents from the newly-discovered SWMU(s)/REC(s) to the environment.

4. After the Permittee submits the plan, the Illinois EPA shall either approve, approve with conditions, or disapprove the plan in writing. 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 must submit a report documenting the results of implementation of the approved plan to the Illinois EPA in accordance with the schedule in the approved plan. The report must describe all results obtained from the implementation of the approved plan.

6. Based upon the results of the report, the Permittee may be required to carry out corrective measures in accordance with Permit Condition VII.J.

L. <u>PROCEDURES FOR DETERMINING WHEN CORRECTIVE MEASURES ARE COMPLETE</u>

1. The corrective action program being implemented by the Permittee addresses all potential sources of contamination throughout the entire original 554-acre former Texaco refinery. This is being accomplished by investigating and remediating, as necessary, 19 soil investigation areas which, combined, make up the former refinery. Corrective measures must be completed in each of these investigation areas, as necessary, in accordance with the Illinois EPA approved

corrective measure plans. Such corrective measures may take place in a phased manner, focusing on certain SWMUs, RECs, or media within an investigation area, as appropriate, or they may focus on the entire investigation area.

2. The Permittee must continue to conduct environmental investigations and CMPs, in accordance with the terms and conditions of this Permit and as approved by the Illinois EPA, until such time as they have been completed for all media (soils, surface water, groundwater) within the investigation areas identified in Permit Conditions VII.C and VII.D which comprise the former refinery.

3. The Permittee may request that the Illinois EPA consider corrective measures complete for any given SWMU, REC, or investigation area at any time during the term of this Permit. Furthermore, the Permittee may request that the Illinois EPA consider corrective measures complete for a given media within an area once that media has been investigated and/or remediated, as appropriate. Such a request must include:

    a. A demonstration that there have been no unacceptable releases of hazardous wastes or hazardous constituents to any media of interest from the SWMU, REC, media, or area of concern; or

    b. A demonstration that the releases of hazardous wastes/constituents attributed to facility-related sources to the media for which the Permittee believes corrective measures have been completed within the area have been remediated to the target cleanup objectives specified within the approved CMP, and a description of how releases will be prevented in the future; or

    c. Some combination of the above demonstrations.

    d. Appropriate documentation and certification must accompany this submittal. This submittal must be referred to as a "Corrective Measures Completed Demonstration".

4. The Permittee will be notified in writing of the Illinois EPA's decision on a Corrective Measures Completed Demonstration. If the demonstration is approved, this notification will also include a release from the environmental investigation financial assurance requirements of Permit Condition VII.K for the SWMU, REC, media, or area addressed in the demonstration.

5. The Illinois EPA will issue an NFA letter for any SWMU, REC, environmental media or investigation area for which it has approved a corrective action completion demonstration in accordance with the procedures set forth in Permit Conditions VII.M.3 and 4. This letter shall clearly identify the SWMU, REC, environmental media or investigation area it pertains to as well as any requirements which must be met in support of the determination. The Illinois EPA's documentation of the NFA determination and the Permittee's proper recording of these decisions shall meet the requirements of 35 IAC Part 742.

6. The issuance of an NFA letter documents Illinois EPA's determination that the SWMU, REC, media or area addressed in the letter does not constitute a threat to human health or the environment and does not require further remediation under the Act if the SWMU, REC, or investigation area is utilized in accordance with the NFA letter.

7. If necessary, corrective measures must be conducted at the former refinery until such time as NFA letters are issued by the Illinois EPA for all areas and all environmental media within each of the investigation areas identified in Permit Conditions VII.C and VII.D, which comprise the former refinery.

8. Issuance of an NFA letter for certain media at a given SWMU, REC, or investigation areas shall not preclude the Illinois EPA from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU, REC, environmental media, or investigation area that is likely to pose a threat to human health or the environment. In such a case, the Illinois EPA shall: (1) rescind the NFA letter; or (2) add conditions to the NFA letter necessary to reflect the new conditions at the SWMU, REC, environmental media or investigation area.

9. Once an NFA letter(s) has/have been issued for the soils, surface water and sediments associated with a given SWMU, REC, or investigation area, then the Permittee may submit a request to modify this Permit to remove the given SWMU, REC, or investigation area from the terms and conditions of this Permit. Any such modification of the Permit will not relieve the Permittee of the responsibility to obtain a comprehensive NFA letter for the area in question for soils, sediments, surface water, and groundwater.

    a. A permit modification request to remove a given SWMU, REC, media or area from the terms and conditions of this Permit must include:

        i. All information required by 35 IAC Part 703;

ii. A survey plat developed by a qualified Illinois-licensed professional land surveyor which shows the legal boundaries of the area in question;

iii. A detailed legal description of the area in question developed by a qualified Illinois-licensed professional land surveyor;

iv. A copy of the Illinois EPA's NFA letter for the area in question;

v. A certified copy of any institutional controls established in accordance with 35 IAC Part 742 and filed with Will County Recorder's Office in support of Illinois EPA's NFA letter. Any institutional controls must be approved by the Illinois EPA before they are properly established and recorded.

vi. Information demonstrating that: (1) the area in question is actually being transferred to another entity; or (2) the Permittee is conducting good-faith efforts to prepare the area in question to be marketed for transfer or for redevelopment.

vii. Information demonstrating that the Permittee has the authority/right to undertake all investigations and remediation necessary to properly address all contamination present within the area, even after ownership of the property has been transferred to another entity;

viii. A statement that the Permittee understands that it: (1) must obtain a comprehensive NFA letter for the area in question (for soils, sediments, surface water, and groundwater to ensure the requirements of 35 IAC 742.201(c) are met for this area; (2) cannot use an argument that it is unable to obtain access to the area as a defense for not completing corrective action in this area.

b. This type of permit modification request is not specifically listed in 35 IAC Part 703, Appendix A. Thus, the Permittee must submit this request as a Class 3 modification request, or it may request a determination by the Illinois EPA that the modification be reviewed as a Class 1 or Class 2 modification. If the Permittee requests that the modification be classified as a Class 1 or 2 modification then the Permittee must provide the Illinois EPA with the necessary information to support the requested classification.

M. FINANCIAL ASSURANCE FOR CORRECTIVE ACTION

1. The cost estimate for completing the corrective action required by this Permit is set forth in Attachment E to this Permit. The approved cost estimate for completing corrective action at this facility is $145,357 (in 2026 dollars), which includes a 15% adjustment for engineering administration fee and a 5% adjustment for contingencies, as identified in Attachment E of this Permit. This approved value is based upon estimates of the cost of the various required/known efforts required to be carried out as part of the corrective action program at this facility. As required by Permit Condition VII.M.2, these estimates must be updated annually to reflect the recent results of the program and the impacts these results have on determining what is needed to complete corrective action at the facility.

   By December 1 of each year, the Permittee must submit an updated estimate of the cost for completing corrective action at this facility (such updates are necessary to take into account such things as the completion of investigation efforts, the need for or completion of remediation, etc.). This estimate must be submitted as a Class 1* modification request and contain the following detailed information in support of the overall cost estimate:

   a. A brief description of the various tasks which must be carried out to complete corrective action at the facility;

   b. The estimated cost of completing each identified task;

   c. An identification of the resources needed to complete each task (type and amount) and the unit cost of each required resource; and

   d. Justification for all values used in developing all aspects of the estimate.

2. The Permittee must 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 estimates required under Permit Condition VII.M.1. The words "completion of corrective measures" must be substituted for "closure and/or post-closure", as appropriate in the financial instrument specified in 35 IAC 724, Subpart H. The documentation must be submitted by March 31 of each year. The Illinois EPA may accept financial assurance for completion of corrective measures in combination with other financial assurance that is acceptable under 35 IAC 724.246 at its discretion.

SECTION VIII - SPECIAL CONDITIONS

A. REPOSITORY

The Permittee must provide one copy of each document for which a public comment period will be held, and one copy of plans and reports and other pertinent correspondence regarding corrective action activities to the Site Information Repository approved by the Illinois EPA so that information regarding RCRA activities at the facility is available to the community as follows:

1. Permit applications and permit modification requests must be submitted to the repository concurrent with the public notice provided to the facility mailing list.

2. Reports must be submitted to the repository concurrent with submittal to the Illinois EPA.

3. Work plans required by the Permit, and each work plan modification and/or response to the Illinois EPA approval letter to the public repository along with the Illinois EPA approval letter following receipt of that Illinois EPA approval letter.

B. REQUIRED FORMS

The Permittee must provide a completed Illinois EPA permit application form LPC-PA23 and a 39i Certification form with all additional information, permit modifications, and permit applications that are submitted to the Illinois EPA Bureau of Land.

C. COMPLIANCE SCHEDULE

1. The Permittee must address all of the comments listed in Attachment 1: Technical Review Comments of the Notice of Deficiency (NOD) letter issued by the Illinois EPA on July 1, 2026, except for Illinois EPA Comment 2 which is addressed elsewhere in the compliance schedule. The response shall be submitted as revised permit application pages within 90 days of the effective date of this permit. The subject comments are listed below:

   a. Section A.4.1 - Facility Mailing List: The mailing list is not up-to-date. An updated mailing list for the facility is provided as an attachment to this letter and must be re-submitted to the Illinois EPA.

   b. Section C.6.1 - Indicator Parameters, Waste Constituents, Reaction Products to be Monitored: Section C.6.1, and any other portions of

Section C as necessary, must be revised to remove proposals related to the following: the Illinois EPA cannot approve the proposals to unify parameter lists, remove barium from the Groundwater Corrective Action Program, or automate transfer of parameters to List D4. Illinois EPA has determined the transfer of parameters to List D4 does not have regulatory basis and will be removed from the Permit.

c. <u>Section C.6.2 - General Monitoring Program Requirements:</u> Section C.6.2, and any other portions of Section C as necessary, must be revised to remove the facility's proposal to transition groundwater elevation and groundwater quality monitoring from semi-annual frequency to annual frequency.

d. <u>Section C.6.3 - Groundwater Monitoring System:</u> Section C.6.3, and any other portions of Section C as necessary, must be revised to remove the facility's proposal to discontinue the use of well B-8 from its upgradient well monitoring network.

e. <u>Section C.8.4.8 - Effectiveness of Corrective Action:</u> Section C.8.4.8 must be revised to remove the proposal for annual monitoring of groundwater elevations in the LF-2 monitoring wells and sumps with renewal of the Permit.

f. <u>Section C.9 - Reporting Requirements:</u> Section C.9, and any other portions of Section C as necessary, must be revised to reflect semi-annual reporting frequency as required by the current Permit.

g. <u>Sections E.3.1 and F.3.1- Quality of Leachate (LF-1, LF-2, CAMU):</u> CEMC proposes to conduct future leachate sampling and analysis on an annual basis from the approved semi-annual basis. The proposal cannot be approved at this time as the leachate data provided in Appendices E-5 and F-4 shows consistent detections of constituents like total organic carbon with no clear indication of improved values. In addition, in accordance with Permit Conditions I-B.D.6.a.ii(a) and (b) of the current Permit (Log No. B-38R), 35 IAC Part 302, 35 IAC Part 620, and 40 CFR 141.40, frequency recommended to stay protective of human health and the environment is on a semi-annual basis at minimum. The application did not provide adequate demonstration to be able to reduce the sampling frequency.

h. <u>Sections E.3.4 and F.3.4 - Leachate Management Program (LF-1, LF-2, CAMU):</u> CEMC proposes to report leachate system information on an annual basis (by July 15 of each calendar year) from the approved semi-annual basis. The proposal cannot be approved at this time based on the determination in Comment #8 above and since the frequency of reporting should match the frequency of leachate sampling and analysis, semi-annual reporting should continue.

i. Sections E.6.3 and F.6.3 - 24 Hour Reporting: The emergency reporting plan must be included in the application in accordance with 35 IAC 702.152(f) and 35 IAC 703.245. Sections E.6 and F.6 of the application must be revised to include a 24-hour reporting notice plan, which describes how the Facility will take action if an inspection for LF-2 and/or CAMU and LF-1 reveals states of noncompliance within the Permit that may cause endangerment to the health of individuals, communities, or the environment in accordance with requirements outlined in 35 IAC 703.245.

j. Section E.11 and Appendix E-7 - Post-closure Cost Estimate: Section E.11 and Appendix E-7 must be revised to include the most current cost estimate, including the tables attached to the letter discussing the cost estimate.

k. Section F.6.1.1 - Items Inspected: CEMC proposes reducing the frequency of gas vent system monitoring and benchmark inspections for the CAMU/LF-1 from quarterly to annually. The proposal cannot be approved at this time as: (1) frequent inspections are necessary to maintain the permanent benchmark, (2) there is an insufficient amount of data to verify the efficacy of the gas vent monitoring system of the CAMU/LF-1, and (3) the CAMU/LF-1 is still in the 30-year post-closure care period.

   In addition, low values of total organic vapor were reported in 2016, followed by a large increase to 36.4 ppm on April 19, 2017. Although the value does not exceed the 100 ppm limit indicated in Permit Condition I-B-I-7.b(1) of the current Permit (Log No. B-38R), the approved approach better ensures the protection of human health and the environment.

2. The Permittee shall submit the necessary 39i Certification form(s) and supporting documentation within 30 days of any of the following events:

   a. The Owner or Operator, or officer of the Owner or Operator, or any employee who has control over operating decisions regarding the facility has violated federal, State or local laws, regulations, standards, or ordinances in the operation of waste management facilities or sites; or

b. The Owner or Operator, or officer of the Owner or Operator, or any employee who has control over operating decisions regarding the facility has been convicted in this or another State of any crime which is a felony under the laws of this State, or conviction of a felony in a federal court; or

c. The Owner or Operator, or officer of the Owner or Operator, or any employee who has control over operating decisions regarding the facility has committed an act of gras carelessness or incompetence in handling, storing, processing, transporting, or disposing of waste.

d. A new person is associated with the Owner or Operator who can sign the permit application or who has control over operating decisions regarding the facility, such as a corporate officer or a delegated employee.

The 39i certification must describe the violation(s), convictions, carelessness, or incompetence as outlined in a, b, or c above and must include the date that a new person as described in d above began employment with the applicant.

The 39i certification form and supporting documentation shall be submitted to the address specified below:

Illinois Environmental Protection Agency
Bureau of Land - #33
Permit Section
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

The 39i certification forms will be treated as confidential by the Illinois EPA. The applicant may also request the information on the 39i certification form be maintained confidential in accordance with 2 IAC 1828.

3. Within 90 days of the effective date of this permit, the facility must submit a revised Table C-1 to the approved permit application that includes the total well depth measurement collected during the first semi-annual sampling event of 2022 rather than the well depth measurement collected at the time of installation.

4. Within 90 days of the effective date of this Permit, Section C of the permit application, including any associated figures, tables, appendices, and the Sampling and Analysis Plan, must be revised to require the Lower Limit of Quantitation (LLOQ) instead of the Practical Quantitation Limit (PQL).

5. Within 90 days of the effective date of this Permit, the facility must submit an Applicability Determination as a Class 1* permit modification request that provides an assessment and evaluation of the following new constituents added to 35 IAC Part 620 effective March 28, 2025:

   - Aluminum
   - Lithium
   - Molybdenum
   - Radium (combined 226+228)
   - HFPO-DA (Hexafluoropropylene Oxide Dimer Acid GenX)
   - PFBS (perfluorobutanesulfonic acid)
   - PFHxS (perfluorohexanesulfonic acid)
   - PFNA (perfluorononanoic acid)
   - PFOA (perfluorooctanoic acid)
   - PFOS (perfluorooctanesulfonic acid)
   - Desethyl-atrazine (DEA)
   - Desisopropyl-atrazine (DIA)
   - Diaminochlorotriazine (DACT)

   The Applicability Determination must include the following information for each constituent:

   a. Monitoring context;
   b. Relevant source and release information;
   c. Affected SWMU, AOC, or regulated unit;
   d. Existing groundwater data;
   e. Potentially relevant upgradient or off-site sources; and
   f. Chevron's proposed monitoring recommendation for both groundwater and leachate.

