



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

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

AUG 05 2026

Waste Management of Illinois, Inc.
Attention: Mr. Brian Roth
21233 West Laraway Road
Joliet, Illinois 60436-9525

Re: 1970450002 -- Will County
Laraway Recycling and Disposal Facility
ILD074411745
Log No. B-141R2
RCRA Permits Administrative Record -- 24D
Permit Draft

Dear Mr. Roth:

Attached is a draft renewed Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management 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 Illinois Environmental Protection Agency's (Illinois EPA's) files. The contents of the administrative record are described in Title 35 Illinois Administrative Code (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 renewal permit application are available for review at the Joliet Public Library located at 150 North Ottawa Street, Joliet, Illinois 60432. 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 21, 2026.

2125 S. First Street, Champaign, IL 61820 • 217-278-5800
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 • 618-346-5120
595 S. State Street, Elgin, IL 60123 • 847-608-3131
412 SW Washington Street, Suite D, Peoria, IL 61602 • 309-671-3022

115 S. LaSalle Street, Suite 2203, Chicago, IL 60603 • 312-832-0028
9511 Harrison Street, Des Plaines, IL 60016 • 847-294-4000
2309 W. Main Street, Suite 134, Marion, IL 62959 • 618-993-7200
4302 N. Main Street, Rockford, IL 61103 • 815-987-7760

Please print on recycled paper.

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:

Ms. Sarah Brubaker, Office of Community Relations #5
Illinois Environmental Protection Agency
2520 West Iles Avenue, P.O. 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 concerning this draft permit, please contact Takako Halteman, P.E., by email at takako.halteman@illinois.gov or by phone at (217) 524-3274. For questions concerning groundwater issues, please contact Shawntay Dial by email at shawntay.dial@illinois.gov or by phone at 217/558-0177.

Sincerely,



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

JLR: TNH: 1970450002-RCRA-B141R2-Approval.docx

TNH AMB

Attachments: (1) Fact Sheet
(2) Draft Renewed RCRA Post-Closure Permit

cc: Mr. Ian Johnson, P.E., Waste Management of Illinois, Inc.
Mr. Edward Doyle, P.E., Environmental Information Logistics, LLC
Ms. Erin Yargicoglu, Environmental Information Logistics, LLC

FACT SHEET
Draft Renewed RCRA Hazardous Waste Management Post-Closure Permit
Laraway Recycling and Disposal Facility
21233 West Laraway Road
Joliet, Illinois
Illinois EPA ID No. 1970450002
USEPA ID No. ILD074411745
Log No. B-141R2

1. INTRODUCTION

The Illinois Environmental Protection Agency (Illinois EPA) has prepared a draft renewed Resource Conservation and Recovery Act (RCRA) hazardous waste management post-closure permit (draft Permit) for public comment that requires Waste Management of Illinois, Inc. (WMI) to continue providing post-closure care for a closed 55-acre landfill located at 21233 West Laraway Road, Joliet, Illinois. The closed landfill, referred to as Area 1 and Area 2, is currently operating under a RCRA post-closure permit. In this draft Permit, the requirements associated with the active municipal solid waste and non-hazardous special waste landfill (MSW landfill) at the facility have been removed from the draft permit as a separate permit has been issued to this facility for operating the active landfill on June 26, 2026 (Permit No. 1995-313-LFM, Log No. 2026-247). The owner of the closed 55-acre hazardous waste landfill and the active 256-acre non-hazardous municipal solid waste landfill also located at the site is WMI.

This fact sheet has been prepared pursuant to the requirements of Title 35 Illinois Administrative Code (35 IAC) 705.143 and is intended to be a brief summary of the principal facts and significant factual, legal, methodological, and policy questions considered in preparing a draft renewal Permit for the above-mentioned facility. The Illinois EPA initially issued this facility a RCRA post-closure permit on November 3, 1989 and has modified it several times since that date. WMI has been operating the facility under the terms and conditions of these permits and is presently operating it under the provisions of its current RCRA permit.

2. FACILITY LOCATION

Laraway RDF is located within the West 1/2 of the Northeast 1/4 and East 1/2 of the Northwest 1/4, Section 31, Township 35 North, Range 10 East of the 3rd Principal Meridian, Will County, Illinois. The total property encompasses 1,010 acres, with 55 acres consisting of the closed hazardous waste landfill and 256 acres consisting of the active non-hazardous municipal solid waste landfill. A facility map is provided at the end of this fact sheet.

3. FACILITY OWNER AND OPERATOR

The owner of the 1,010-acre parcel of land on which the facility is located is

Waste Management of Illinois, Inc.
21233 West Laraway Road
Joliet, Illinois 60436-9525

The operator of the facility, and the entity responsible for carrying out the post-closure care of the closed hazardous waste landfill is:

Waste Management of Illinois, Inc.
21233 West Laraway Road
Joliet, Illinois 60436-9525

4. FACILITY BACKGROUND

Laraway Recycling and Disposal Facility (RDF) is owned and operated by (WMI). The facility was originally permitted on March 17, 1972 as a solid waste disposal facility receiving both municipal and industrial waste. On October 21, 1976, when the RCRA federal hazardous waste management rules became effective, some of the waste accepted at the facility met the new hazardous waste definitions. Such existing facilities were given an option to cease hazardous waste acceptance prior to July 26, 1982 and close under the old solid waste landfill rules, or to continue to accept hazardous waste and operate under the new hazardous waste landfill rules. This facility continued to receive hazardous waste after the July 26, 1982 deadline, and therefore became subject to the hazardous waste rules. Two units at the facility, identified as Area 1 and Area 2, operated under the hazardous waste rules, and were ultimately closed on March 3, 1992. These units are now subject to post-closure care and will continue under post-closure care until such time that they do not pose a threat to human health and the environment. Several Solid Waste Management Units (SWMUs) have been identified at the facility over the year while under USEPA's initially and then Illinois EPA's oversight. A total of five SWMUs have been closed, while corrective action is on-going at the North Stack and South Stack, along with three Olin Ponds.

The facility also operates a municipal solid waste and non-hazardous special waste landfill. The facility received its initial non-hazardous landfill permit on May 22, 1996. The non-hazardous waste landfill was developed under the modern, 35 IAC Parts 811 through 814 standards. Therefore, the non-hazardous landfill is equipped with a dual liner system, leachate collection system, and landfill gas monitoring probes. As the non-hazardous landfill approached capacity, WMI's request to expand was approved on July 1, 2009. The expansion proposed 15 additional non-hazardous waste disposal cells.