D. PERMITTED FACILITY BOUNDARY

1. The Permittee may eventually remove up to approximately 57 acres from the current definition of the Permitted Facility covered by the RCRA Permit, from approximately 148 acres to approximately 91 acres, which consists of LF-2, CAMU, and their proximate areas. Once approval of the pending NFAs for the completion of corrective action for environmental media, with the exception of

groundwater, are obtained from the Illinois EPA for the remaining subareas of Area 7A, up to approximately 57 acres may be removed from the definition of the Permitted Facility through a Class 1* permit modification request(s) to this Permit for alternative future uses as allowed in accordance with the Illinois EPA's NFA approval letters and other governmental authorities. Groundwater at the facility still must continue to be addressed through this corrective action program in accordance with the requirements of 35 IAC 724.201 and the conditions of this Permit until a NFA for every GWIA is obtained from the Illinois EPA.

2. The Class 1* permit modification request must include, at a minimum:

   a. A redefined survey plat;

   b. An updated legal description reflecting the redefined survey plat; and

   c. Revised permit application pages of Section B.1.1.3 describing the respective updates.

SECTION IX - STANDARD CONDITIONS

1. EFFECT OF PERMIT. The existence of a RCRA Permit must not constitute a defense to a violation of the Illinois 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 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 must 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 must 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 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 through 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 must take all reasonable steps to minimize releases to the environment and must 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 must 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 must 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 must 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 must 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 must 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 USEPA's <u>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods</u>, Third Edition (SW-846) and finalized updates; 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 must 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 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 must 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 must 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 must 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 (HWM), the Permittee must not commence treatment, storage, or disposal of hazardous waste; and for a facility being modified the Permittee may 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 qualified Illinois-licensed professional engineer stating that the facility has been constructed or modified in compliance with the Permit; and

    b. The Illinois EPA has inspected the modified or newly constructed facility and finds it is in compliance with the condition of the Permit; or

    If, within 15 days of the date of submission of the letter in paragraph (a), the Permittee has not received notice from the Illinois EPA of its intent to inspect, prior inspection is waived, and the Permittee may commence treatment, storage, or disposal of hazardous waste. (35 IAC 703.247)

16. ANTICIPATED NONCOMPLIANCE. The Permittee must 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 must submit a revised permit application no later 90 days prior to the scheduled change. (35 IAC 703.260)

18. MONITORING REPORTS. Monitoring results must 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 must be submitted no later than specified in 35 IAC 702.162. (35 IAC 702.152(e))

20. TWENTY-FOUR REPORTING. (35 IAC 702.152(f) and 35 IAC 703.245).

a. The Permittee must report to the Illinois EPA any noncompliance with the Permit which may endanger human health or the environment. Any such information must be reported orally within 24 hours from the time the Permittee becomes aware of the following circumstances. This report must 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 must 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 must also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Illinois EPA may waive the five day written notice requirement in favor of a written report within 15 days.

21. OTHER NONCOMPLIANCE. The Permittee must report all instances of noncompliance not otherwise required to be reported under Standard Conditions 18, 19 and 20, at the time monitoring reports, as required by this Permit, are submitted. The reports must 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 must 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 must be sent to:

    Illinois Environmental Protection Agency
    Bureau of Land #33
    Permit Section
    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 must be signed and certified as required by 35 IAC 702.126. (35 IAC 702.151)

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 must maintain at the facility, until post-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 post-closure care 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 must be managed in accordance with the generator requirements at 35 IAC Part 722.

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

29. GENERAL INSPECTION REQUIREMENTS. The Permittee must follow the approved inspection schedule. The Permittee must remedy any deterioration or malfunction discovered by an inspection as required by 35 IAC 724.115(c). Records of inspections must be kept as required by 35 IAC 724.115(d).

30. CLOSURE REQUIREMENTS FOR ACCUMULATION AREAS. The Permittee must 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).

PREPARDNESS AND PREVENTION

31. DESIGN AND OPERATION OF FACILITY. The Permittee must 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)

RECORD KEEPING

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

POST-CLOSURE

33. CARE AND USE OF PROPERTY. The Permittee must provide post-closure care for the facility as required by 35 IAC 724.217 and in accordance with the approved post-closure plan.

34. 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).

35. COST ESTIMATE FOR POST-CLOSURE. The Permittee's original post-closure cost estimate, prepared in accordance with 35 IAC 724.244, must be:

a. Adjusted for inflation either 60 days prior to each anniversary of the date on which the first post-closure cost estimate was prepared or if using the financial test or corporate guarantee, within 30 days after close of the firm's fiscal year. This Permit condition is applicable throughout the entirety of the post-closure care period.

b. Revised whenever there is a change in the facility's post-closure plan increasing the cost of 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 during the post-closure care period and cannot be decreased unless approved by the Illinois EPA in a permit modification.

36. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE. The Permittee must 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. This financial assurance must be maintained at such value throughout the post-closure care period and must be adjusted accordingly pursuant to 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
Materials Management and Compliance Section
2520 West Iles Avenue
P.O. Box 19276
Springfield, IL 62794-9276

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

SECTION X - REPORTING AND NOTIFICATION REQUIREMENTS

The reporting and notification requirements of each section of the RCRA permit are summarized below. This summary table is provided to "highlight" the various reporting and notification requirements of this permit.

Condition	Action	Due Date
Section II: Post-closure Care for LF-2		
II.E.3	Inspect LF-2	Monthly or within 72-hours rainfall at 3" or more in 24-hr period
II.E.4	Elevation survey of LF-2	Once every 5 years
II.E.5	Reinspect following corrective action taken	Within one month of corrective action
II.F.2	Request permit modification to remove the liner or hazardous wastes	Prior to removing the liner or wastes
II.F.3	Certify to the Illinois EPA that post-closure care was performed in accordance with the specifications	Within 60 days after completion of the post-closure care period
II.G.1 a and b	Collect and analyze leachate samples	Semi-annually
II.G.1.c	Record flow of leachate	Daily
II.G.1.d	LF-2 leachate monitoring data	Semi-annually (January 15 and July 15 of each calendar year)
II.G.2.a	Inspect gas vent and sample for total organic vapor by a portable PID	Quarterly
II.G.2.b	LF-2 gas management data	Annually or within 30 days after occurrences identified in Permit Condition II.G.2.a
II.H.3	Provide financial assurance	Within 60-day of approval
Section III: Post-closure Care for LF-1/CAMU		
III.C.3	Submit a Class 2 permit modification request to extend post-closure	By December 10, 2044
III.E.4	Elevation survey of CAMU	Once every 5 years
III.E.5	Reinspect following corrective action taken	Within one month of corrective action
III.F.3	Submittal of certification of completion of post-closure care	No later than 60-day after completion of post-closure care
III.G.1 a and b	Collect and analyze leachate samples	Semi-annually

III.G.1.c	Record flow of leachate	Daily
III.G.1.d	CAMU leachate monitoring data	Semi-annually (January 15 and July 15 of each calendar year)
III.G.2.a	Inspect gas vent and sample for total organic vapor by a portable PID	Quarterly
III.G.2.b	CAMU gas management data	Annually or within 30 days after occurrences identified in Permit Condition III.G.2.a
III.H.3	Provide financial assurance	Within 60-day of approval
Section V: Groundwater Monitoring Program		
V.I.2	Groundwater monitoring data.	Semi-annually (January 15 and July 15 of each calendar year)
V.I.3	Groundwater surface elevation.	Semi-annually (January 15 and July 15 of each calendar year)
V.I.4	Groundwater flow rate and direction.	July 15.
V.I.5	Surveyed elevation of the measuring point.	Every 5 years or at the request of Illinois EPA or whenever the elevation changes. For new wells, at the time of installation.
V.I.6	Elevation of the bottom of each well.	July 15.
V.I.10.a	Notify Illinois EPA of discovery of statistically significant increase.	Within 7 days of the date increase is discovered.
V.I.10.d	Submit permit modification to establish a compliance monitoring program.	Within 90 days of the date increase is discovered.
V.I.10.e	Provide the Illinois EPA with corrective action feasibility plan.	Within 180 days of the date the increase is discovered.
V.I.11.a	Notify Illinois EPA of decision to make demonstration that another source caused the increase or that increase resulted from error in sampling analysis or evaluation.	Within 7 days of the date exceedance is discovered.
V.I.11.b	Submit report demonstrating that another source caused the increase or that the increase was the result of error in sampling or evaluation.	Within 90 days of the date exceedance is discovered.
V.I.11.c	Submit to Illinois EPA application to change detection monitoring program.	Within 90 days of the date the increase is discovered.
V.J.1	Submit permit modification if determination is made that the monitoring program no longer satisfies the regulatory requirements.	Within 90 days of the date determination is made.

Section VI: Groundwater Corrective Action Monitoring Program		
VI.I.2	Groundwater monitoring data.	Semi-annually (January 15 and July 15 of each calendar year)
VI.I.3	Groundwater surface elevation.	Semi-annually (January 15 and July 15 of each calendar year)
VI.I.4	Groundwater flow rate and direction.	July 15.
VI.I.5	Surveyed elevation of the measuring point.	Every 5 years or at the request of Illinois EPA or whenever the elevation changes. For new wells, at the time of installation.
VI.I.6	Elevation of the bottom of each well.	July 15.
VI.I.10	Submit report to the Illinois EPA evaluating effectiveness of groundwater corrective action.	Semi-annually (January 15 and July 15 of each calendar year)
VI.I.11.a	Notify the Illinois EPA if determination is made that groundwater flow is not being adequately controlled.	Within 7 days of the date determination is made.
VI.I.11.c	Submit report describing actions taken to regain control of groundwater flow.	Within 30 days of the date determination is made.
VI.I.11.d	Submit permit modification describing changes that must be made to ensure groundwater is being adequately controlled.	Within 90 days of the date determination is made.
VI.I.12.a	Notify the Illinois EPA if determination is made that constituent exceeds concentration limit at GMZ Perimeter well.	Within 7 days of the date exceedance is discovered.
VI.I.12.b	Submit report describing additional groundwater activities to determine source or extent of exceedance.	Within 30 days of the date exceedance is discovered.
VI.I.12.c	Submit permit modification describing changes that must be made to ensure concentration limits are not exceeded at the GMZ Perimeter.	Within 90 days of the date exceedance is discovered.
VI.J.1	Submit permit modification if determination is made that the monitoring program no longer satisfies the regulatory requirements.	Within 90 days of the date determination is made.
Section VII: Corrective Action		

VII.E.4	Annual Update of Attachment F	December 1 of each calendar year or when requested by the Permittee
VII.G.2	Submittal of an institutional control for Areas 5A, 5B, and 5C	Prior to execution and filing of an institutional control for Areas 5A, 5B, and 5C
VII.I.1.c	Reporting of Interim Groundwater Measures monitoring results and evaluation of effectiveness of interim groundwater measures	July 15
VII.I.2.a	Notification that Interim Groundwater Measure is not adequately intercepting groundwater	7 days after date determination is made
VII.I.2.c	Report documenting activities completed to ensure Interim Groundwater Measure is adequately intercepting groundwater	30 days after date determination is made
VII.I.2.d	Proposed Revised Interim Groundwater Measures Plan	90 days after determination of inadequacy made
VII.J.2	Submittal of Interim Corrective Measure Work	When deemed necessary by Permittee
VII.J.5	Long Term Groundwater Monitoring Program Plan	Within 90 days of Illinois EPA's request
VII.K.1	Notification of release from a SWMU	Within 30 days of discovery
VII.K.3	SWMU Assessment Plan for a new SWMU	Within 90-days of Illinois EPA request
VII.L.3 and 4	Corrective Measures Completed Demonstration	Upon completion of required corrective measure
VII.M.1	Submit a revised cost estimate for corrective action	By December 1 each year
VII.M.2	Submit financial assurance documentation	By March 31 each year
Section VIII: Special Conditions		
VIII.C.1	Address comments in Illinois EPA-issued NOD letter	Within 90 days of the effective date of the Permit
VIII.C.2	Submission of 39i Certification form(s) and supporting documentation	Within 30 days of occurrence
VIII.C.3	Submission of revised Table C-1	Within 90 days of the effective date of the Permit
VIII.C.4	Revised Sampling and Analysis Plan	Within 90 days of the effective date of the Permit
VIII.C.5	Applicability Determination	Within 90 days of the effective date of the Permit

Section IX: Standard Conditions		
IX.6	Complete application for new Permit	At least 180 days prior to Permit expiration
IX.11	Information requested by the Illinois EPA and copies of records required to be kept by this Permit	Reasonable time
IX.14	Notify the Illinois EPA of planned physical alterations or additions	As soon as possible
IX.16	Notify Illinois EPA of changes which may result in permit noncompliance	In advance of such activities
IX.17	Application for permit modification indicating Permit is to be transferred	No later than 90 days prior to the scheduled change
IX.19	Submission of any information required in a compliance schedule	Within 14 days after each schedule date
IX.20	Report to the Illinois EPA any noncompliance By telephone In writing	 Within 24 hours after discovery Within 5 days after discovery
IX.21	Report all other instances of noncompliance not covered by Conditions IX.18, 19, and 20. By telephone In writing	Within 5 days after discovery Within 24 hours after discovery Within 5 days after discovery
IX.35(a)	Adjust post-closure care cost estimate for inflation	Within 60 days before anniversary date, or within 30 days after the close of the firm's fiscal year
IX.35(b)	Revision of post-closure cost estimate	As needed
IX.36	Change in financial assurance mechanism for post-closure care	As needed
IX.37	Notify the Illinois EPA of commencement of voluntary or involuntary bankruptcy proceedings	Within 10 days after commencement proceeding

ATTACHMENT A

IDENTIFICATION OF APPROVED PERMIT APPLICATION

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

STATE ID NO. 1970500012

FEDERAL ID NO. ILD041518861

ATTACHMENT A: IDENTIFICATION OF APPROVED PERMIT APPLICATION

Document	Dated	Date Received by the Illinois EPA	Log No.
Permit Application	November 4, 2022	November 7, 2022	B-38R2
Permit Application (Revised)	November 12, 2025	November 14, 2025	B-38R2

ATTACHMENT B

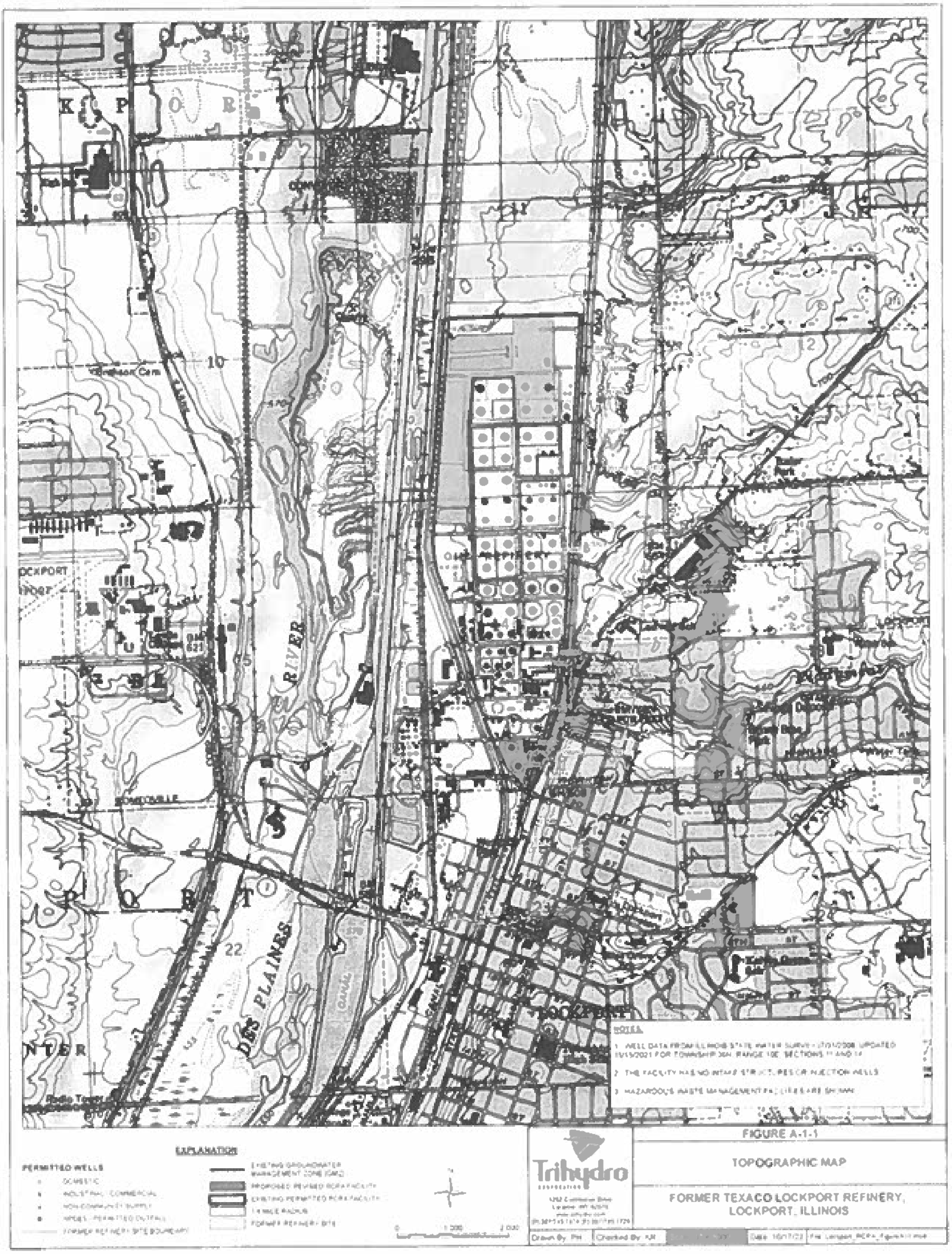
SITE LOCATION AND LAYOUT MAPS

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

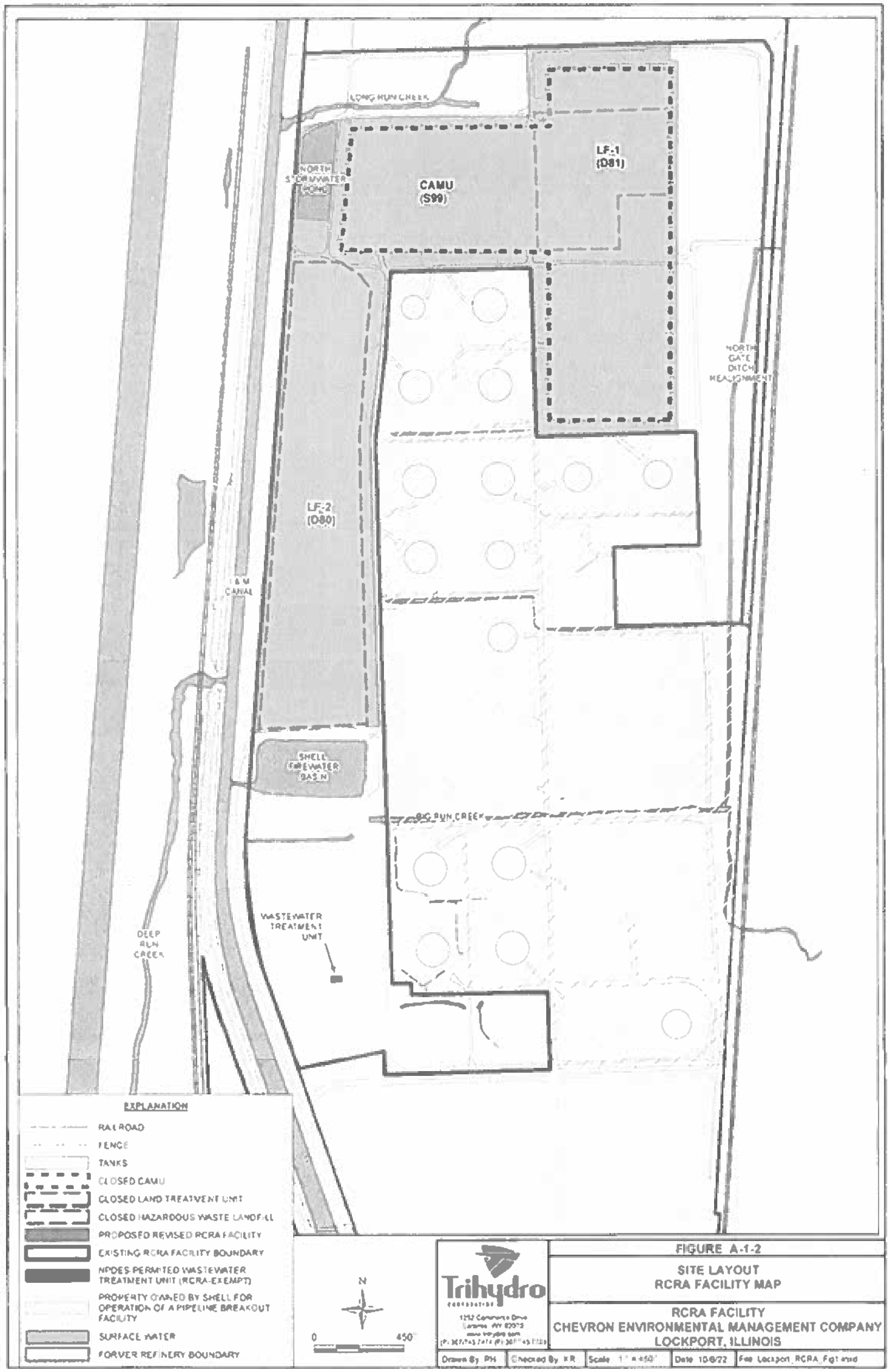
STATE ID NO. 1970500012

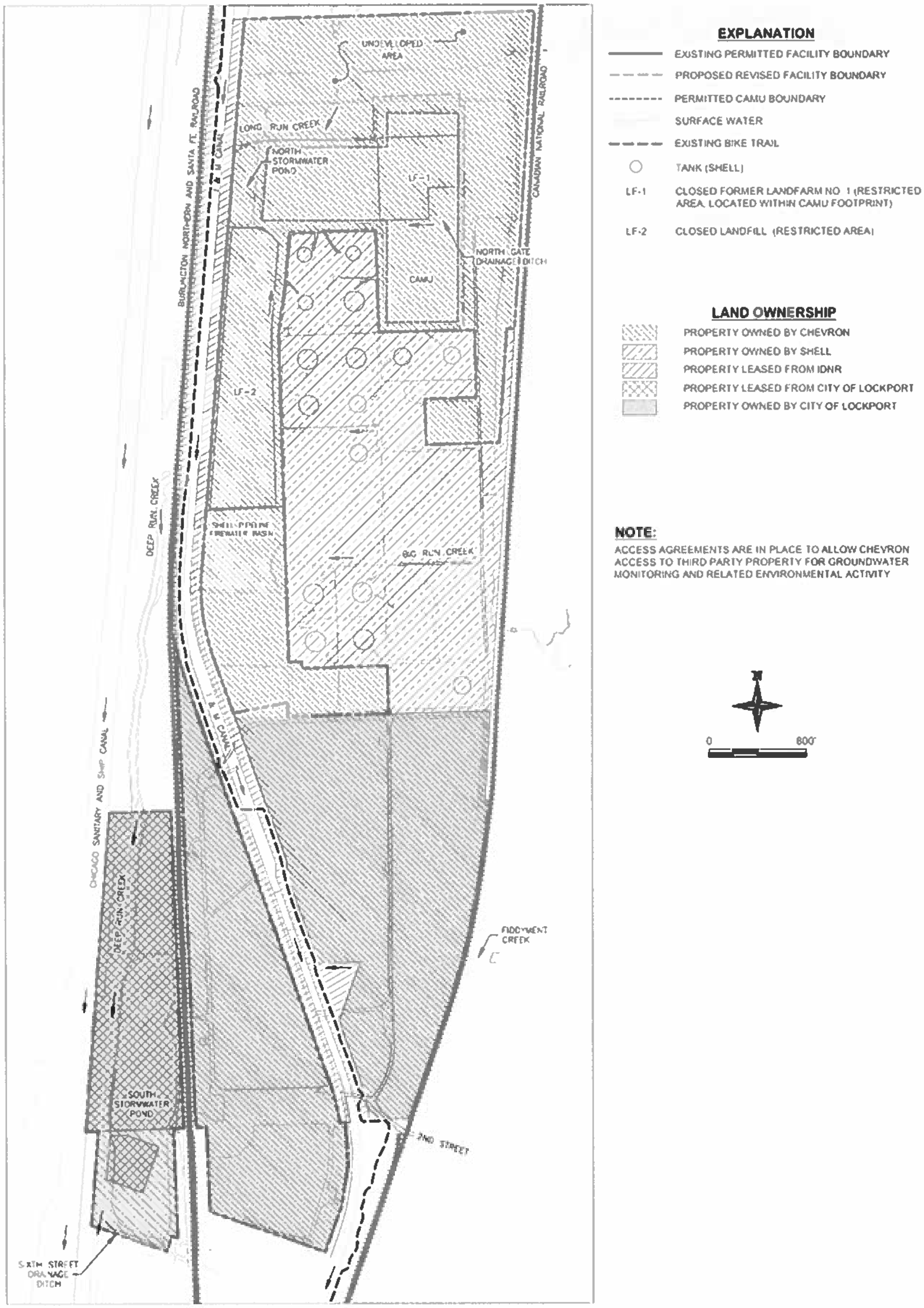
FEDERAL ID NO. ILD041518861

ATTACHMENT B-1



ATTACHMENT B-2




EXPLANATION
EXISTING PERMITTED FACILITY BOUNDARY
PROPOSED REVISED FACILITY BOUNDARY
PERMITTED CAMU BOUNDARY
SURFACE WATER
EXISTING BIKE TRAIL
TANK (SHELL)
LF-1 CLOSED FORMER LANDFARM NO. 1 (RESTRICTED AREA, LOCATED WITHIN CAMU FOOTPRINT)
LF-2 CLOSED LANDFILL (RESTRICTED AREA)
LAND OWNERSHIP
PROPERTY OWNED BY CHEVRON
PROPERTY OWNED BY SHELL
PROPERTY LEASED FROM IDNR
PROPERTY LEASED FROM CITY OF LOCKPORT
PROPERTY OWNED BY CITY OF LOCKPORT
NOTE:
ACCESS AGREEMENTS ARE IN PLACE TO ALLOW CHEVRON ACCESS TO THIRD PARTY PROPERTY FOR GROUNDWATER MONITORING AND RELATED ENVIRONMENTAL ACTIVITY
0
800'
UNDEVELOPED AREA
LONG RUN CREEK
NORTH STORMWATER POND
LF-1
CAMU
NORTH GATE DRAINAGE DITCH
LF-2
BIG RUN CREEK
I & M CANAL
BURLINGTON NORTHERN AND SANTA FE RAILROAD
CANADIAN NATIONAL RAILROAD
DEEP RUN CREEK
CHICAGO SANITARY AND SHIP CANAL
SOUTH STORMWATER POND
FIDDYMENT CREEK
2ND STREET
SIXTH STREET DRAINAGE DITCH

ATTACHMENT C

INSPECTION LOGS

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

STATE ID NO. 1970500012

FEDERAL ID NO. ILD041518861

Attachment C-1: LF-2 and CAMU Monthly Inspection Log

Chevron Environmental Management Company
Former Texaco Lockport Refinery

Monthly Inspection - Post Closure Period	Date of Inspection:
Unit Inspected: LF-2 or CAMU/LF-1 (Circle)	Time of Inspection:
Inspection Element	**Comments**
Surface Condition:	
Erosion	
Abrasion	
Settlement/subsidence/displacement	
Ponding	
Gas or Odor	
Vegetative Cover	
Animals	
Vegetation with tap roots	
Lateral Containment Sys., Dike Rip Rap:	
Erosion	
Abrasion	
Settlement	
Runon/Runoff Control System:	
South: concrete ditch East: concrete ditch North: concrete ditch and swale West: concrete ditch	
Other items needing attention:	

Emergency Coordinator Contacted: Yes No

Response Timing: Urgent Routine Inspected by: Title:

Attachment C-2: LF-2 and CAMU Weekly Inspection Log

Chevron Environmental Management Co.
Former Texaco Lockport Refinery

LF-2 | CAMU/LF-1 WEEKLY INSPECTION – LEACHATE COLLECTION SYSTEM

Week of: ______________________

Inspection Element	Comments
Leachate Containment System	
Check automatic level control pump @ South Sump for operability.	
Check for leakage when leachate is being transferred.	

Emergency Coordinator contacted: Yes No

Response Timing: Urgent Routine

Inspected by: Title:

Attachment C-3: Quarterly Gas Vent Inspection Log for LF-2

Chevron Environmental Management Co.
Former Texaco Lockport Refinery

Quarterly* Inspection - Post Closure Period

Date of Inspection:

Unit Inspected: LF-2

Time of Inspection:

Inspection Element	Acceptable	Total Organic Vapor (ppm) Measured with PID	Maintenance Required
Five Gas Vents - North to South			
Check for any obstructions with fish tape. Vent #1			
Vent #2			
Vent #3			
Vent #4			
Vent #5			
Surveyed Benchmark			
Inspect for condition and record. If required, request replacement.			

Comments:

Emergency Coordinator Contacted: Yes No

Response Timing: Urgent Routine

Inspected by:

Attachment C-4: Quarterly Gas Vent Inspection Log for CAMU

Chevron Environmental Management Co.
Former Texaco Lockport Refinery

Quarterly Inspection - Post Closure Period   Date of Inspection: ______

Unit Inspected: **CAMU/LF-1**   Time of Inspection: ______

Inspection Element	Acceptable	Total Organic Vapor (ppm) Measured with PID	Maintenance Required
Eight Gas Vents			
Check for any obstructions with fish tape. Vent #1			
Vent #2			
Vent #3			
Vent #4			
Vent #5			
Vent #6			
Vent #7			
Vent #8			
Surveyed Benchmark			
Inspection for condition and record. If required, request replacement.			
Comments:			

Emergency Coordinator Contacted: Yes No

Response Timing: Urgent Routine

Attachment C-5: Emergency Generator Monthly Inspection Log

Chevron Environmental Management Co.
Former Texaco Lockport Refinery

Date of Inspection:

Monthly Inspection

Emergency Generator - LF-2/CAMU Leachate Collection System

Equipment/Item Inspection Element	YES	NO	Comments
Security Evidence of Vandalism/Tampering?			
Operation Bump Test/Start?			
Chassis & Circuit Breakers Visible rust, corrosion, or damage? Staining or other evidence of leaks? Supports stable and in good condition?			
Ground Condition Staining or other evidence of leaks? Stable beneath support structure?			