5. OVERVIEW OF DRAFT RENEWED RCRA PERMIT

The closed Area 1 and Area 2 hazardous waste landfill has been in post-closure care since March 3, 1992 and is undergoing routine maintenance to safeguard its contents as specified in the facility's existing RCRA permit. This draft permit contains updated post-closure care requirements which must be carried out at the closed landfill. The following activities will continue at the facility during the post-closure care period until such a time that the landfill has stabilized and does not pose a threat to human health and the environment:

- a. Leachate Collection – Liquid generated within the landfill will continue to be collected and pumped until leachate is no longer being generated. Annual analysis of leachate is required.
- b. Landfill Gas Monitoring Probe Network – Due to the de minimis amount of organics placed within the landfill, a landfill gas collection system was not required. A landfill gas monitoring probe network was installed around the perimeter of the unit to detect any potential migration of landfill gases from the unit. In the event that landfill gas is detected, it would be investigated and corrective action taken as necessary.
- c. Final Cover System – The final cover system consists of seamed geomembrane panels and a soil cover on top of the waste mass. Vegetation has been established to assist in minimizing erosion. The final cover system prevents the infiltration of stormwater, the exposure of waste to the atmosphere, and encapsulates the hazardous waste.
- d. Groundwater Management Zone – The groundwater management zone monitors the groundwater for contamination. Groundwater monitoring wells are placed upgradient of groundwater flow as well as downgradient. These monitoring wells are sampled quarterly and/or semi-annually for constituents. Should an elevated concentration be detected, it is investigated further and corrective action taken as necessary. The constituent lists have been updated to include revised standards and new constituents that have been included with the revisions of 35 IAC Part 620 (March 28, 2025).
- e. Hydraulic Gradient Pumping Wells – As part of the facility's Corrective Action Program, the facility operates groundwater extraction wells that pump water to maintain an inward hydraulic gradient at the site. This helps to remove contaminated groundwater and prevent contaminants in the groundwater from migrating off-site.

- f. Administrative Updates – The Illinois EPA has implemented a variety of regulatory administrative updates throughout this draft Permit, corrected any typographical errors discovered, and removed requirements associated with the now required by the non-hazardous waste permit issued to the facility on June 26, 2026 (Permit No. 1995-313-LFM, Log No. 2026-247), which includes requirements for the municipal solid waste and non-hazardous special waste landfill operation, closure, and post-closure.

6. Hazardous Waste Cleanup

The facility has been conducting hazardous waste cleanup activities, known as RCRA Corrective Action, at several SWMUs since the original RCRA Permit was issued in 1989, jointly by the Illinois EPA and the United States Environmental Protection Agency (USEPA). The facility obtained no further action (NFA) for three SWMUs under the oversight of the USEPA in March 1993 and for two additional SWMUs by the Illinois EPA in April 2012.

The North and South Stacks, historically operated by Olin Corporation, were used to stockpile the phosphogypsum material. The phosphogypsum material was also historically managed in three ponds, referred to as the Olin Ponds, which are located just north of the Laraway facility. These Olin Ponds have been acquired by the Permittee in 2020. Under the facility's RCRA permit, the phosphogypsum material and any impacted soils at the North Stack, Olin Ponds, areas surrounding the South Stack, which includes Moat and Return Water Pond surrounding the South Stack, have been or being consolidated into the South Stack in accordance with best management practices for phosphogypsum material and the conditions of the RCRA Permit.

Any remaining phosphogypsum material will continue to be excavated in areas surrounding the South Stack and consolidated onto the South Stack to complete remediation in this area. As the phosphogypsum materials and any impacted soils are consolidated into the south Stack, a partial final cover system is placed incrementally over the South Stack. This final cover system is designed to prevent stormwater from infiltrating into the phosphogypsum material underneath, generating run-off that would need to be treated as hazardous, and prevent the material from becoming wind strewn. Under the draft Permit, the closure of the South Stack and remediation of the remaining areas subject to corrective action, including groundwater monitoring and remediation, will continue to be conducted until no further action (NFA) is obtained from the Illinois EPA. The post-closure of the South Stack will be required after the completion of closure of this unit, which will consist of, but not be limited to, the maintenance of the final cover and groundwater monitoring.

7. CONSIDERED PERMIT ACTIONS OTHER THAN RCRA

- a. The air emissions from this facility are regulated under the Clean Air Act (CAA), the Illinois Environmental Protection Act (Act) and 35 IAC, Subtitle B: Air Pollution. Under these regulations, a permit is required to install or operate any process which is, or may be, a source of air pollutants. Emissions from the landfill itself and from the on-site flare are regulated by Permit No. 15090036 issued by the Illinois EPA Bureau of Air.
- b. The water discharge from this facility into the waters of the State is required to have a National Pollutant Discharge Elimination System (NPDES) permit, in accordance with Section 39(b) of the Act. The only water discharged to waters of the State at this RCRA permitted facility is storm water run-off and water from the on-site wastewater treatment plant. This water is discharged in accordance with NPDES Permit No. IL0063479 issued by the Illinois EPA Bureau of Water. Additionally, the NPDES Permit requires that the quality of the discharged water be monitored on a regular basis to ensure it meets certain effluent standards.

8. 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 renewal permit conditions prior to Illinois EPA taking any final permitting action on the application for this draft Permit. The comment period will begin on August 7, 2026, the date of publication of the public notice in a major local newspaper of general circulation. The comment period will end on September 21, 2026.

The administrative record is open for public inspection at the Illinois EPA Springfield headquarters from 9:00 a.m. to 5:00 p.m., Monday through Friday. The administrative record contains the Permit application, fact sheet, and other supporting documents and correspondence submitted to the Illinois EPA. Inspections of the administrative record must be scheduled in advance by contacting the Public Notice Clerk 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 in writing and must state the nature of the issues proposed to be raised in the hearing. Public notice will be issued 45 days before any public hearing. If a hearing has been scheduled with the public notice, then further requests are not necessary.

Any interested person may submit written comments on the draft renewed Permit, or request a public hearing, at the following address:

Ms. Sarah Brubaker, Office of Community Relations #5
Illinois Environmental Protection Agency
2520 West Iles Avenue, P.O. Box 19276
Springfield, Illinois 62794-9276
(217) 786-0790
TDD phone number: (866) 273-5488
sarah.brubaker@illinois.gov

When the Illinois EPA Bureau of Land makes its final Permit decision, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final Permit decision. The Permit will become effective 35 days after service of notice of the decision or at a later date if stated in the Permit. In addition, copies of the draft renewed Permit and fact sheet are available for review at the Joliet Public Library (150 North Ottawa Street, Joliet, Illinois 60432).

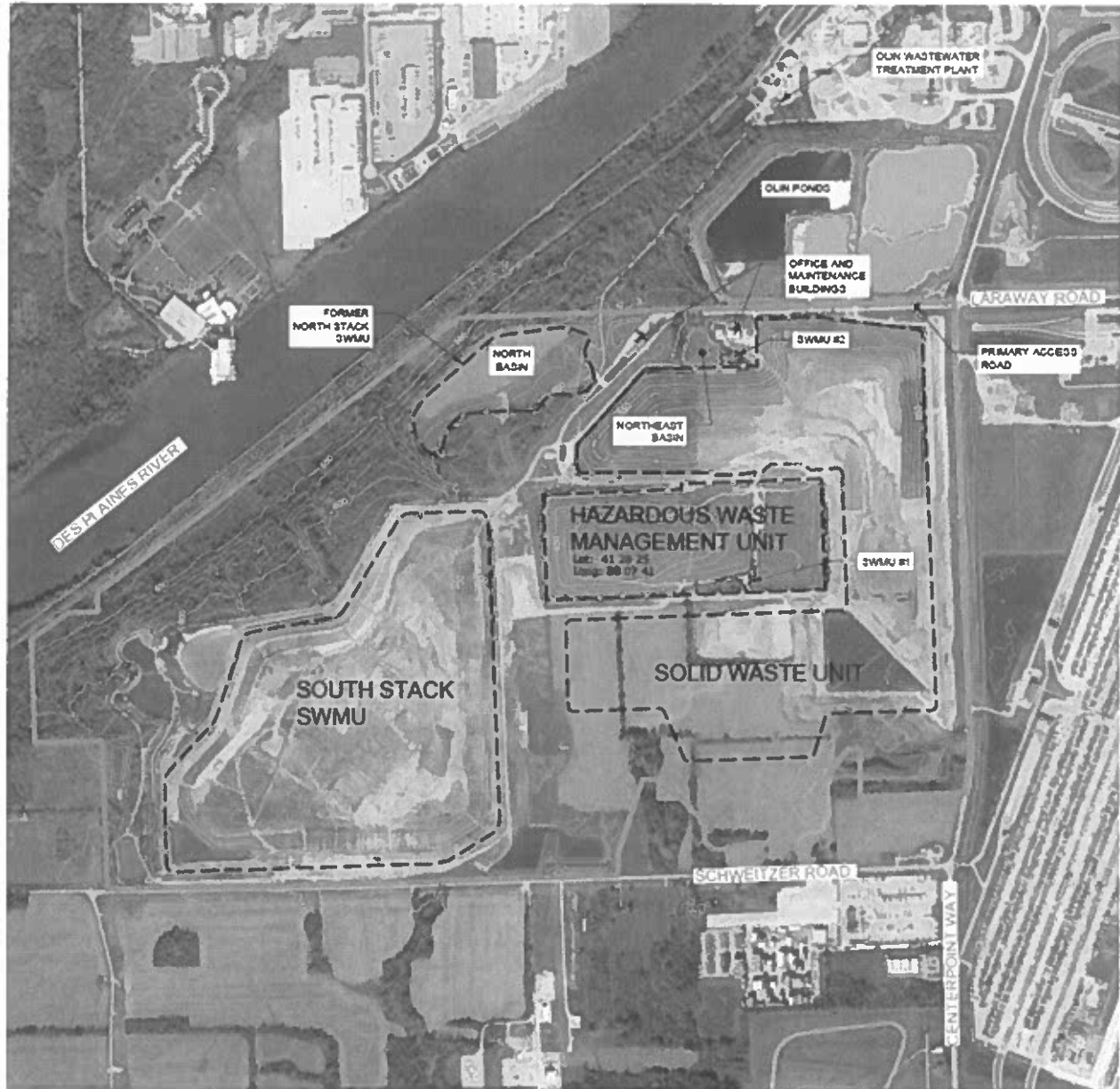


Figure 1: Laraway Recycling and Disposal Facility, owned and operated by Waste Management of Illinois, Inc; depicting the closed hazardous waste landfill, active non-hazardous waste landfill, former North Stack, existing South Stack, Olin Ponds, and current facility boundary.



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 HAZARDOUS WASTE MANAGEMENT POST-CLOSURE PERMIT

1970450002 -- Will County
Laraway Recycling and Disposal Facility
ILD074411745
Log No. B-141R2
RCRA Permits Administrative Record – 24D

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

OWNER/OPERATOR

Waste Management of Illinois, Inc.
Attention: Mr. Brian Roth
21233 West Laraway Road
Joliet, Illinois 60436-9525

FACILITY LOCATION

21233 West Laraway Road
Joliet, Illinois 60436-9525

A Resource Conservation and Recovery Act (RCRA) post-closure permit is hereby granted to Waste Management of Illinois, Inc. (WMI) as owner and operator pursuant to Section 39(d) of the Illinois Environmental Protection Act (Act) and Title 35 Illinois Administrative Code (35 IAC) Subtitle G.

PERMITTED HAZARDOUS WASTE ACTIVITY

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

1. **Post-Closure Care** of a closed landfill (Area 1 and Area 2) (D80)
2. **Groundwater Monitoring** Corrective Action Program
3. **Corrective Action** for identified SWMUs and AOCs as necessary

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

This Permit is issued based on the information submitted in the approved permit application identified in Attachment B of this Permit and any subsequent amendments. Any inaccuracies found in this information 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: TNH: 1970450002-RCRA-B141R2-Draft.docx

**RCRA HAZARDOUS WASTE MANAGEMENT
POST-CLOSURE PERMIT**

Log No. B-141R2

Laraway Recycling and Disposal Facility

ILLINOIS EPA ID No: 1970450002

USEPA ID No: ILD074411745

**RCRA POST-CLOSURE PERMIT
LARAWAY RECYCLING AND DISPOSAL FACILITY**

Illinois EPA ID No: 1970450002
USEPA ID No: ILD074411745

TABLE OF CONTENTS

<u>ITEM</u>	<u>PAGE</u>
I. General Facility Description	I-1 - I-2
II. Post-Closure Care	II-1 - II-11
III. Groundwater Corrective Action Program for HWMUs	III-1 - III-23
IV. Corrective Action for Solid Waste Management Units	IV-1 - IV-23
V. Groundwater Monitoring Program for the North Stack	V-1 - V-4
VI. Groundwater Monitoring Program for the South Stack	VI-1 - VI-8
VII. Special Conditions	VII-1 - VII-3
VIII. Standard Conditions for Post-Closure Care	VIII-1 - VIII-8
IX. General Facility Reporting and Notification Requirements	IX-1 - IX-5
X. Corrective Action Reporting and Notification Requirements	X-1 - X-2

LIST OF ATTACHMENTS

Attachment A - Cost Estimates

Attachment B - Approved Permit Application Identification

Attachment C - Statistical Procedures Flowchart

Attachment D - Facility Map

Attachment E – Chronological Summary of Corrective Action Submittals

Section I: GENERAL FACILITY DESCRIPTION

A. OWNER

The facility is owned by Waste Management of Illinois, Inc., herein referred to as the "Permittee". (35 IAC 702.123 and 35 IAC 703.181)

Waste Management of Illinois, Inc.
21233 West Laraway Road
Joliet, Illinois 60436-9525

B. OPERATOR

The facility operator is Waste Management of Illinois, Inc., herein referred to as the "Permittee". (35 IAC 702.121, 35 IAC 702.123, and 35 IAC 703.181)

Waste Management of Illinois, Inc.
21233 West Laraway Road
Joliet, Illinois 60436-9525

C. LOCATION

1. The Laraway Recycling and Disposal Facility is located within the West 1/2 of the Northeast 1/4 and East 1/2 of the Northwest 1/4, Section 31, Township 35 North, Range 10 East of the 3rd Principal Meridian, Will County, Illinois. The total property encompasses 1,010 acres, with 55 acres consisting of the closed hazardous waste landfill and 256 acres consisting of the active non-hazardous municipal solid waste (MSW) landfill.