COMMENTS: IF NO, LIST ACTION TO CORRECT.

Emergency Coordinator Contacted: Yes No

Response Timing: Urgent Routine

Inspected by: Title:

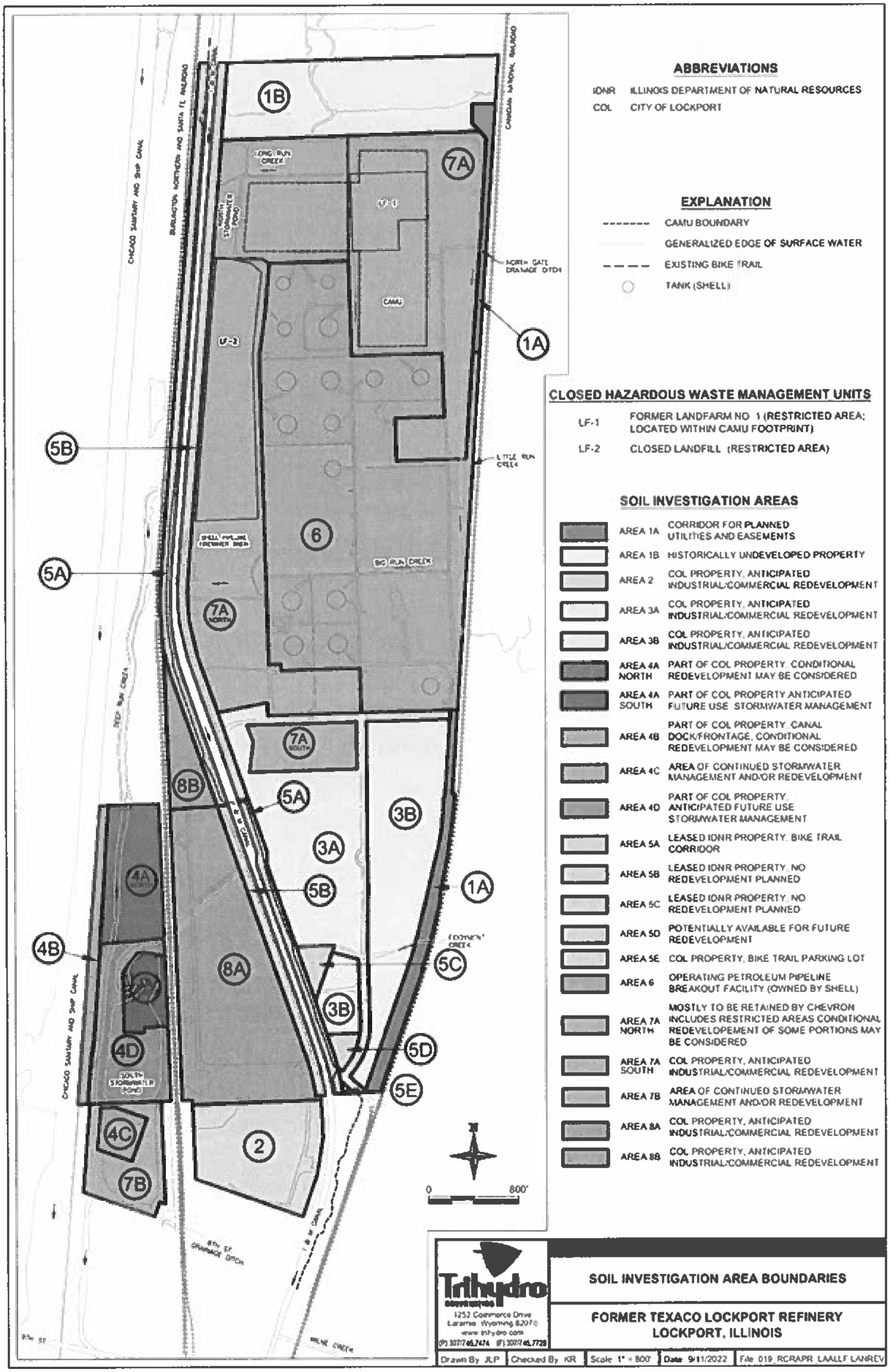
ATTACHMENT D

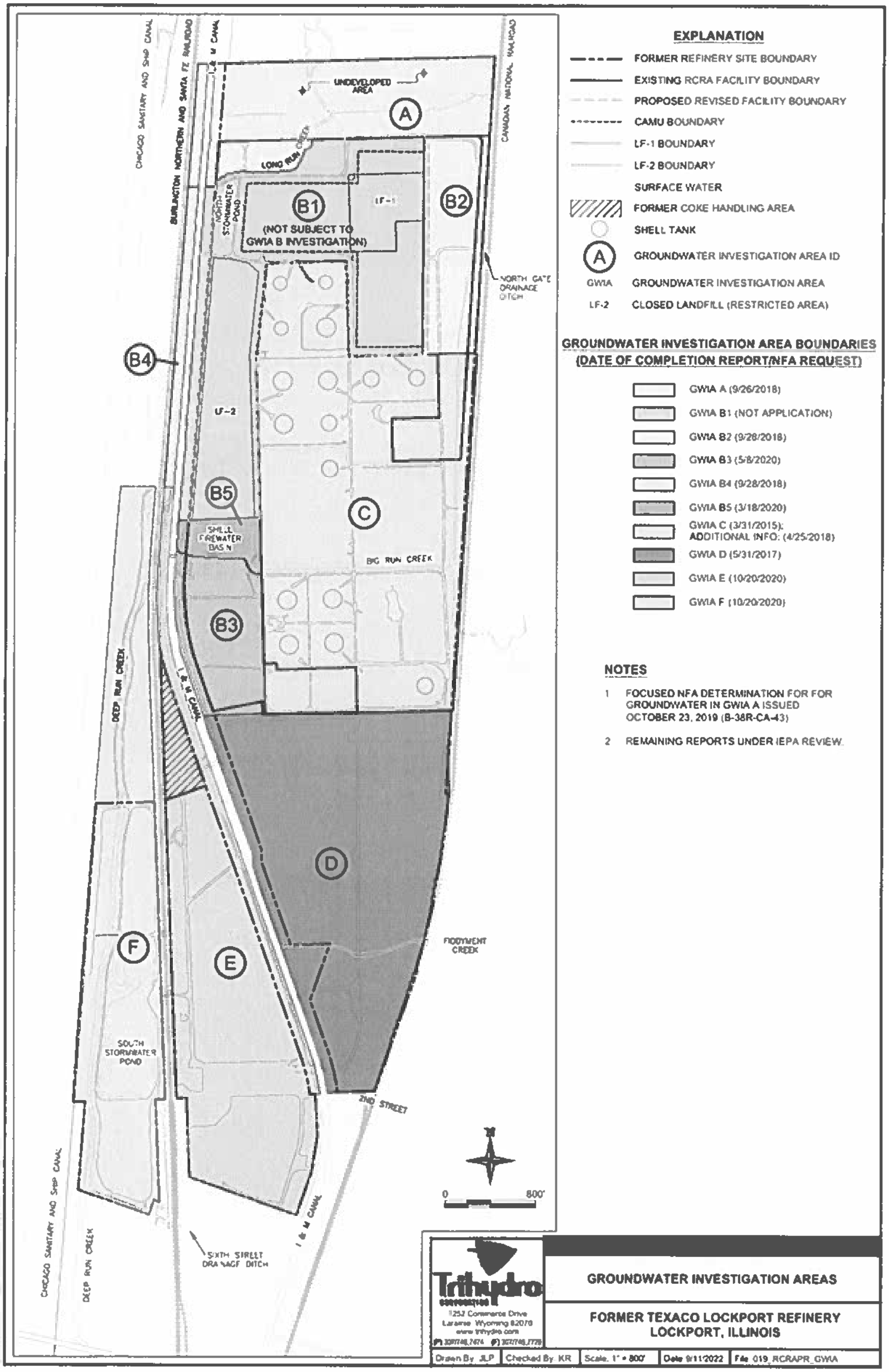
CORRECTIVE ACTION INVESTIGATION AREAS

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

STATE ID NO. 1970500012

FEDERAL ID NO. ILD041518861


ABBREVIATIONS
IDNR ILLINOIS DEPARTMENT OF NATURAL RESOURCES
COL CITY OF LOCKPORT
EXPLANATION
CAMU BOUNDARY
GENERALIZED EDGE OF SURFACE WATER
EXISTING BIKE TRAIL
TANK (SHELL)
CLOSED HAZARDOUS WASTE MANAGEMENT UNITS
LF-1 FORMER LANDFARM NO. 1 (RESTRICTED AREA; LOCATED WITHIN CAMU FOOTPRINT)
LF-2 CLOSED LANDFILL (RESTRICTED AREA)
SOIL INVESTIGATION AREAS
AREA 1A CORRIDOR FOR PLANNED UTILITIES AND EASEMENTS
AREA 1B HISTORICALLY UNDEVELOPED PROPERTY
AREA 2 COL PROPERTY, ANTICIPATED INDUSTRIAL/COMMERCIAL REDEVELOPMENT
AREA 3A COL PROPERTY, ANTICIPATED INDUSTRIAL/COMMERCIAL REDEVELOPMENT
AREA 3B COL PROPERTY, ANTICIPATED INDUSTRIAL/COMMERCIAL REDEVELOPMENT
AREA 4A NORTH PART OF COL PROPERTY. CONDITIONAL REDEVELOPMENT MAY BE CONSIDERED
AREA 4A SOUTH PART OF COL PROPERTY ANTICIPATED FUTURE USE STORMWATER MANAGEMENT
AREA 4B PART OF COL PROPERTY. CANAL DOCK/FRONTAGE. CONDITIONAL REDEVELOPMENT MAY BE CONSIDERED
AREA 4C AREA OF CONTINUED STORMWATER MANAGEMENT AND/OR REDEVELOPMENT
AREA 4D PART OF COL PROPERTY. ANTICIPATED FUTURE USE STORMWATER MANAGEMENT
AREA 5A LEASED IDNR PROPERTY. BIKE TRAIL CORRIDOR
AREA 5B LEASED IDNR PROPERTY. NO REDEVELOPMENT PLANNED
AREA 5C LEASED IDNR PROPERTY. NO REDEVELOPMENT PLANNED
AREA 5D POTENTIALLY AVAILABLE FOR FUTURE REDEVELOPMENT
AREA 5E COL PROPERTY. BIKE TRAIL PARKING LOT
AREA 6 OPERATING PETROLEUM PIPELINE BREAKOUT FACILITY (OWNED BY SHELL)
AREA 7A NORTH MOSTLY TO BE RETAINED BY CHEVRON INCLUDES RESTRICTED AREAS CONDITIONAL REDEVELOPEMENT OF SOME PORTIONS MAY BE CONSIDERED
AREA 7A SOUTH COL PROPERTY, ANTICIPATED INDUSTRIAL/COMMERCIAL REDEVELOPMENT
AREA 7B AREA OF CONTINUED STORMWATER MANAGEMENT AND/OR REDEVELOPMENT
AREA 8A COL PROPERTY, ANTICIPATED INDUSTRIAL/COMMERCIAL REDEVELOPMENT
AREA 8B COL PROPERTY, ANTICIPATED INDUSTRIAL/COMMERCIAL REDEVELOPMENT
1A
1B
2
3A
3B
4A
4B
4C
4D
5A
5B
5C
5D
5E
6
7A
7A NORTH
7A SOUTH
7B
8A
8B
LF-1
LF-2
CAMU
LONG RUN CREEK
NORTH STORMWATER POND
SOUTH STORMWATER POND
NORTH GATE DRAINAGE DITCH
LITTLE RUN CREEK
BIG RUN CREEK
SHELL PIPELINE FIREWATER BASIN
CHICAGO SANITARY AND SHIP CANAL
BURLINGTON NORTHERN AND SANTA FE RAILROAD
CANADIAN NATIONAL RAILROAD
I & M CANAL
DEEP RUN CREEK
0
800'
Trihydro
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
SOIL INVESTIGATION AREA BOUNDARIES
FORMER TEXACO LOCKPORT REFINERY
LOCKPORT, ILLINOIS
Drawn By: JLP
Checked By: KR
Scale: 1" = 800'
Date: 9/11/2022


EXPLANATION
FORMER REFINERY SITE BOUNDARY
EXISTING RCRA FACILITY BOUNDARY
PROPOSED REVISED FACILITY BOUNDARY
CAMU BOUNDARY
LF-1 BOUNDARY
LF-2 BOUNDARY
SURFACE WATER
FORMER COKE HANDLING AREA
SHELL TANK
GROUNDWATER INVESTIGATION AREA ID
GWIA GROUNDWATER INVESTIGATION AREA
LF-2 CLOSED LANDFILL (RESTRICTED AREA)
GROUNDWATER INVESTIGATION AREA BOUNDARIES (DATE OF COMPLETION REPORT/NFA REQUEST)
GWIA A (9/26/2018)
GWIA B1 (NOT APPLICATION)
GWIA B2 (9/28/2018)
GWIA B3 (5/8/2020)
GWIA B4 (9/28/2018)
GWIA B5 (3/18/2020)
GWIA C (3/31/2015); ADDITIONAL INFO: (4/25/2018)
GWIA D (5/31/2017)
GWIA E (10/20/2020)
GWIA F (10/20/2020)
NOTES
1 FOCUSED NFA DETERMINATION FOR FOR GROUNDWATER IN GWIA A ISSUED OCTOBER 23, 2019 (B-38R-CA-43)
2 REMAINING REPORTS UNDER IEPA REVIEW.
UNDEVELOPED AREA
A
LONG RUN CREEK
NORTH STORMWATER POND
B1
(NOT SUBJECT TO GWIA B INVESTIGATION)
LF-1
B2
NORTH GATE DRAINAGE DITCH
B4
LF-2
B5
SHELL FIREWATER BASIN
C
BIG RUN CREEK
B3
D
FIDDYMENT CREEK
F
E
SOUTH STORMWATER POND
2ND STREET
I & M CANAL
DEEP RUN CREEK
CHICAGO SANITARY AND SHIP CANAL
BURLINGTON NORTHERN AND SANTA FE RAILROAD
CANADIAN NATIONAL RAILROAD
SIXTH STREET DRAINAGE DITCH
0
800'
Trihydro
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
GROUNDWATER INVESTIGATION AREAS
FORMER TEXACO LOCKPORT REFINERY
LOCKPORT, ILLINOIS
Drawn By: JLP
Checked By: KR
Scale: 1" = 800'
Date: 9/11/2022
File: 019_RCRAPR_GWIA

ATTACHMENT E

COST ESTIMATE FOR RCRA PERMITTED UNITS AT THE FACILITY

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

STATE ID NO. 1970500012

FEDERAL ID NO. ILD041518861

The following values must be used when establishing financial assurance in accordance with this Permit, applicable rules, and regulations. The costs provided below are expressed in **2026 dollars**.		
		Total Cost
I.	Post-Closure Care:	
	A. HWMUs Post-Closure Care (30 Years)	$ 3,563,585
	B. CAMU Post-Closure Care (30 Years)	$ 4,025,214
II.	Corrective Action:	$ 145,357

ATTACHMENT F

SUMMARY OF CORRECTIVE ACTION EFFORTS COMPLETED TO DATE AT THE FORMER REFINERY

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

STATE ID NO. 1970500012

FEDERAL ID NO. ILD041518861

Attachment F

Summary of Corrective Action Efforts Completed To Date at the Former Refinery

I. INTRODUCTION

The Permittee has been conducting RCRA corrective action activities required in Section VII of the Permit at the former 554-acre Texaco oil refinery. The Permittee must address any areas of environmental concerns at the former refinery for all media (soil, sediment, surface water, and groundwater). One goal of this project is to leave a majority of the former refinery site in a condition that will allow for possible industrial, commercial, or recreational redevelopment. To achieve the goal, the Permittee has been conducting the demolition, investigation, and remediation activities required in Section VII of this Permit in a phased approach by dividing the entire 554-acre former refinery and an additional 41 acres of the land leased from the Illinois Department of Natural Resources (IDNR), which lies adjacent to the former permitted refinery, into several Investigation Areas based on environmental and land use conditions. The initial phase of the corrective action project focused on soil investigation and potential source removal, which began in 1998.