2. The facility street address is:

Laraway Recycling and Disposal Facility
21233 West Laraway Road
Joliet, Illinois 60436-9525

3. The general facility layout and location of the closed hazardous waste management unit, Area 1 and Area 2, regulated by this Permit is shown in Attachment D.
4. The total property encompasses approximately 1,010 acres. Of the total, 110 acres were permitted for waste management in 1972 by the Illinois EPA. Of those 110 acres, Landfill Areas 1 and 2 occupy about 55 acres of what was previously permitted for solid and hazardous waste disposal. An additional 700 acres were added by a facility expansion included in the renewal of the facility's Part B Permit in 2009 (Log B-141R).

D. DESCRIPTION OF HAZARDOUS WASTE MANAGEMENT ACTIVITIES**1. Post-Closure Care for closed Hazardous Waste Management Units (HWMUs)**

There are two closed hazardous waste landfill units (Area 1 (35.95 Acres) and Area 2 (8.17 Acres)) at the facility. These units must receive post-closure care for at least 30 years after closure. This care includes inspections, monitoring, maintenance, and operation of the leachate and gas collection systems. The units subject to RCRA post-closure care are identified as the "Hazardous Waste Management Unit" on the Facility Map drawing included as Attachment D of this Permit. Post-Closure Care is to be provided until at least September 10, 2022.

2. Corrective Action (Hazardous Waste Cleanup)

A brief description of historical corrective action conducted at the site is provided in Section IV of this Permit. Under this Permit, corrective action, also known as hazardous waste cleanup, required focuses primarily around two historical solid waste management units (SWMUs) identified by the Permittee as the North Stack and the South Stack. The location of the South Stack is indicated on the Facility Map included as Attachment D to this Permit. The phosphogypsum material and any impacted soils at the North Stack and Olin Ponds have been or being consolidated into the South Stack. Any sediment accumulated in the former seepage management system, Moat and Return Water Pond, for the South Stack is also excavated and planed in the South Stack. The Permittee will continue to provide groundwater monitoring and corrective action for groundwater contamination associated with these units. The South Stack will eventually be closed with a cover system over it to encapsulate the phosphogypsum and stormwater management systems constructed to manage the flow of stormwater. In addition, any newly discovered SWMU or AOC in the future must also be addressed under corrective action section of this Permit.

E. Non-Hazardous Municipal Solid Waste Landfill

An active non-hazardous MSW is also located on the 1,010-acre site. This landfill operates under Illinois EPA Permit No. 1995-313-LFM. At the present time, in general, the facility is only permitted to receive construction and demolition debris (including asbestos) and non-hazardous special waste. Under the previous RCRA Post-Closure Permit (Log No. B-141R), the requirements for the non-hazardous MSW landfill were incorporated into the RCRA Post-Closure Permit at the facility's request. During the renewal of this Permit, due to the operational needs, the Permittee requested to separate out the hazardous and non-hazardous permits. On June 26, 2026, Permit No. 1995-313-LFM under Log No. 2026-247 was issued to the facility, for operation of the non-hazardous MSW landfill, this action allowed this Permit to only include the requirements associated with RCRA Post-Closure care and RCRA corrective action at the facility.

Section II: POST-CLOSURE CARE FOR HWMUs**A. SUMMARY**

HWMUs that have waste left in-place must receive post-closure care for at least 30 years after the date the certification of closure is approved in writing by the Illinois EPA. Area 1 and Area 2 landfill were used for the disposal of hazardous waste after July 26, 1982, and had closure approved on September 10, 1992. Activities required during post-closure care include but are not limited to: (1) maintenance of the final cover; (2) management of leachate (3) monitoring of the groundwater; and (4) providing financial assurance for post-closure activities pursuant to 35 IAC Part 724.

B. UNIT IDENTIFICATION

1. The Permittee must provide post-closure care for the Area 1 and Area 2 hazardous waste landfill identified in the following table, and as described in the approved permit application, subject to the terms and conditions of this Permit.

Unit Designation	Approximate Capacity	Approximate Surface Area (acres)
Area 1 and Area 2 Landfill	2,900,000 yd ³	55

2. The location and horizontal extent of the landfill is identified on the facility map in Attachment D to this Permit. The lowest elevation of the sumps in the landfill is approximately 600 feet above mean-sea-level (MSL). The highest elevation of the final cover system at the time of closure was approximately 683 feet above MSL.
3. The cover system on the top of Area 1 and Area 2 Landfill, where wastes were also received from other closure activities at the site or the cover system area with less than 10% slope, is constructed of the following layers, specified from the top to bottom:
 - a. At least 6 inches of vegetative cover;
 - b. At least 1.5 feet of protective cover soil layer;
 - c. A 12-ounce/square yard, non-woven geotextile;
 - d. A layer of geonet;
 - e. A 40-mil thick high density polyethylene geomembrane (HDPE);

- f. At least 2 feet of compacted clay layer with hydraulic conductivity of less than 1×10^{-7} cm/sec; and
 - g. The slopes of the final cover of approximately 5% with side slopes between 3:1 and 4:1 (horizontal: vertical).
- 4. The cover system on the top of Area 1 and Area 2 Landfill, where no waste from other closure activities at the site are deposited and/or with slopes of the final cover generally greater than 10%, is constructed of the following layers, specified from the top to bottom:
 - a. At least 6" of vegetative cover; and
 - b. At least 2 feet of compacted clay layer with hydraulic conductivity of less than 1×10^{-7} cm/sec.
- 5. The bottom liner system consists of in-situ clay soils with a minimum of 10 feet in thickness.
- 6. Leachate extraction system at the site is the Perimeter Leachate collection system consisting of leachate collection trenches, excavated to approximately 600-feet above MSL but above the in-situ clay liner.
- 7. The Plat of Survey (Parcel Index Numbers (PINs) 7-31-100-002 and 7-31-200-008) were filed with the Will County Recorder's Office on August 16, 1993. The record data is included in Appendix E-2 of the approved permit application. The Plat of Survey was attached to the deed to the property and serves as an instrument which is normally examined during title search that will in perpetuity notify any potential purchaser of the property that:
 - a. The waste material in Area 1 and Area 2 is considered a RCRA hazardous waste;
 - b. Use of Area 1 and Area 2 are restricted; and
 - c. A survey plat and record of the type, location, and quantity of waste material in Area 1 and Area 2 was filed with the Illinois EPA and the County Recorder.
- 8. The Permittee must not allow the property where the Area 1 and Area 2 Landfill identified in Conditions II.B.1 and II.B.3 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:

- b. It is necessary to the proposed use of the property, and will not increase the potential hazard to public health or the environment, or
- c. It is necessary to reduce the threat to human health or the environment.

C. POST-CLOSURE CARE PERIOD

1. The Permittee must conduct post-closure care for the Area 1 and Area 2 Landfill identified in Condition II.B.1 beginning on September 10, 1992, the date the Illinois EPA approved certification of closure (Log No. C-381-M-7). Post-closure care of this landfill has continued beyond the initial 30 years of post-closure, which was reached on September 20, 2022.
2. The Permittee must continue the post-closure care of the Area 1 and Area 2 Landfill until such time as no unacceptable risks to human health and the environment are present in the Area 1 and Area 2 Landfill, 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 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.

6. The Illinois EPA may require a continuation of any of the security requirements during part or all of the post-closure period.

D. MONITORING, MAINTENANCE, RECORDKEEPING AND REPORTING

1. The Permittee must maintain and monitor the groundwater monitoring program and comply with the other applicable regulations of 35 IAC Part 724 Subpart F (Groundwater Protection) during the post-closure period for both the Area 1 and Area 2 Landfill.
2. The Permittee must comply with the following requirements for Area 1 and Area 2 Landfill as follows:
 - a. Maintain the integrity and effectiveness of the final cover system, including making repairs to the final cover as necessary to correct the effects of settling, subsidence, erosion, cracking, or other events. Corrective action on the final cover must be taken if problems, including, but not limited to, the following, occur:
 - i. Ponding
 - ii. cracks greater than one-inch wide
 - iii. gas problems
 - iv. odor problems
 - v. dead or stressed vegetation
 - vi. vegetation with taproots growing in areas not designed to accommodate such
 - vii. vector problems
 - viii. leachate pop outs or seeps
 - b. Operate the leachate collection system to its capacity to reduce the amount (head) of leachate in Area 1 and Area 2 Landfill. Removal of leachate must not be solely based on the ability to maintain the operation of the flare. The Permittee must continuously remove all pumpable leachate until the required maximum depth of one foot of leachate above the invert of the landfill liner is achieved. Upon achieving the required depth, leachate must continue to be removed as necessary to maintain the required maximum depth of one foot. In order to accurately determine leachate levels throughout the landfill, the Permittee must monitor and evaluate the leachate levels within the leachate monitoring wells on a monthly basis. If such evaluation

reveals that the improved leachate collection system is incapable of achieving the required leachate depth throughout the landfill, the Illinois EPA may require the Permittee to further improve the leachate collection system so that it is capable of achieving the required leachate depth throughout the landfill.

- c. Four representative samples of leachate from the co-disposal hill and the drum trenches must be collected annually and analyzed individually (no compositing) for the constituents listed in 35 IAC Part 724, Appendix I. These samples must be collected during the first quarter inspections. The four samples will be taken from a subset of the withdrawal points. The sample points must be selected such that the leachate from both Area 1 and Area 2 are represented each year. No one withdrawal point should be sampled more than once in a four-year period unless otherwise directed by the Illinois EPA. The results of these analyses must be submitted to the Illinois EPA by June 1 each year. Leachate levels observed in each withdrawal point, the amount of leachate removed from each withdrawal point each month, leachate levels observed in each of the Leachate Monitoring Wells, and an evaluation of the effectiveness of the leachate removal system must also be included with these submittals.
- d. In addition to the constituents listed in 35 IAC Part 724, Appendix I (Appendix I) for leachate analysis, any groundwater monitoring constituents set forth in List E1 of Condition III.D.1 (List E1) of this Permit must also be analyzed for leachate sampling required under Condition II.D.2.c.
- e. The annual leachate analysis may be reduced by the Permittee through a permit modification, in accordance with 35 IAC 703.280, to reduce the annual leachate monitoring list. The Reduced List will be based on a review of the four most recent full Appendix I and List E1 analyses, and include all parameters detected in any of these four Appendix I and List E1 analyses, along with their appropriate STORET for electronic data submittal. Starting the next sampling event after Illinois EPA approval, this reduced list will be used in lieu of the Appendix I and List E1 analysis for three out of four years, with the fourth year reverting to a full Appendix I and List E1 analysis. Any parameters not included on the existing Reduced List detected in the fourth-year Appendix I and List E1 analysis must be added to the Reduced list, by means of a permit modification in accordance with 35 IAC 703.280, for all future Reduced List analyses. This cycle of three years of Reduced List, followed by one year of Appendix I and List E1 analysis, will repeat for the remainder of the post-closure care period.
- f. Information required by this Section must be submitted in an electronic format. The information is to be submitted as fixed-width text files. Additional guidance

regarding the submittal of the information in an electronic format can be found on the Illinois EPA's webpage titled, Electronic Reporting of Groundwater Data.

- g. The following leachate withdrawal points will be used for leachate sampling and analysis. For purposes of electronic reporting, the points will be renamed as shown below.

<u>Name in Application</u>	<u>Name for Electronic Reporting</u>
DTM-1	L334
DTM-2	L335
DTM-3	L336
DTM-4	L337
DTM-5	L338
DTM-6	L339
DTM-7	L340
DTM-8	L341
DTM-9	L342
DTM-10	L343
PLER-1	L344
PLER-2	L345
PLER-3	L346
PLER-4	L347
PLER-6A	L348

- h. The following leachate monitoring wells will be used for purposes of the leachate level determination. For purposes of electronic reporting, the points will be renamed as shown below.

<u>Name in Application</u>	<u>Name for Electronic Reporting</u>
LW-1R	L321
LW-2R	L322
LW-3R	L323
LW-4R	L324
LW-5R	L325
LW-6R	L326
LW-7	L327
LW-8R	L328
LW-9	L329
LW-10R	L330
LW-11R	L331

<u>Name in Application</u>	<u>Name for Electronic Reporting</u>
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LW-12R	L332
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LW-13R	L333
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- i. The Permittee must submit a completed "RCRA Facility Groundwater, Leachate and Gas Reporting Form (LPC-592)" as a cover sheet for all leachate reports for identification purposes. The form is not to be used for permit applications.
 - j. Prevent run-on and run-off from eroding or otherwise damaging the final cover.
 - k. Maintain and monitor the groundwater monitoring program and comply with all other applicable requirements of 35 IAC Part 724, Subpart F.
 - l. Protect and maintain surveyed benchmarks used in complying with surveying and recordkeeping requirements.
3. As the generation of leachate and detection of hazardous constituents in leachate continue for the Area 1 and Area 2 Landfill after over 30 years of post-closure care, a Post-Closure Care Effectiveness Evaluation Report for the Area 1 and Area 2 Landfill must be submitted 90 days before the five-year anniversary of the issuance date of this Permit as required in 35 IAC 702.161(d). This report must summarize and evaluate the effectiveness of the post-closure activities being implemented and submitted to the Illinois EPA as a Class 1* permit modification. Such evaluation must include, but not limited to, the following:
- i. A survey plat of the Area 1 and Area 2 Landfill. A survey of the Area 1 and Area 2 Landfill by a professional surveyor conducted within 60 days of the report due date must be submitted.
 - ii. Evaluation of the condition of the landfill final cover comparing the data obtained from 1992 survey, 2017 topography evaluation, as noted in Appendix E-10a of the approved permit application, surveys conducted by a professional surveyor in accordance with Condition VII.2.c, and Condition II.D.2 of this Permit.
 - iii. An updated evaluation of run-on and run-off analysis (included in Appendix E-5 of the approved permit application) based on the updated inputs/model, as necessary, and the local precipitation data from the most current five consecutive years available at the time of evaluation.
 - iv. Evaluation of leachate quality data based on the analytical results and quantities of leachate generation from the last five (or more) years.