To date (August 2026), approximately 463 acres of the investigation areas at the former refinery and proximate area have received a focused No Further Action (NFA) determination for soil, sediment, and surface water. Nine surface water bodies that intersect the former refinery have been remediated and received NFA determinations. As a result, approximately 406 acres of land were removed from the definition of the Permitted Facility covered by the Permit and were made available for alternative future uses as allowed in accordance with the Illinois EPA's NFA approval letters and other governmental authorities. A phased groundwater investigation/remediation-approach is also being implemented at the six Groundwater Investigation Areas (GWIAs) at the former refinery as described in the subsequent Section. Focused corrective measures completed demonstration reports have been submitted for all six GWIAs with two GWIAs, GWIA A and GWIA C, receiving an NFA for groundwater.

The purpose of this Attachment F is to provide summaries of corrective action efforts conducted at: (1) the Permitted Facility; (2) the areas removed from the definition of the Permitted Facility covered by this Permit; and (3) the areas along the I&M Canal leased by the Permittee from IDNR. Furthermore, implementation status of establishing required Environmental Land Use Controls (ELUC) for the former refinery areas, where parcels are removed from the Permitted Facility, is discussed in a later section of this Attachment F. The contents of Attachment F are provided for informational purposes only and do not include any enforceable conditions or requirements of the Permit.

II. SOIL INVESTIGATION AREAS

1. AREA 1A

a. Description of Investigation Area 1A

Area 1A is a 12.1-acre strip of land located along the east perimeter of the former refinery which has been designated for utilities and similar infrastructure. This area was further divided into two areas to allow for a more efficient remediation effort in Area 1A: Area 1A-North (2.7-acre) and Area 1A-South (9.4-acre). This area has been removed from the definition of the Facility covered by this Permit.

b. Parcel Identification

In addition to being broken down into a North Area and a South Area, these areas were further broken down into the following parcels (the first three parcels comprise the South Area while the fourth Parcel comprises the North Area):

1A- First Parcel (1.5-acre) - portion of Roadway/Utility Corridors

1A- Second Parcel (4-acre)

1A- Third Parcel (3.9-acre)

1A- Fourth Parcel (2.7-acre)

c. Summary of Corrective Action Effort Completed to Date

(1) The non-groundwater aspects of the Current Conditions Report and Investigation/Remediation work plan were approved on August 15, 2000 (Log No. B-38-CA-3). Two addendums to the work plan were approved on October 12, 2001 (Log Nos. B-38-CA-8 and B-38-CA-15); these addendums included: (1) updated description of Area 1 boundaries; (2) division of Area 1 into two subareas, Areas 1A and 1B; and (3) relocation of proposed bike trail to Area 5.

(2) A focused Corrective Measures Completion Report for the soils of the roadway/utilities corridor within 1A, 3A, and 3B, was approved on January 12, 2004 (Log No. B-38RI-CA-38).

(3) A focused Corrective Measures Completion Report for the soils within a 4-acre parcel within Area 1A was approved on February 25, 2005 (Log No. B-38RI-CA-46).

(4) A focused Corrective Measures Completion Demonstration Report for the soils within a 3-acre parcel in Area 1A was approved on January 5, 2006 (Log No. B-38RI-CA-50).

(5) A focused Corrective Measures Completion Report for a 2.7-acre parcel, referred to as Area 1A-North (also referenced herein as "Area 1A-Fourth Parcel") was approved on December 14, 2011 (Log No. B-38RI-CA-81). This determination, along with the determinations in Attachment F, Item II.1.c(2), (3), and (4) brought corrective action for the soils within Area 1A to completion.

(6) A draft ELUC Amendment ("Supplemental ELUC") for 1A-Fourth Parcel was submitted to the Illinois EPA on December 20, 2019 to meet the indoor inhalation requirements of the GWIA A NFA letter. A revision to that draft Supplemental ELUC was submitted to the Illinois EPA on March 17, 2025 (Log No. B-38R-CA-49).

d. Date of NFA Determination by the Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
1A-First Parcel	1.492	January 12, 2004	R2004016307
1A-Second Parcel	4	February 25, 2005	R2005048908
1A-Third Parcel	3.85	January 5, 2006	R2006020700
1A-Fourth Parcel (1A-North)	2.69	December 14, 2011	R2012029600

e. Description of ELUCs Established for the Four Parcels of Area 1A

ELUCs have been established for Business Park 1 (includes First, Second and Third Parcels of Area 1A) and Area 1A-North (Fourth Parcel) which place the following restrictions on further activities in these areas:

(1) The property will only be used for commercial/industrial purposes in the future;

(2) Groundwater beneath the property may not be used as potable water supply in any fashion;

(3) A Worker Caution and Construction Safety plan must be in place prior to the commencement of any future excavation and/or construction to address, at a minimum, possible worker exposure with contaminated groundwater. Such safety plan must be consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, state and local regulations; and other U.S.EPA guidance.

(4) Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

   i. If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to Title 35 Illinois Administrative Code (35 IAC) Subtitle G: Waste Disposal;

   ii. If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However, procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

   iii. Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

(5) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

(6) In addition, Area 1A-Fourth Parcel is also subject to a Supplemental ELUC that:

i. Requires that the conditions of Groundwater Ordinance #00-267 for the City of Lockport, Illinois, prohibiting the use of groundwater as potable water supply, must continue to be met.

ii. Documents that the NFA determination for the indoor inhalation exposure route was based on 35 IAC 742, Appendix B, Table H Groundwater Remediation Objectives for the indoor inhalation exposure route.

iii. Requires that, in accordance with 35 IAC 742.505(b)(C) and 742.1000(a)(9), all buildings intended for worker occupancy that are constructed on the Property must include a full concrete slab-on-grade or a full concrete basement floor and walls with a minimum thickness of 4-inches. Any natural or man-made pathways from the sub-surface, such as a sump, may not be located inside the building.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
1A-First Parcel 1A-Second Parcel 1A-Third Parcel	See Attachment F, Item II.12 (Business Park 1)	See Attachment F, Item II.12 (Business Park 1)

1A-Fourth Parcel	11-04-11-200-009-0000 11-04-11-400-009-0000	R2012141493 R2025019825

2. AREA 1B

a. Description of Investigation Area 1B
Area 1B is a 37.8-acre property of undeveloped land located at the northern end of the former refinery.

b. Parcel Identification
Area 1B

c. Summary of Corrective Action Effort Completed to Date

(1) As Area 1 was divided (1A and 1B), the non-groundwater aspects of the Current Conditions Report (CCR) and Investigation/Remediation work plan for Area 1B were included in the document identified in Attachment F, Item II.1.c(1).

(2) A modification request was approved on October 12, 2001 (Log Nos. B-38-CA-8 and B-38-CA-15), which included a proposal to divide Area 1 into two subareas, Areas 1A and 1B.

(3) A focused Corrective Measures Completion Report for Area 1B was approved on August 1, 2008 (Log No. B-38RI-CA-63).

d. Date of NFA Determination by the Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
1B-First Parcel	37.8	August 1, 2008	R2008105404

e. Description of ELUC Established for Area 1B

(1) Groundwater beneath the property may not be used as potable water supply in any fashion;

(2) A Worker Caution and Construction Safety plan must be in place prior to the commencement of any future excavation and/or

construction to address, at a minimum, possible worker exposure with contaminated groundwater. Such safety plan must be consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, state and local regulations; and other U.S.EPA guidance.

(3) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

(4) Any soils removed from the area within the Property must be managed in accordance with all applicable rules, regulations, and statutes.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
1B	11-04-11-200-009-0000	R2012141492

3. AREA 2

a. Description of Investigation Area 2
Area 2 consists of a 21.6-acre property at the far southern portion of the Facility, between the I&M Canal and the BNSF (formerly Santa Fe) Railroad. Area 2 is designated as Business Park 2 and will be developed with Business Park 3 (Area 8) in the future.

b. Parcel Identification
Area 2 (Business Park 2)

c. Summary of Corrective Action Effort Completed to Date

(1) A current Conditions Report and Investigation/Remediation Work Plan was approved on May 10, 2002 (Log No. B-38-CA-23).

(2) A focused Corrective Measures Completion Demonstration Report for the soils was approved on January 18, 2006 (Log No. B-38RI-CA-53).

d. Date of NFA Determination by Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
Area 2	21.6	January 18, 2006	R2006020701

e. Description of ELUC Established for Area 2
An ELUC has been established for Business Parks 2 & 3 which include Area 2. See Attachment F, Item II.13.b for restrictions established in the ELUC.

f. County Recorder's Document No. ELUC
See Attachment F, Item II.13.c.

4. AREA 3A

a. Description of Investigation Area 3A
Area 3A consists of a 30.7-acre property along with an approximately 12.6-acre area designated for utility and roadway corridors.

b. Parcel Identification
Area 3A First Parcel (10-acre)
Second Parcel (11-acre)
Third Parcel (9-acre)
Fourth Parcel (12.6-acre)

c. Summary of Corrective Action Effort Completed to Date

(1) The soil aspects of a Current Conditions Report and Investigation/Remediation Work Plan were approved on May 17, 2000 (Log No. B-38-CA-1); the groundwater aspects of this workplan were approved on August 8, 2000.

(2) An NFA letter for the soils in the northern 10-acres of Area 3A was issued August 21, 2000 (Log No. B-38-CA-5); revisions to this letter were subsequently approved on December 27, 2000 and July 16, 2001.

(3) Modifications to the work plan identified for Area 3A were approved on May 16, 2002 (Log No. B-38-CA-16).

(4) A Corrective Measures Completion Demonstration for the soils of an 11-acre parcel within Area 3A was approved on February 27, 2002 (Log No. B-38-CA-22).

(5) A focused Corrective Measures Completion Report for the soils of a 9-acre parcel within Area 3A was approved on May 14, 2003 (Log No. B-38RI-CA-36).

(6) A focused Corrective Measures Completion Report for the soils of roadway/utilities corridors within Areas 1A, 3A, and 3B was approved on January 12, 2004 (Log No. B-38RI-CA-38). This determination, along with the determinations in Attachment F, Item II.4.c(4) and (5) brought corrective action for the soils within Area 3A to completion.

(7) A Groundwater Quality Environmental Investigation Report was approved on April 12, 2007 (Log No. B-38RI-CA-57 and 58).

(8) A subsequent Groundwater Investigation Report for Area 3A was approved on November 6, 2008 (Log No. B-38RI-CA-66).

d. <u>Date of NFA Determination by the Illinois EPA and County Recorder's Document Number for NFA</u>

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
3A-First Parcel	10	July 16, 2001	R2001115319
3A-Second Parcel	11	February 27, 2002	R2002068595
3A-Third Parcel	9	May 14, 2003	R2003160978
3A-Fourth Parcel	12.6	January 12, 2004	R2004016306

e. <u>Descriptions of ELUCs Established for the Four Parcels of Area 3A</u>

ELUCs have been established for the four parcels within Area 3A (all included in Business Park 1) which place the following restrictions on further activities in the area:

(1) The property will only be used for commercial/industrial purposes in the future;

(2) Groundwater beneath the property may not be used as potable water supply in any fashion;

(3) A Worker Caution and Construction Safety plan must be in place for any future excavation and/or construction on the subject property to restrict the direct worker ingestion and inhalation exposures with any impacted soils and groundwater;

(4) Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

i. If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal;

ii. If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However, procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

iii. Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

(5) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC

3A-First Parcel 3A-Second Parcel 3A-Third Parcel 3A-Fourth Parcel	See Attachment F, Item II.12 (Business Park 1)	See Attachment F, Item II.12 (Business Park 1)

5. AREA 3B

a. Description of Investigation Area 3B
Area 3B consists of a 38.9-acre property along with an approximately 1.3-acre area designated for utility and roadway corridors.

b. Parcel Identification
Area 3B First Parcel (1.3-acre)
Second Parcel (6-acre)
Third Parcel (5-acre)
Fourth Parcel (27-acre)

c. Summary of Corrective Action Effort Completed to Date

(1) A Current Conditions Report and Investigation/Remediation Work Plan was approved on May 10, 2002 (Log No. B-38-CA-19).

(2) A focused Corrective Measures Completion Report for the soils of the roadway/utilities corridors within Areas 1A, 3A and 3B was approved on January 12, 2004 (Log No. B-38RI-CA-38).

(3) A focused Corrective Measures Completion Report for the soils of a 6-acre parcel within Area 3B was approved on February 27, 2004 (Log No. B-38RI-CA-41).

(4) A focused Corrective Measures Completion Report for the soils of a 5-acre parcel within Area 3B approved on February 25, 2005 (Log No. B-38RI-CA-45).

(5) A focused Corrective Measures Completed Demonstration Report for the soils of a 27-Acre parcel within Area 3B was approved on January 5, 2006 (Log No. B-38RI-CA-50). This determination, along with the determinations in (2), (3), and (4) above brought corrective action for the soils within Area 3B to completion.

(6) A Groundwater Quality Environmental Investigation Report for Area 3B was approved on March 7, 2008 (Log No. B-38RI-CA-56).

(7) A subsequent Groundwater Investigation Report for Area 3B was approved on November 6, 2008 (Log No. B-38RI-CA-66).

d. Date of No Further Action (NFA) Determination by Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
3B-First Parcel	1.3	January 12, 2004	R2004016308
3B-Second Parcel	6	February 27, 2004	R2004044865
3B-Third Parcel	5	February 25, 2005	R2005048908
3B-Fourth Parcel	27	January 5, 2006	R2006020700

e. Descriptions of ELUCs Established for the Four Parcels of Area 3B
ELUCs have been established for Business Park 1, which include all four parcels of Area 3B. See Attachment F, Item II.12.b for the restrictions established in an ELUC for Business Park 1.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
3B-First Parcel 3B-Second Parcel 3B-Third Parcel 3B-Fourth Parcel	See Attachment F, Item II.12 (Business Park 1)	See Attachment F, Item II.12 (Business Park 1)

6. AREA 4 (4A, 4B, 4C, AND 4D)

a. Description of Investigation Area 4
Area 4 is comprised of four subareas (4A through 4D). This approximately 44.1-acre area of land was used for operation of the former refinery's wastewater treatment plant and included a former South Stormwater Pond. This area has been acquired by the City of Lockport. Descriptions of each area are as follows:

(1) Area 4A consists of approximately 18.4 acres and is located in the southwestern portion of the Facility. Area 4A is comprised of two

areas: 4A North (12.9-acre) and 4A South (5.5-acre). It must be noted that prior to June 30, 2009, Area 4D (discussed below) was a portion of Area 4A. This Area was acquired by the City of Lockport.

(2) Area 4B consists of approximately 7.6 acres in the southwestern portion of the Facility along the Sanitary and Ship Canal. This Area was acquired by the City of Lockport.

(3) Area 4C consists of approximately 3 acres in the far southwestern portion of the Facility and is part of the Facility's former South Stormwater Ponds. This Area was acquired by the City of Lockport.