- v. Summary and evaluation of groundwater monitoring and corrective action program required in Section III of this Permit as applicable.

E. NOTICES AND CERTIFICATION

1. If the Permittee 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 Permittee must request a permit modification in accordance with the applicable requirements in 35 IAC Parts 703, 705, and 724. The Permittee must, at a minimum, demonstrate that the removal of the hazardous wastes will satisfy the requirements of 35 IAC 724.217.
2. No later than 60 days after determining post-closure care periods for the Area 1 and Area 2 Landfill has been completed, the Permittee must submit to the Illinois EPA Bureau of Land Permit Section, by certified 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 Permittee and a qualified Illinois licensed professional engineer. Documentation supporting the qualified Illinois licensed professional engineer's certification must be furnished to the Illinois EPA Bureau of Land Permit Section upon request until the Illinois EPA releases the Permittee from the financial assurance requirements for post-closure care.
3. A survey plat indicating the location and dimensions of the Area 1 and Area 2 Landfill and any other hazardous waste disposal units with respect to permanently surveyed benchmarks, prepared and certified by a professional land surveyor, must be submitted with the documentation required in Condition II.E.2. The notes on the survey plat state the owner's and operator's obligation to restrict disturbance of the Area 1 and Area 2 Landfill in accordance with the applicable 35 IAC 724 Subpart G regulations. These notes must state:
 - a. The waste materials contained in the Area 1 and Area 2 Landfill are considered RCRA hazardous wastes. They include multiple hazardous waste codes from various industrial processes. See Table C-1 of Appendix E-3 of the approved permit application for a detailed list of waste codes received.
 - b. Any material removed from the Area 1 and Area 2 Landfill during future activities must be managed as a hazardous waste in accordance with 35 IAC Subtitle G: Waste Disposal.
 - c. The use of this area is restricted.

F. SUBSURFACE GAS MANAGEMENT

1. The Permittee must flare the subsurface gas generated at Area 1 as permitted by the Illinois EPA Bureau of Air during the post-closure care period.
2. The Permittee must operate the gas management system in accordance with Section E-5 and Appendix E of the approved permit application.
3. A Corrective Action Plan to modify the facility's existing gas control system must be submitted to the Illinois EPA Bureau of Land Permit Section for approval if subsurface gas creates problems within 30 days of discovery. Upon approval, the plan must be implemented.

G. INSPECTION SCHEDULE

1. Post-closure inspections will be conducted quarterly during the post-closure care period. Additional inspections will be performed following precipitation events in which two inches or more of precipitation are received at the site during a 24-hour period. If such precipitation events occur within one month of one of the scheduled quarterly inspections, the precipitation event inspection will be substituted for the regular quarterly inspection. Findings made during each inspection will be recorded on the post-closure inspection log, included as Section D-1 of Appendix D of the approved permit application, or on a similar log. Copies of all inspection logs will be kept at the landfill. Documentation of all repairs performed, or replacements required to properly maintain the site will be kept with the inspection logs.
2. General post-closure care inspection procedures will include the following:
 - a. Visually inspect the perimeter fence and all gates. Check for fence integrity and note any areas of damage. Note the working condition of each gate and check to ensure that all locks and other security systems are in place and function.
 - b. Visually inspect the landfill final cover and surrounding areas. Note any evidence of cover erosion, settling, or negative stress. Also note any unusual conditions such as odors, ponded water, or bubbling. Visually inspect the run-on/run-off control berms and ditches. Mark any areas requiring further inspection or repairs so arrangements can be made to efficiently effect all necessary repairs.
 - c. Visually inspect the gas risers and flares. Note any damage, malfunction, and/or clogging. Check liquid level in each riser and make arrangements for condensate removal.

- d. Visually inspect each leachate collection riser and note any damage. Check and record the liquid level in each withdrawal riser for the co-disposal hill and each drum trench. If the liquid level is found to be above the maximum acceptable level identified in the approved permit application, make arrangements for leachate removal.
 - e. Inspect each groundwater well cover for damage. Check the well cap and well cover lock to ensure they are functioning and have not been tampered with. Note area around wells for erosion, settling, or negative stress. The monitoring wells are also utilized as permanent benchmarks. Visually inspect each benchmark, report any missing benchmarks, and note any damage to the benchmarks.
 - f. Visually inspect any applicable safety and emergency equipment. Report missing and/or damaged equipment.
 - g. Visually inspect the groundwater remediation system each time water level measurements are obtained.
 - h. Inspect the components of the groundwater treatment process each day that the system is in operation or liquid is present in the tank.
 - i. Inspect the leachate collection tanks and associated secondary containment. Check for any accumulation of standing water (from precipitation) and arrange for removal. Check for evidence of leakage. Investigate all breaches within 24 hours of occurrence and correct the problem as soon as practicable. Inspections of the portable tanks are required on a weekly basis when there is material in the containers.
3. Arrangements must be made to repair or replace any items in order to maintain the site at a condition equal to that in the approved permit application and as required in conditions of this Permit.

H. POST-CLOSURE MAINTENANCE

Maintenance activities will respond to the needs determined from the inspections. The following items will be repaired to original conditions described in the original post-closure permit application: slopes damaged by erosion; areas of settlement, subsidence, and displacement; run-on and run-off control structures; and the leachate collection and removal system. Wells will be repaired or replaced. The vegetative cover on the final cover will be: (1) mowed annually; and (2) fertilized on an as-needed basis.

I. FINANCIAL ASSURANCE

1. The Permittee must maintain financial assurance for post-closure care of the Area 1 and Area 2 Landfill as identified in Condition II.B.1 of at least the amount shown in Attachment A. The post-closure care cost was calculated by multiplying the total annual post-closure by 30 years, plus any one-time costs. The post-closure cost estimate must be adjusted for inflation annually. The financial assurance maintained by the facility must be sufficient to meet the requirements of 35 IAC 724, Subpart H.

Section III: GROUNDWATER CORRECTIVE ACTION PROGRAM FOR HWMUs

A. SUMMARY

Hazardous constituents released from Area 1 and Area 2 have been detected in groundwater within the upper Silurian Dolomite. The contamination is located in the vicinity of the closed RCRA co-disposal landfill designated as "Area 1" and extends beyond the Point of Compliance.

As a result, the Corrective Action Program detailed in this section must be implemented to remove the groundwater contamination and ensure compliance with the Groundwater Protection Standards (GPS) and 35 IAC Part 620, Class I Groundwater Quality Standards. The Corrective Action Program is designed to meet the requirements of 35 IAC 724.200 and includes conditions pursuant to Section 39(d) of the Act to achieve compliance with additional State administrative rules.