(4) Area 4D consists of approximately 15 acres and is located in the southern portion of the Facility. It includes the footprint of former Wastewater Treatment Unit #1 and the area between the berms that contain the former Process Wastewater Channel associated with the former refinery. It must be noted that prior to June 30, 2009, Area 4D was a portion of Area 4A. This Area was acquired by the City of Lockport.

b. <u>Parcel Identification</u>

Area 4	Area 4A North
	Area 4A South
	Area 4B
	Area 4C
	Area 4D

c. <u>Summary of Corrective Action Effort Completed to Date</u>

(1) A Current Conditions Report and Investigation/Remediation Work Plan was approved on September 27, 2002 (Log No. B-38-CA-18) for the former boundaries of Area 4.

(2) A Current Conditions Report and Investigation/Remediation Work Plan was approved on February 7, 2003 (Log No. B-38-CA-12).

(3) Minor modifications to the approved investigation work plan for Area 4C were approved on March 25, 2005 (Log No. B-38RI-CA-48).

(4) A focused Corrective Measures Completed Demonstration Report for soils in an 18.4-acre Area 4A and a 7.6-acre Area 4B was approved on June 30, 2009 (Log Nos. B-38RI-CA-72 and 73). In making this determination, 14.8 acres in the 33.2-acre portion of Area 4A was removed from Area 4A and re-designated as Area 4D.

(5) A focused Corrective Measures Completed Demonstration Report for soils in Area 4D was approved on March 14, 2012 (Log No. B-38RI-CA-94).

(6) A focused Corrective Measures Completed Demonstration Report for soils in Area 4C was approved on September 17, 2012 (Log No. B-38RI-CA-89). This determination, along with the determinations in (4) and (5) above, brought corrective action for the soils within Area 4 to completion.

(7) An ELUC Amendment for Area 4 was submitted to the Illinois EPA on January 18, 2021 to meet the indoor inhalation requirements. That submittal is currently under review.

d. Date of No Further Action (NFA) Determination by Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
4A	18.4	June 30, 2009	R2013014071
4B	7.6	June 30, 2009	R2013014071
4C	3.0	September 17, 2012	R2013014070
4D	14.8	March 14, 2012	R2013014180

e. Descriptions of ELUCs Established for the Four Parcels of Area 4
ELUCs have been established for the four parcels within Area 4 which place the following restrictions on further activities in the area:

(1) The property will only be used for commercial/industrial purposes in the future;

(2) Groundwater beneath the property may not be used as potable water supply in any fashion;

(3) A Worker Caution and Construction Safety plan must be in place prior to the commencement of any future excavation and/or construction to address, at a minimum, possible worker exposure with contaminated groundwater. Such safety plan must be consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, state and local regulations; and other U.S.EPA guidance.

(4) Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

i. If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal;

ii. If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However, procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

iii. Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

(5) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
4A	11-04-14-300-008-0000	R2013014285
4B	11-04-14-300-008-0000	
4C	11-04-23-101-003-0010	
4D	11-04-14-300-008-0000	

7. AREA 5

a. Description of Investigation Area 5

Area 5 consists of the 90-foot-wide strips of land on either side of the I&M Canal (the 90-foot strips are collectively referred to as the I&M Canal Reserve) and three small parcels of adjacent property. This investigation area was divided into Area 5A through 5E. Areas 5A, 5B and 5C are leased properties from Illinois Department of Natural Resources (IDNR) and were never used for refining purposes and thus are not part of the definition of the former Permitted Facility. Chevron chose to address these areas as part of the overall corrective action program for the former refinery and included them as Investigation Areas.

(1) Area 5A is approximately 17 acres in size and is utilized as a bike trail by IDNR. Area 5A runs along the western side of the Canal for approximately 6,600 ft south from the northern boundary of the former refinery to a point where the bicycle trail crosses the I&M Canal and then extends another 2,800 ft south along the eastern side of the canal. This is a leased area from IDNR.

(2) Area 5B is approximately 20 acres in size and the 90-foot-wide strip along the I&M Canal which is on the opposite side of Area 5A. This is a leased area from IDNR.

(3) Area 5C consists of an approximately 2.0-acre triangular shaped area located in the southern portion of the facility. This is a leased area from IDNR.

(4) Area 5D consists of approximately 1.8 acres located in the far southern portion of the former refinery. This area is included in Business Park 1 (see Attachment F, Item II.12).

(5) Area 5E consists of approximately 0.3 acre in the far southern portion of the former refinery. Area 5E is anticipated to be used as a parking area for the existing bike trail along the I&M Canal. This area is included in Business Park 1 (see Attachment F, Item II.12).

b. Parcel Identification:

5A		17.03-acre
5A- Buffer Zone		
Parcel 1		1.386-acre
Parcel 2		1.259-acre
5B	Parcel 3	5.587-acre
	Parcel 4	13.728-acre
5C		2-acre
5D		1.789-acre
5E		0.3-acre

c. Summary of Corrective Action Effort Completed to Date

(1) A Current Conditions Report and Investigation/Remediation Work Plan was approved on October 12, 2001 (Log No. B-38-CA-10); proposed modification to the work plan was approved on December 27, 2001 (Log No. B-38-CA-17).

(2) Area 5 was subsequently broken down into five subareas: 5A, 5B, 5C, 5D, and 5E.

(3) A focused Corrective Measures Completion Report for soils in Areas 5A and 5E was approved on May 7, 2003 (Log No. B-38RI-M-33).

(4) A focused Corrective Measures Completion Report for soils in Area 5C was approved on August 11, 2003 (Log No. B-38RI-CA-37).

(5) A focused Corrective Measures Completion Report for soils in Area 5D was approved on November 3, 2003 (Log No. B-38RI-CA-39).

(6) A focused Corrective Measures Completion Report for soils in Area 5B and the remainder of Area 5A (i.e. Area 5A Buffer Zone)

was approved on November 26, 2012 (Log No. B-38RI-CA-99). This determination, along with the determinations in (3), (4), and (5) above brought corrective action for the soils within Area 5 to completion.

d. <u>Date of No Further Action (NFA) Determination by Illinois EPA and County Recorder's Document Number for NFA</u>

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
5A	17.03	May 7, 2003	R2003140033
5A- Buffer Zone Parcel 1 Parcel 2	 1.386 1.259	November 26, 2012	R2013019952
5B Parcel 3 Parcel 4	5.587 13.728	November 26, 2012	R2013019952
5C	2	August 11, 2003	R2003235576
5D	1.789	November 3, 2003	R2003299341
5E	0.3	May 7, 2003	R2003140033

e. <u>Descriptions of Restrictions to be Established for Areas 5A, 5B, and 5C</u>
Land use restrictions are to be established for the three investigation areas which place the following restrictions on further activities in the area:

(1) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility (Log No. B-38RI); and

(2) Groundwater in the vicinity of the property may not be used as potable water supply in any fashion.

f. <u>Description of ELUC Established for Areas 5D and 5E</u>
The Permittee must address groundwater beneath the area in accordance with the Permit. Areas 5D and 5E are included in Business Park 1 and thus follow the restriction established in an ELUC for Business Park 1.

g. <u>County Recorder's Document No. for ELUC for Areas 5D and 5E</u>

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
5D, 5E	See Attachment F, Item II.12. for Business Park 1	See Attachment F, Item II.12. for Business Park 1

8. Area 6

a. <u>Description of Investigation Area 6</u>
Area 6 consists of a 129-acre parcel of land, operated as Pipeline Breakout Facility by Shell Pipeline Company (Shell). North Stormwater Ponds, approximately 800-foot by 400-foot area, were initially included in Area 6; however, it was later removed from Area 6 and transferred to be included in Area 7A. The Illinois EPA issued a NFA for Area 6 for soil sediment, surface water on May 10, 2010 (Log No. B-38RI-CA-61 & 74). The ownership of this parcel was transferred to Shell in March 2011.

b. <u>Parcel Identification</u>
Area 6

c. <u>Summary of Corrective Action Effort Completed to Date</u>

(1) Area 6 consists of a 129-acre parcel of land, operated as Pipeline Breakout Facility by Shell. North Stormwater Ponds, approximately 800 ft by 400 ft area, were initially included in Area 6; however, it was later removed from Area 6 and transferred to be included in Area 7A. The Illinois EPA issued a NFA for Area 6 for soils, sediment, and surface water on May 10, 2010 (Log No. B-38RI-CA-61 & 74). The ownership of this parcel was transferred to Shell in March 2011.

(2) Minor modifications to the approved investigation work plan were approved on June 1, 2005 (Log No. B-38RI-CA-47).

(3) A focused Corrective Measures Completed Demonstration Report for the soils associated with the SWMUs within Area 6 was approved on March 21, 2007 (Log No. B-38RI-CA-54).

(4) A focused Corrective Measures Completed Demonstration Report for soils within Area 6 was approved on May 10, 2010 (Log No. B-38RI-CA-74).

(5) An ELUC Amendment ("Supplemental ELUC") for Area 6 was submitted to the Illinois EPA on January 18, 2021 to meet the indoor inhalation requirements. That submittal was revised and resubmitted to the Illinois EPA on April 23, 2025; it is currently under review.

d. <u>Date of NFA Determination by the Illinois EPA and County Recorder's Document Number for NFA</u>

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
Area 6	128.581	May 10, 2010	R2010050333

e. <u>Description of ELUC Established for Area 6</u>
An ELUC has been established for the property within Area 6 which places the following restrictions on further activities in the area:

(1) The property will only be used for commercial/industrial purposes in the future;

(2) Groundwater beneath the property may not be used as potable water supply in any fashion;

(3) A Worker Caution and Construction Safety plan must be in place prior to the commencement of any future excavation and/or construction to address, at a minimum, possible worker exposure with impacted soils. Such safety plan must be consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, state and local regulations; and other U.S.EPA guidance. In addition, following special conditions must also be met:

i. Sampling Locations BC-28 and 6S-188, soils must be managed in accordance with 35 IAC, Subtitle G: Waste Disposal as contaminated soil and special caution for construction workers must be met; and

ii. At sampling locations BC-68 and BC-69, in addition to the soil screening required in (4) below, soils must be analyzed for arsenic prior to disposal.

(4) Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

i. If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal;

ii. If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However, procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

iii. Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

(5) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC

Area 6	04-14-100-010-0010 04-14-100-010-0020 04-14-200-020-0000 04-11-400-009-0000 04-11-300-005-0000	R2010050334 R2012141491

9. AREA 7A

a. <u>Description of Investigation Area 7A</u>

Area 7A includes approximately 156 acres in the north-central portion of the Facility. Area 7A includes 8.8 acres of land within Business Park 1; the soils in these 8.8 acres have been adequately remediated and this land, which was removed from the boundaries of the Permitted Facility when the RCRA Permit for this facility was renewed on March 29, 2013. That portion of Area 7A is included in the former CT Unit. The remaining 147.5-acre comprises the area of the Permitted Facility.

CEMC submitted an updated status report and schedule for corrective action within the Permitted Facility on May 28, 2013. The submittal was approved on July 9, 2013 (Log No. B-38R-M-2). In the May 28, 2013 submittal, Area 7A was divided into 10 parcels (7A-1 through 7A-10) for investigation and remediation purposes. The 10 parcels of Area 7A are identified below.

(1) Parcel 7A-1 is comprised of the CAMU, LF-1, LF-2, and immediately adjacent property to LF-2. On August 10, 2018, CEMC submitted a Focused Corrective Measures Completed Demonstration Report for three sub-parcels within Parcel 7A-1. The three parcels subject to the August 10, 2018 report are located outside of the footprints of LF-1, LF-2, and the CAMU. This submittal was approved on March 12, 2025 (Log No. B-38R-CA-41).

(2) Parcel 7A-2, which is a 32-acre parcel (the former North Storm Water Pond area), has been issued a NFA for soil, sediment, and surface water on April 25, 2008 (Log No. B-38RI-CA-67). On June 25, 2018, CEMC submitted a revised survey plat and legal description for Parcel 7A-2 to include a 0.002-acre portion of the site directly west of the CAMU, which was found to be omitted from the original Parcel 7A-2 survey plat and legal description. This submittal is under review by the Illinois EPA.

(3) Parcels 7A-3 through 7A-10 are subject to the corrective action requirements of Section VII of this Permit. Descriptions of Parcels 7A-3 through 7A-10 are summarized below.

Parcel Identification	Area Designation	Description/Additional Information
7A-3	Former Ammonia Plant	An approximately 11.4-acre parcel that was formerly occupied by the refinery's operations of an ammonia plant. Parcel 7A-3 is located east of CAMU Phase A.
7A-4	Former Ammonia Plank Tankage Area	An approximately 9.3-acre parcel occupied by former tankage at the Former Ammonia Plant, which is located east of CAMU Phase B.
7A-5	Former LAA/LLF Area	An approximately 9.2-acre parcel occupied by former land treatment units LAA and LLF. These units were transferred from post-closure care to the corrective action program in the previous Permit (Log No. B-38R).
7A-6	Area south of Shell Fire Water Basin (formerly Big Run Surge Basin)	An approximately 2.3-acre parcel located south of Shell Fire Water Basin.
7A-7	Former Alky #2 Area North	An approximately 3-acre parcel was formerly occupied by a portion of the Alkylation Unit No. 2 (Alky #2) Unit. CEMC plans to use Area 7A-7 to support future surface water management activities.
7A-8	Former Alky #2 Area South	An approximately 8-acre parcel was formerly occupied by a portion of the former Alky #2 and a portion of the former Plant Sewer System.
7A-9	WTU #2	An approximately 6-acre parcel, a portion of which is occupied by WTU #2. Portions of the Delayed Coking Unit and Alky #2 formerly occupied the area.

7A-10	Tank Cells 19510 and 19511 Area	An approximately 6.6-acre parcel was formerly occupied by refinery product tanks.

b. Parcel Identification

Area 7A

c. Summary of Corrective Action Effort Completed to Date

(1) A Current Conditions Report and Investigation/Remediation Work Plan was approved on March 4, 2003 (Log No. B-38-CA-32).

(2) A focused Corrective Measures Completed Demonstration Report for soils within an 8-acre parcel of Area 7A was approved on May 31, 2007 (Log No. B-38RI-CA-60). This area is a part of Business Park 1.

(3) A focused Corrective Measures Completed Demonstration Report for soils within a 32-acre parcel of Area 7A was approved on April 25, 2008 (Log No. B-38RI-CA-67). This area is a part of CAMU Phase C within the Permitted Facility.

(4) A focused Corrective Measures Completed Demonstration Report for the CT Unit (which is located within Area 7A) was approved on September 30, 2009 (Log No. B-38RI-CA-75). This area is a part of Business Park 1.

(5) A focused Corrective Measures Completed Demonstration Report for soils within Parcel 7A-5 and a draft ELUC for Parcel 7A-5 were approved on January 31, 2017 (Log Nos. B-38R-CA-3, 21).

(6) A focused Corrective Measures Completed Demonstration Report for soils within Parcel 7A-4, a supplemental submittal, and a draft ELUC were approved on January 31, 2017 (Log Nos. B-38R-CA-5, 23).

(7) A focused Corrective Measures Completed Demonstration Report for soils within Parcel 7A-7 and an addendum report for Parcel 7A-7 were approved on October 7, 2016 (Log Nos. B-38R-CA-5, 23).

(8) A focused Corrective Measures Completed Demonstration Report for soils and a portion of the former Plant Sewer System within

Parcel 7A-10, an addendum report for Parcel 7A-10, and a draft ELUC for Parcel 7A-10 were approved on September 12, 2016 (Log Nos. B-38R-CA-6, 20, and 27).

(9) A focused Corrective Measures Completed Demonstration Report for soils and a portion of the former Plant Sewer System within Parcel 7A-9, supplemental information, and an addendum report for Parcel 7A-9 were approved on November 2, 2016 (Log Nos. B-38R-CA-7, 9, and 25).

(10) An updated/revised Environmental Investigation Work Plan for Investigation Area 7A (received on October 2, 2014) along with additional information in support of the submittal was approved on August 22, 2016 (Log No. B-38R-CA-12). This work plan replaced the previously submitted work plan received on January 2, 2014 (Log No. B-38R-CA-8) by the Illinois EPA.

(11) A focused Corrective Measures Completed Demonstration Report for soils and a portion of the former Plant Sewer System within Parcel 7A-8 was approved on October 11, 2016 (Log No. B-38R-CA-11).

(12) A focused Corrective Measures Completed Demonstration Report for soils within Parcel 7A-6 was received on December 26, 2014 (Log No. B-38R-CA-15) and is currently under Illinois EPA's review.

(13) A focused Corrective Measures Completed Demonstration Report for soils within Parcel 7A-3 and a revised plat of survey for Parcel 7A-3 were approved on January 10, 2017 (Log Nos. B-38R-CA-16, 24).

(14) An addendum to focused Corrective Measures Completed Demonstration Report for soils within Parcel 7A-10 was received by the Illinois EPA on November 9, 2015, and was approved on September 12, 2016 (Log No. B-38R-CA-20).

(15) An amended survey plat, legal description, and additional supporting information for Parcel 7A-6 was submitted to the Illinois EPA on August 4, 2017, as an addendum to the Focused Corrective Measures Completed Demonstration Report for soil within Parcel 7A-6 (Log No. B-38R-CA-15). These documents are under Illinois EPA review.

(16) A draft ELUC for Parcel 7A-6 was submitted to the Illinois EPA on October 3, 2017.

(17) A draft ELUC for Parcel 7A-7 was submitted to the Illinois EPA on October 3, 2017.

(18) A draft ELUC for Parcel 7A-8 was submitted to the Illinois EPA on October 3, 2017.

(19) A focused Corrective Measures Completed Demonstration Report for soils within three sub parcels of Parcel 7A-1 was approved on March 12, 2025 (Log No. B-38R-CA-41).

(20) A draft ELUC for Parcel 7A-3 was submitted to the Illinois EPA on April 12, 2019.

(21) A draft ELUC for combined portions of Parcels 7A-1 and 7A-2 was submitted to the Illinois EPA on December 20, 2019; a revised version was submitted to the Illinois EPA on May 9, 2025.

(22) Draft Supplemental ELUCs for Parcels 7A-5, 7A-9, and 7A-10 were submitted to the Illinois EPA on April 23, 2025.

d. Date of NFA Determination by the Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
7A-First Parcel	8	May 31, 2007	R2007094153
7A-Third Parcel	0.8	September 30, 2009	R2010006761
Parcel 7A-1	8.47	March 12, 2025	R2025064084
Parcel 7A-3	11.3	January 10, 2017	R2017010548
Parcel 7A-4	9.7	January 31, 2017	R2017013031
Parcel 7A-5	9.2	January 31, 2017	R2017013030
Parcel 7A-7	3	October 7, 2016	R2016085416
Parcel 7A-8	8.2	October 11, 2016	R2016085418
Parcel 7A-9	6.1	November 2, 2016	R2016092412
Parcel 7A-10	6.6	September 12, 2016	R2016085417

Note: A 31.773-acre portion of Area 7A (Former North Stormwater Pond area now designated Area 7A-2) located within the Permitted Facility was issued an NFA for soil, sediment, and surface water on April 25, 2008 (Log No. B-38RI-CA-67). A portion of this area is under CAMU Phase C.

e. <u>Descriptions of ELUCs Established for the First and Third Parcels of Area 7A and Parcels 7A-4, 7A-5, 7A-9, and 7A-10</u>

(1) ELUCs have been established for Business Park 1, which includes First and Third Parcels within Area 7A.

(2) ELUCs have been established for Parcels 7A-4, 7A-5, 7A-9, and 7A-10, which placed the following restrictions on future activities in the area:

i. The property will only be used for commercial/industrial purposes in the future;

ii. Groundwater beneath the property may not be used as potable water supply in any fashion;

iii. A Worker Caution and Construction Safety plan must be in place prior to the commencement of any future excavation and/or construction to address, at a minimum, possible worker exposure with impacted soils. Such safety plan must be consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, state and local regulations; and other U.S.EPA guidance.

iv. Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

(1) If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal;

(2) If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However,

procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

(3) Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

v. CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

vi. In accordance with 35 IAC 742.505(b)(2)(C) and 742.1000(a)(9), all buildings intended for worker occupancy that are constructed on the Property must include a full concrete slab-on-grade or a full concrete basement floor and walls with a minimum thickness of 4-inches.

(3) A certified copy of the recorded ELUC for Parcel 7A-10 was submitted to the Illinois EPA and was approved on January 24, 2017 (Log No. B-38R-CA-30).

(4) A certified copy of the recorded ELUC for Parcel 7A-4 was submitted to the Illinois EPA on March 21, 2017, and was approved on May 22, 2017 (Log No. B-38R-CA-34).

(5) A certified copy of the recorded ELUC for Parcel 7A-5 was submitted on March 21, 2017 to the Illinois EPA and was approved on May 22, 2017 (Log No. B-38R-CA-33).

(6) A draft ELUC for 7A-9 was approved on January 31, 2017 (Log No. B-38R-CA-32). In turn, a certified copy of the recorded ELUC for

Parcel 7A-9 was submitted on March 21, 2017, to the Illinois EPA and is currently under review. The Illinois EPA requested an additional certified copy of the recorded ELUC for Parcel 7A-9 be submitted as it had indicated during an environmental status meeting that it had not been received. The additional copy was submitted on July 5, 2022. Subsequently, that certified copy of the recorded ELUC was approved by the Illinois EPA on June 28, 2024.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
7A-4	11-04-11-400-023-0000	R2017015715
7A-5	11-04-11-400-023-0000	R2017015716
7A-9	11-04-14-100-013-0010	R2017015717
7A-10	11-04-14-100-013-0010	R2016087103

10. AREA 7B

a. Description of Investigation Area 7B
Area 7B consists of a 10.4-acre parcel of land and was a part of the Facility's South Stormwater Pond Area.

b. Parcel Identification
Area 7B

c. Summary of Corrective Action Effort Completed to Date

(1) A Current Conditions Report and Investigation/Remediation Work Plan was approved on February 7, 2003 (Log No. B-38-CA-12).

(2) Minor modifications to the Approved Work Plan for the southwest corner of Area 7B were approved on March 25, 2005 (Log No. B-38RI-CA-48).

(3) A focused Corrective Measures Completed Demonstration Report for the soils in Area 7B (and Area 4C) was approved on September 17, 2012 (Log No. B-38RI-CA-89).

(4) An ELUC Amendment ("Supplemental ELUC") for Area 7B was submitted to the Illinois EPA on September 15, 2020 to meet the

indoor inhalation requirements. That submittal is currently under review.

d. Date of NFA Determination by the Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
Area 7B	10.408	September 17, 2012	R2013014070

e. Description of ELUC Established for Area 7B

An ELUC has been established for the property within Area 7B which places the following restrictions on future activities in the area:

(1) The property will only be used for commercial/industrial purposes in the future;

(2) Groundwater beneath the property may not be used as potable water supply in any fashion;

(3) Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

i. If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal;

ii. If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However, procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

iii. Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

(4) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

f. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
Area 7B	11-04-23-100-002-0000	R2012141494

11. AREA 8 (8A AND 8B)

a. Description of Investigation Area 8

Area 8 is divided into two subareas, 8A and 8B. Area 8A consists of an approximately 50-acre parcel of land in the south-central portion of the Facility, located between Area 2 and Area 8B. Area 8B is located just north of Area 8A and is approximately 6.7 acres in size. These two areas make up the area designated for future development, known as Business Park 3.

b. Parcel Identification

Area 8 (8A and 8B) - Business Park 3

c. Summary of Corrective Action Effort Completed to Date

(1) A Current Conditions Report and Investigation/Remediation Work Plan for Area 8A was approved on October 30, 2002 (Log No. B-38-CA-26).

(2) A Current Conditions Report and Investigation/Remediation Work Plan for Area 8B was approved on February 7, 2003 (Log No. B-38-CA-13).

(3) A focused Corrective Measures Completed Demonstration Report for the soils within Area 8B was approved on November 22, 2004 (Log No. B-38RI-CA-44).

(4) A focused Corrective Measures Completed Demonstration Report for the soils within Area 8A was approved on September 13, 2012 (Log No. B-38RI-CA-88). This determination and Log No. B-38RI-CA-44 brought corrective action for the soils within Area 8 to completion.

d. Date of NFA determination by the Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
Area 8A	50.001	September 13, 2012	R2012123830
Area 8B	6.73	November 22, 2004	R2004227471

e. Descriptions of ELUCs Established for the Two Parcels of Area 8
An ELUC has been established for the combined area of Business Parks 2 and 3, which includes Areas 2 and 8.

f. County Recorder's Document No. for ELUC
See Attachment F, Item II.13.c (Business Parks 2 & 3).

12. BUSINESS PARK 1

a. Description of Business Park 1 and NFA
Business Park 1 is a 95-acre parcel of the former Chevron Petroleum refinery which has been targeted for commercial/industrial re-development. This parcel of land is composed of several investigation areas or subareas of the former refinery where the soil, sediment, and surface water have been investigated/remediated to achieve NFA determinations as mentioned for the following investigation areas identified in the following table:

Area	Parcel ID	Acreage of NFA	Date of NFA Letter	County Recorder's No. for NFA
1A	1A Second Parcel	4	February 25, 2005	R2005048908
	1A Third Parcel	3	January 5, 2006	R2006020700

3A	3A First Parcel	10	August 21, 2000	R2001115319
	3A Second Parcel	11	February 27, 2002	R2002068595
	3A Third Parcel	9	May 14, 2003	R2003160978
3B	3B Second Parcel	6	February 27, 2004	R2004044865
	3B Third Parcel	5	February 25, 2005	R2005048908
	3B Fourth Parcel	27	January 5, 2006	R2006020700
5D	5D	1.789	November 3, 2003	R2003299341
5E	5E	0.3	May 7, 2003	R2003140033
7A	7A First Parcel	8	May 31, 2007	R2007094153
	7A Third Parcel	0.8	September 30, 2009	R2010006761
Roadway /Utility Corridor	1A First Parcel 3A Fourth Parcel 3B First Parcel	1.5 12.6 1.3	January 12, 2004 January 12, 2004 January 12, 2004	R2004016307 R2004061306 R2004016308

Note: The Illinois EPA issued an NFA letter for the sediment and surface water associated with Fiddyment Creek, the only surface water body which flows through Business Park 1, on January 28, 2009 (Log No. B-38R-CA-71). This determination, in conjunction with the NFA determinations in the above table, brought remediation of soils, sediments, and surface water associated with Business Park 1 to completion.

b. <u>ELUC Established for Business Park 1</u>

An ELUC has been established for Business Park 1 as a condition of NFA for soil/sediment and surface water for the entire parcel:

(1) The property will only be used for commercial/industrial purposes in the future;

(2) Groundwater beneath the property may not be used as potable water supply in any fashion;

(3) A Worker Caution and Construction Safety plan must be in place prior to the commencement of any future excavation and/or construction to address, at a minimum, possible worker exposure with impacted soils. Such safety plan must be consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, state and local regulations; and other U.S.EPA guidance.

(4) Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

  i. If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal;

  ii. If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However, procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

  iii. Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

(5) Intrusions into bedrock within the 0.8-acre portion of the Property known as the "CT Unit" shall be limited to doweling for installation of rebar foundation dowels, key notches, or equivalent disturbance necessary for construction of buildings or associate appurtenances. Bedrock removed from the vicinity of the former CT unit area shall be sent-off for disposal as a special waste in accordance with 35 IAC, Subtitle G: Waste Disposal and all other applicable laws and regulations, unless such material is shown not to be special waste to the satisfaction of the Illinois EPA.

(6) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

(7) In order to prevent unauthorized access by recreational users of the bike path, fencing constructed of galvanized chain-link steel of a minimum of six feet must be maintained along the border between Business Park 1 and the IDNR Bike Path.

c. Supplemental ELUC Established for Business Park 1

A supplemental ELUC has been established for Business Park 1 to account for the indoor inhalation exposure pathway:

(1) In accordance with 35 IAC 742.505(b)(2)(C) and 742.1000(a)(9), all buildings intended for worker occupancy that are constructed on the Property must include a full concrete slab-on-grade or a full concrete basement floor and walls with a minimum thickness of 4-inches.

(2) A certified copy of the recorded supplemental ELUC for Business Park 1 submitted to the Illinois EPA on November 8, 2017, was approved on April 24, 2020.

d. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's No. for ELUC
Business Park 1	11-04-14-300-007-0000 11-04-14-100-011-0000	R2012140287

	11-04-14-200-020-0020 11-04-14-400-005-0000 11-04-14-100-010-0020 11-04-14-300-005-9002	R2017040834

13. BUSINESS PARK 2 AND 3

a. Description of Business Parks 2 and 3 and NFA

Business Parks 2 and 3 is a 78.352-acre parcel of the former CEMC Petroleum refinery which has been targeted for commercial/industrial redevelopment. This parcel of land is comprised of three investigation areas/subareas of the former refinery where the soil, sediment, and surface water have been investigated/remediated to achieve NFA determination as mentioned for the following investigation areas identified in the following table:

Area	Parcel ID	Acreage of NFA	Date of NFA	County Recorder's No. for NFA
2	2	21.621-acre	January 18, 2006	R2006020701
8A	8A	50.001-acre	September 13, 2012	R2012123830
8B	8B	6.730-acre	November 22, 2004	R2004227471

In addition to the above, the Illinois EPA issued an NFA letter for the sediment and surface water associated with Santa Fe Ditch, the only surface water body which flows through and adjacent to Business Park 2 & 3, on September 13, 2012. This determination, in conjunction with the NFA determinations in the above table, brought remediation of soils, sediments, and surface water associated with Business Parks 2 and 3 to completion.

b. ELUC Established for Business Parks 2 and 3

An ELUC has been established for Business Parks 2 and 3 as a condition of NFA for soil/sediment and surface water for the entire parcels:

(1) The property will only be used for commercial/industrial purposes in the future;

(2) Groundwater beneath the property may not be used as potable water supply in any fashion;

(3) A Worker Caution and Construction Safety plan must be in place prior to the commencement of any future excavation and/or construction to address, at a minimum, possible worker exposure with impacted soils. Such safety plan must be consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities; OSHA regulations, state and local regulations; and other U.S.EPA guidance.

(4) Soil excavated during construction/demolition/excavation activities within the Property must be evaluated to determine if it is contaminated.

i. If the soil is found to be contaminated, then it must be sent off-site for disposal in accordance with any applicable rules and regulations including but not limited to 35 IAC, Subtitle G: Waste Disposal;

ii. If the soil is uncontaminated, as determined by visual inspection and field screening, then it may be used as fill in other areas of the Property. However, procedures must be in place to ensure that this material remains on the Property and is not to be transported off-site, unless it is transported off-site in accordance with any applicable rules and regulations, including but not limited to 35 IAC, Subtitle G: Waste Disposal; and

iii. Documentation of all these activities must be placed in the Property Owner's (or any subsequent Property Owner's or Property Owner's 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, at the time of the activity) operating record.

(5) CEMC authorized personnel must be allowed to conduct any necessary groundwater assessment and remediation activities within the Property required of CEMC by the RCRA Permit for the CEMC Facility.