The Corrective Action Program is comprised of a groundwater recovery and treatment system and monitoring network for the areas which are currently contaminated (hereafter referred to as an "Observation Zone"), and a groundwater monitoring program for the areas which are not currently contaminated (hereafter referred to as "GMZ Boundary Wells"). The Program includes:

1. Establishment of a 35 IAC 620.250 Groundwater Management Zone (GMZ). "GMZ" refers to the three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contaminants from a site that is subject to corrective action or for which the owner/operator undertakes an adequate corrective action in a timely and appropriate manner and provides written confirmation to the Illinois EPA.
2. Extraction and treatment of contaminants dissolved in the groundwater through the pumping of well(s) located within the GMZ. This extraction is also designed to maintain hydraulic control of the flow of groundwater within the GMZ. The hydraulic control must prevent further off-site migration of contaminants from the boundaries of the facility and draw groundwater containing dissolved organic and inorganic contaminants, which had previously migrated off-site, back to the facility boundary.
3. Monitoring to ensure the effectiveness of the groundwater recovery system within the GMZ. This monitoring will involve: (a) evaluating the zone of influence of the groundwater recovery system; and (b) groundwater sampling and analysis to monitor the reduction of contaminant concentrations.

4. Monitoring in a series of wells designated as GMZ Boundary Wells. This monitoring will determine if groundwater located outside the area of contamination is in compliance with the applicable standards and will identify additional hazardous constituents which may be present in the uppermost aquifer.

B. IMPLEMENTATION

1. The Permittee must implement the Groundwater Corrective Action Program upon the effective date of this post-closure permit. On that date, the corrective action and groundwater monitoring requirements set forth in this permit shall supersede those established in the previous post-closure permit for the facility.
2. The Permittee must carry out the corrective action program specified in this Permit on the groundwater beneath the facility. "Uppermost Aquifer" refers to the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically connected with this aquifer in the vicinity of the facility. The uppermost aquifer in the vicinity of the facility has been identified as a composite zone consisting of outwash sand and gravel deposits, where present and the underlying weathered, fractured, and/or jointed Silurian Dolomite.
3. The compliance period when the GPS applies is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting and the closure period). The compliance period for Area 1 and Area 2 has been defined as a minimum of 30 years following the issuance of the November 3, 1989, post-closure permit.
4. The corrective action program must continue during the compliance period until the Permittee demonstrates the GPS has not been exceeded for three consecutive years. However, if the Permittee is engaged in a corrective action at the end of the defined compliance period, the compliance period is extended until the Permittee can demonstrate that the GPS has not been exceeded for three consecutive years.
5. The Point of Compliance must be postponed for the regulated unit until such time that the GMZ monitoring wells have attained the applicable concentration limits that comprise the GPS and the GMZ expires. At that time, the facility must submit a proposal for establishment of a Point of Compliance which satisfies the regulatory requirements found in 35 IAC Part 724 Subpart F and reflects the current conditions of the facility. "Point of Compliance" refers to the vertical surface located at the hydraulically downgradient limits of the waste management area extending down into the uppermost aquifer underlying the regulated unit.

C. WELL LOCATIONS AND CONSTRUCTION

1. The Permittee must install and maintain groundwater monitoring wells and piezometers at the locations specified in the tables below to allow for the collection of groundwater samples and elevations from the uppermost aquifer. .

TABLE 1. Observation Zone -- GMZ wells located within the area of groundwater contamination. The geographic location of each well is shown in the Existing Well Locations Map in Appendix C.3 of the approved permit application.

<u>Illinois</u> <u>EPA</u> <u>Well</u> <u>No.</u>	<u>Well</u> <u>Depth</u> <u>Elevation</u> <u>(Ft-bgs)</u>	<u>Well</u> <u>Depth</u> <u>Elevation</u> <u>(Ft-MSL)</u>	<u>Ground</u> <u>Surface</u> <u>Elevation</u> <u>(Ft-MSL)</u>	<u>Top of</u> <u>Casing</u> <u>Interval</u> <u>(Ft-MSL)</u>	<u>Well</u> <u>Screen</u> <u>(Ft-MSL)</u>
A128	49.14	573.67	622.81	625.16	583.90--573.90
G127	55.58	565.70	621.28	623.28	584.85--565.70
G130	61.98	563.15	625.13	627.40	582.30--563.15
G131	63.85	560.85	624.70	627.01	579.97--560.85
G167	51.97	564.94	616.92	620.07	575.78--566.20
G168	54.75	565.34	620.09	622.96	575.58--566.00
R29D	57.75	567.28	624.85	626.87	572.28--567.28
R29S	48.40	576.45	624.85	626.56	581.45--576.45
R40S	40.01	579.61	619.62	621.97	584.81--579.61
R4D2	61.22	559.52	620.74	622.98	565.02--559.52

Notes:

"FT-bgs refers to the number of feet below ground surface

"FT-MSL refers number of feet referenced to mean sea level (MSL).

TABLE 2. GMZ Boundary Wells -- GMZ wells outside the area of contamination. The geographic location of each well is shown in the Existing Well Locations Map in Appendix C.3 of the approved permit application.

<u>Illinois</u> <u>EPA</u> <u>Well</u> <u>No.</u>	<u>Well</u> <u>Depth</u> <u>Elevation</u> <u>(Ft-bgs)</u>	<u>Well</u> <u>Depth</u> <u>Elevation</u> <u>(Ft-MSL)</u>	<u>Ground</u> <u>Surface</u> <u>Elevation</u> <u>(Ft-MSL)</u>	<u>Top of</u> <u>Casing</u> <u>Interval</u> <u>(Ft-MSL)</u>	<u>Well</u> <u>Screen</u> <u>(Ft-MSL)</u>
G101	20.42	570.84	591.26	593.18	575.98--570.98
G105	50.18	572.67	622.85	625.44	577.67--572.67
G109	48.18	569.39	617.57	619.55	574.80--569.80
G123	54.05	567.03	621.08	622.80	586.23--567.03
G124	47.97	572.08	620.05	621.74	586.48--572.08
G125	53.02	567.94	620.96	623.17	587.06--567.94
G126	53.69	568.02	621.71	623.39	587.12--568.02
G132	61.95	559.41	621.36	623.43	576.61--559.41
G133	61.36	561.53	622.89	625.26	581.21--561.53
G135	62.91	559.93	622.84	625.26	579.08--559.93
G136	62.87	559.65	622.52	625.00	583.60--559.65
G137	61.18	560.51	621.69	623.90	584.51--560.51
G138	60.76	561.13	621.89	624.66	584.92--561.13
G142	51.12	567.86	618.99	621.66	587.68--568.40
G145	60.82	556.76	617.58	620.63	586.33--556.76
G146	54.54	563.58	618.12	621.48	582.57--563.58
G147*	55.44	562.75	618.19	621.44	581.85--562.75
G148	50.91	567.91	618.82	621.13	582.28--567.91
G169	55.69	562.93	618.63	620.94	572.97--563.39
G281	49.76	577.24	627.00	629.33	587.18--577.89
G53D	63.03	563.24	626.27	627.84	571.80--566.30
G53S	43.72	582.37	626.09	627.87	588.09--582.60
R112 ⁺	50.90	563.82	614.72	616.24	573.82--563.82
R114*	48.46	581.07	629.53	632.78	591.57--581.07
R122	48.46	576.27	624.73	626.03	586.27--576.27
R134	52.50	572.45	624.95	627.13	582.45--572.45
R139	39.64	582.51	622.15	624.54	587.51--582.51
R143	36.71	581.93	618.64	621.70	594.83--581.93
R144	58.24	559.41	617.65	620.25	564.41--559.41
R149*	50.72	582.61	633.33	636.12	588.10--583.30

TABLE 3. Groundwater Recovery Wells – Extraction wells used for removal of groundwater contamination. The geographic location of each well is shown in the Existing Well Locations

Map in Appendix C.3 of the approved permit application. Groundwater elevations and sampling are not required at extraction wells.