(6) In order to prevent unauthorized access by recreational users of the bike path, fencing constructed of galvanized chain-link steel of

a minimum of six feet must be maintained along the border between Business Park 3 and the IDNR Bike Path.

c. Supplemental ELUC Established for Business Parks 2 and 3
A supplemental ELUC has been established for Business Parks 2 and 3 to account for the indoor inhalation exposure pathway:

(1) In accordance with 35 IAC 742.505(b)(2)(C) and 742.1000(a)(9), all buildings intended for worker occupancy that are constructed on the Property must include a full concrete slab-on-grade or a full concrete basement floor and walls with a minimum thickness of 4-inches.

(2) A certified copy of the recorded ELUC for Business Parks 2 and 3 was submitted on November 8, 2017, and was approved on April 24, 2020.

d. County Recorder's Document No. for ELUC

Parcel ID	Parcel Identification Numbers	County Recorder's Number for ELUC
Business Parks 2 & 3	11-04-14-100-010-0010 11-04-14-300-003-0000 11-04-23-110-002-0000	R2012141495 R2017040835

III. SURFACE WATER

1. Identification of Surface Water Bodies at the Former Refinery

a. Long Run Creek

b. Little Run Creek

c. Big Run Creek

d. Fiddyment Creek

e. Deep Run Creek

f. I&M Canal

g. North Gate Drainage Ditch

h. Santa Fe Drainage Ditch

i. Shell Fire Water Basin (Big Run Surge Basin)

2. Summary of Corrective Action Effort Completed to Date

a. A Current Conditions Report and Investigation/Remediation work plan was approved on May 30, 2002 (Log No. B-38-CA-24).

b. I&M Canal and Deep Run Creek Remedial Workplan Supplement was approved on August 8, 2008 (Log No. B-38RI-CA-70).

c. A Surface Water and Sediment Environmental Investigation Report (Log No. B-38RI-CA-49) and a Focused Corrective Measures Completed Demonstration Report, titled Surface Water and Sediments at Six Streams at the Former Texaco Lockport Refinery (Log No. B-38-CA-71) were approved on January 28, 2009. These six streams were all surface water except for I&M Canal and Deep Run Creek.

d. I&M Canal and Deep Run Creek Remedial Workplan Supplement (Log No. B-38RI-CA-76) was approved on September 18, 2009.

e. I&M Canal Remedial Action Completion Report (Log No. B-38RI-CA-80) was approved on March 9, 2011.

f. I&M Canal Remedial Action Completion Report (Log No. B-38RI-CA-82) was approved on October 4, 2011.

g. Focused Corrective Measures Completed Demonstration Report, Surface Water of Santa Fe Drainage Ditch (Log No. B-38RI-CA-87) was approved on September 13, 2012.

3. Summary of NFA

Surface Water Body	Date of NFA
Long Run Creek	January 28, 2009 (Log No. B-38RI-CA-71)
North Gate Drainage Ditch	January 28, 2009 (Log No. B-38RI-CA-71)
Little Run Creek	January 28, 2009 (Log No. B-38RI-CA-71)
Big Run Creek	January 28, 2009 (Log No. B-38RI-CA-71)

Big Run Surge Basin (now referred to as Shell Fire Water Basin)	January 28, 2009 (Log No. B-38RI-CA-71)
Fiddyment Creek	January 28, 2009 (Log No. B-38RI-CA-71)
Deep Run Creek	October 4, 2011 (Log No. B-38RI-CA-82)
I&M Canal	March 9, 2011 (Log No. B-38RI-CA-80)
Santa Fe Drainage Ditch	September 13, 2012 (Log No. B-38RI-CA-87)

IV. GROUNDWATER

1. <u>A Brief Summary of Approved Corrective Action Effort Prior to Establishing Groundwater Investigation Areas (GWIAs), which are described in Section VII of the Permit</u>

   a. In regard to the Deep Well investigation initially required by the Permit issued on September 28, 2001 (Log No. B-38RI);

      i. Work Plan for installation/monitoring of deep wells approved on March 13, 2002 (Log No. B-38-CA-20);

      ii. Proposed modification to deep wells work plan approved on April 9, 2002 (Log No. B-38-CA-25);

      iii. Phase 2 work plan approved on September 5, 2002 (Log No. B-38RI-CA-30);

      iv. Proposal to abandon monitoring well DMW-4 approved on September 5, 2002 (Log Nos. B-38RI-CA-28 and 29);

      v. Two submittals reporting exceedances of hazardous constituents above concentration limits in upgradient deep monitoring well DMW-7D approved subject to conditions and modifications on March 4, 2003 (Log Nos. B-38RI-CA-34 and 35);

      vi. Deep Groundwater Monitoring Wells-Request for Reduction in Sampling Frequency, approved on June 4, 2004 (Log No. B-38RI-CA-42);

      vii. Discontinuing monitoring of eleven deep wells approved on August 13, 2007 (Log No. B-38RI-CA-59);

viii. 2006 Annual Progress Report, Groundwater Monitoring Plan, Deeper Groundwater Monitoring Wells was approved on August 13, 2007 (Log No. B-38RI-CA-59).

b. Installation of 2 hyporheic zone monitoring wells near wells PM-22R and PM-24RR was approved on October 24, 2007 (Log No. B-38RI).

2. <u>Corrective Action completed at GWIAs</u>

Workplan for addressing groundwater on a facility-wide basis was approved by the Illinois EPA on April 8, 2011 (Log No. B-38RI-CA-79). In this workplan, the approximately 554-acre former refinery and adjacent areas were divided into six GWIAs. A summary of corrective action completed to date at each GWIA is as follows:

a. <u>GWIA A</u>
Workplan for GWIA A was received by the Illinois EPA on October 3, 2012 (Log No. B-38RI-CA-100) with supplemental information received by the Illinois EPA on July 29, 2015. The Work Plan was approved on September 14, 2015 (Log Nos. B-38RI-CA-100 and 101). Quarterly and semi-annual monitoring events have been completed. A Corrective Measures Completed Demonstration Report for groundwater within GWIA A was submitted to the Illinois EPA on September 26, 2018, and subsequently approved on October 3, 2019 (Log No. B-38R-CA-43). The Illinois EPA issued supplemental correspondence clarifying ELUC requirements for portions of GWIA A on October 23, 2019 (Log No. B-38R-CA-43). GWIA A is comprised of portions of the following soil areas: Area 1A-Fourth Parcel, Area 1B, Area 5A, Area 5B, Parcel 7A-1, and Parcel 7A-2.

A draft ELUC for combined portions of Parcels 7A-1 and 7A-2 and draft ELUC Amendments ("Supplemental ELUCs") for Area 1A-Fourth Parcel and Area 1B were submitted to the Illinois EPA on December 20, 2019, and have subsequently been revised, with the most recent revisions submitted on October 18, 2024 (Area 1A-Fourth Parcel; approved March 17, 2025; recorded April 17, 2025), March 11, 2025 (Area 1B; under review), and May 9, 2025 (portions of Parcels 7A-1 and 7A-2; under Illinois EPA review).

b. <u>GWIA B</u>
Workplan for GWIA B was received by the Illinois EPA on October 3, 2012 (Log No. B-38RI-CA-101) with supplemental information received by the Illinois EPA on July 29, 2015. The Work Plan was approved on September

14, 2015 (Log No. B-38RI-CA-100 and 101). The Work Plan sub-divided GWIA B into four sub-areas, B1 through B4. GWIA B1 was not the subject of the GWIA program because the footprints of LF-2 and the CAMU reside within this area and that property is neither eligible to receive an NFA determination nor be removed from the permitted facility boundary. A request to create a new sub-area (GWIA B5) from the southern portion of GWIA B1, located outside the footprints of LF-2 and the CAMU was submitted to the Illinois EPA on May 24, 2019 and is currently under review.

Quarterly and semi-annual monitoring events have been completed in all five GWIA B sub-areas. A single report combined into a Corrective Measures Completed Demonstration Report for groundwater within GWIAs B2 and B4 and an Environmental Investigation Progress Report for groundwater in GWIA B3 was submitted to the Illinois EPA on September 28, 2018. A submittal providing supplemental information in support of Illinois EPA's review of the GWIA B Corrective Measures Completed Demonstration Report for GWIAs B2 and B4 was submitted on October 9, 2019. Two additional documents containing supplemental information in support of the GWIA B Corrective Measures Completed Demonstration Report were submitted separately to the Illinois EPA on February 14, 2020. A Fate and Transport Model in the form of a proposed Tier 3 Evaluation for GWIA B3 was submitted to the Illinois EPA on December 30, 2019, followed by supporting information for that document, which was submitted to the Illinois EPA on September 4, 2020. Focused Corrective Measures Completed Demonstration Reports for GWIAs B3 and B5 were submitted to the Illinois EPA on March 18, 2020, and May 8, 2020, respectively. These submittals are under review by the Illinois EPA.

c. GWIA C

Workplan for GWIA C was approved by the Illinois EPA on January 24, 2012 (Log No. B-38RI-CA-86). Quarterly and semi-annual monitoring events have been completed. A focused Corrective Measures Completed Demonstration report for groundwater within GWIA C was submitted to the Illinois EPA on March 31, 2015. On June 18, 2017, the Illinois EPA sent CEMC a request for additional information in a response to the March 31, 2015 submittal. On April 25, 2018, CEMC submitted supplemental information as requested. Furthermore, supplemental information in support of the GWIA C Corrective Measures Completed Demonstration Report was submitted on October 9, 2019, followed by two additional documents containing supplemental information submitted separately to the Illinois EPA on February 14, 2020. Finally, the Illinois EPA requested additional information to be submitted in support of its review of the GWIA C Corrective Measures Completed Demonstration Report and that information was submitted on May 2, 2024.

The supplemental information provided by CEMC and the original report were approved by the Illinois EPA on January 23, 2025 (Log No. B-38R-CA-17, 52, and 53). The approval letter indicated that additional ELUC conditions were required for the property within or partially within the GWIA C boundary: Area 6 and three of the Area 7A parcels (Parcels 7A-5, 7A-9, and 7A-10). Supplemental ELUCs for those four areas were submitted to the Illinois EPA on April 23, 2025.

d. <u>GWIA D</u>

Workplan for GWIA D was approved on May 8, 2012 (Log No. B-38RI-CA-96). Monitoring wells were installed in 3Q2012 and groundwater monitoring commenced in 4Q2012. Quarterly and semi-annual monitoring events have been completed. A request to modify the GWIA D Work Plan to incorporate a hydraulic testing program for GWIA D was submitted on April 22, 2014, with supplemental information submitted on June 27, 2014. The Illinois EPA approved the Work Plan modification request on July 24, 2014 (Log No. B-38R-CA-10). Hydraulic testing commenced in the summer of 2015 and is completed. An Environmental Investigation Progress Report detailing the results of hydraulic testing and groundwater quality evaluation was submitted to the Illinois EPA on September 30, 2015. A Corrective Measures Completed Demonstration Report was submitted on May 31, 2017. This report supersedes the September 30, 2015 progress report. Additionally, supplemental information provided to the Illinois EPA in support of its review of the GWIA D Corrective Measures Completed Demonstration Report was submitted on October 9, 2019. Finally, two additional documents containing supplemental information in support of the GWIA D Corrective Measures Completed Demonstration Report were submitted separately to the Illinois EPA on February 14, 2020. The May 31, 2017 report as well as the supplemental information are under review by the Illinois EPA.

e. <u>GWIA E</u>

Workplan for GWIA E was received by the Illinois EPA on October 3, 2012 (Log No. B-38RI-CA-102) and was approved on August 28, 2013. Monitoring well and hydraulic test well networks were installed 4Q2013; groundwater monitoring commenced 4Q2013. Quarterly and semi-annual monitoring events have been completed. Hydraulic testing commenced in the summer of 2014 and is completed. An Environmental

Investigation Progress Report detailing the results of hydraulic testing and groundwater quality evaluation was submitted to the Illinois EPA on September 30, 2016, and is under review by the Illinois EPA.

Based on the results of that progress report CEMC submitted a document entitled Proposed Tier 3 Evaluation: Environmental Fate and Transport Model for GWIA E on December 30, 2019 along with supporting information that was submitted to the Illinois EPA on September 4, 2020. The Proposed Tier 3 Evaluation document formed the basis for a Focused Corrective Measures Completed Demonstration Report for GWIA E and F which was submitted to the Illinois EPA on October 20, 2020. These documents are under Illinois EPA review.

f. GWIA F

Workplan for GWIA F was approved on October 23, 2012 (Log No. B-38RI-CA-97). Hydraulic test well network installed in 1Q2013. Groundwater monitoring commenced 1Q2013. Quarterly and semi-annual monitoring events have been completed; hydraulic testing commenced 3Q2013 and was completed 3Q2014. A GWIA F Hydraulic Investigation Report was submitted on October 31, 2014, and a GWIA F Groundwater Quality Investigation Progress Report was submitted on March 31, 2016. These reports detail the results of the hydraulic and groundwater quality evaluations, respectively. Based on the evaluations contained within both these reports, CEMC submitted a document entitled Proposed Tier 3 Evaluation: Environmental Fate and Transport Model for GWIA F on December 30, 2019. Supporting information for the Proposed Tier 3 Evaluation was submitted on September 4, 2020. A Focused Corrective Measures Completed Demonstration Report for GWIAs E and F was submitted to the Illinois EPA on October 20, 2020. These documents are under Illinois EPA review.

g. Date of NFA Determination by the Illinois EPA and County Recorder's Document Number for NFA

Parcel ID	Parcel Size (acre)	Date of NFA Letter	County Recorder's No. for NFA
GWIA A	48.09	October 23, 2019	R2019091770
GWIA C	144.610	January 23, 2025	Pending

V. OTHER CORRECTIVE ACTION EFFORT COMPLETED TO DATE

In addition to addressing the various specific investigation areas, several other work plans, submittals or reports associated with the corrective action program being carried out at this facility have been approved by the Illinois EPA.

1. A dismantling Work Plan was approved on May 11, 2000 (Log No. B-38-CA-4) which describes procedures for dismantling/removing underground structures.

2. A work plan to investigate/remediate 25 leaded gasoline tank bottom pits was approved on May 8, 2000 (Log No. B-38-CA-2). A report documenting completion of remedial activities at these units was approved on October 12, 2001 (Log Nos. B-38-CA-8 and 15).

3. A decontamination work plan for Wastewater Treatment Unit #1 was approved on April 10, 2001 (Log No. B-38-CA-9) (located in Area 4A; part of wastewater treatment system). A decontamination Completion Report for this unit was approved on December 16, 2005 (Log No. B-38RI-CA-51).

4. A request for Site-Specific Remediation Objectives for polynuclear aromatic hydrocarbons was approved on August 31, 2004 (Log No. B-38RI-CA-43).

5. A request to revise the constituent of concern list for soil and groundwater was approved on November 26, 2001 (Log No. B-38R-CA-14).

6. Soil handling procedures for the overall project were approved on April 9, 2002 (Log No. B-38-CA-21); modified in a September 5, 2002 letter (Log No. B-38-CA-21 (rev.)).

7. A proposed modification to the investigation area boundaries was approved on September 5, 2002 (Log No. B-38-CA-27). A subsequent proposed modification to the investigation area boundaries which focused on Area 4 was approved on June 30, 2009 (Log No. B-38RI-CA-72).

8. A proposal to discontinue the submission of quarterly corrective action progress reports was approved on March 12, 2020 (Log No. B-38R-CA-46). The final quarterly corrective action progress report was submitted to the Illinois EPA on January 15, 2020.