<u>Illinois</u> <u>EPA</u> <u>Well</u> <u>No.</u>	<u>Well</u> <u>Depth</u> <u>Elevation</u> <u>(Ft-bgs)</u>	<u>Well</u> <u>Depth</u> <u>Elevation</u> <u>(Ft-MSL)</u>	<u>Ground</u> <u>Surface</u> <u>Elevation</u> <u>(Ft-MSL)</u>	<u>Top of</u> <u>Casing</u> <u>Interval</u> <u>(Ft-MSL)</u>	<u>Well</u> <u>Screen</u> <u>(Ft-MSL)</u>
EW-1	53.0	565.33	619.83	NA	586.83-566.83
EW-2	54.5	565.56	620.06	620.56	586.66-567.66
EW-3	65.5	557.68	623.18	623.68	579.18-559.18
EW-4	66.5	557.86	624.36	624.86	579.36-559.36
EW-5	57.5	563.37	620.87	621.37	584.87-564.87
EW-6	63.5	560.46	623.96	624.46	581.96-561.96
EW-7	58.5	563.21	621.77	622.21	584.71-564.71
EW-8	57.5	564.64	622.14	622.64	586.14-566.14

Notes:

* -- Wells used for groundwater measurements only

+ --

"FT-bgs refers to the number of feet below ground surface

"FT-MSL refers number of feet referenced to mean sea level (MSL).

- Written approval from the Illinois EPA must be obtained prior to changes being made to the facility's Groundwater Recovery System. The Permittee must submit a proposal for the installation and addition, replacement, or for the removal of any Groundwater Recovery System well that is located within the GMZ as it is currently defined. This proposal must be in the form of a Class 1* permit application.
- This Permit may be modified by the Permittee or the Illinois EPA in accordance with 35 IAC 705.128 if information becomes available that the current well spacing is not adequate to detect contamination from the hazardous waste management areas to the uppermost aquifer.
- Construction of each monitoring well/piezometer must be in accordance with the "Cross-Section of Typical Monitoring Well" diagram found on the Illinois EPA website, unless otherwise approved in writing by the Illinois EPA. Any new or replacement monitoring well/piezometer to be installed must be continuously sampled and logged on an Illinois EPA approved boring logs found 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 Condition III.C.1 are damaged, the structural integrity has been compromised, or if any have become consistently dry or unserviceable as a result of poor construction and/or development. 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 and 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 geologic zone as the existing well and be constructed in accordance with the current Illinois EPA groundwater monitoring well construction standards at the time that the wells are replaced. A well which is more than 10 feet from the existing well and which does not monitor the same geologic zone shall be approved by the Illinois EPA and designated as a new well. If the facility determines that a replacement well will be a dry well, then it must submit for Illinois EPA approval either a proposal to install a new monitoring well or a proposal not to replace the well with appropriate rationale.
7. Monitoring well and piezometer construction must comply with the minimum standards set forth in 77 IAC Part 920 regulations. The Permittee must submit boring logs, construction diagrams, and data sheets from the installation and development of each new or replacement well to the Illinois EPA at the address below within 30 days of the date that 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 77 IAC Part 920 and the approved Illinois EPA procedures to the Illinois EPA at the address below within thirty 30 days of the date that the well is plugged and abandoned. All information must be submitted to the appropriate 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 on the protective casing and must be equipped with protective caps and locks. Monitoring wells/piezometers located in high traffic areas must be protected with bumper guards.

9. All wells/piezometers not utilized in the approved groundwater monitoring program, but retained by the facility, must be constructed and maintained in accordance with 77 IAC Part 920 regulations.
10. Wells/piezometers that are improperly constructed must be abandoned in accordance with Condition III.C.7.
11. Any modifications to this groundwater monitoring well network and program effecting the Municipal Solid Waste (MSW) and non-hazardous special waste landfill permit require the Permittee to submit a modification in accordance with 35 IAC Part 813 to the MSW and non-hazardous special waste Permit No. 1995-313-LFM.

D. GROUNDWATER PROTECTION STANDARD

1. The Permittee must determine groundwater quality at groundwater monitoring wells identified in Condition III.C.1 semi-annually. The concentration limits listed for the following hazardous and non-hazardous constituents comprise the GPS hereafter referred to as List E1.

LIST E1

<u>Constituent</u>	<u>STORET</u>	<u>Concentration Limit</u> <u>(ug/L, except as noted)</u>
<u>ORGANICS (Total Concentration)</u>		
Chloroethane	34311	ND
Chloromethane	34418	ND
Dichlorodifluoromethane	34668	770
1,1-Dichloroethane	34496	770
1,2-Dichloroethane	34531	5 ⁽¹⁾
1,1-Dichloroethylene	34501	7 ⁽²⁾
cis-1,2-Dichloroethylene	77093	70 ⁽²⁾
trans-1,2-Dichloroethylene	34546	100 ⁽²⁾
1,2-dichloropropane	34541	5
p-Dioxane	81582	0.78
Tetrachloroethylene	34475	5 ⁽¹⁾
Trichloroethylene	39180	5 ⁽¹⁾
1,1,1-Trichloroethane	34506	200 ⁽²⁾

LIST E1 (Continued)

1,1,2-Trichloroethane	34511	5 ⁽²⁾
Trichlorofluoromethane	34488	1200
Vinyl Chloride	39175	2 ⁽¹⁾
Chloride	00940	200 mg/L
HFPO-DA (hexafluoropropylene oxide dimer acid GenX)	52612	0.01
PFBS (perfluorobutanesulfonic Acid)	52602	2
PFHxS (perfluorohexanesulfonic acid)	52605	0.01
PFNA (perfluorononanoic acid)	51626	0.01
PFOA (perfluorooctanoic acid)	51521	0.004
PFOS (perfluorooctanesulfonic acid)	52606	0.004
1-Methylnaphthalene	77418	270
Total Atrazine and Metabolites		3
Desethyl-atrazine(DEA)	46373	
Desisopropyl-atrazine (DIA)	46374	
Diaminochlorotriazine (DACT)	75979	

Inorganics (Unfiltered)

Aluminum	01105	1900
Arsenic	01002	10
Barium	01007	2000
Chromium	01034	100
Lead	01051	7.5
Lithium	01132	40
Molybdenum	01062	308
Radium (combined 226+228)	11503	5 (pCi/L)

LIST E1 (Continued)

<u>Constituent</u>	<u>STORET</u>	<u>Concentration Limit</u> <u>(ug/L, except as noted)</u>
<u>Inorganics (Filtered)</u>		
Aluminum	01006	LLOQ
Arsenic	01000	LLOQ
Barium	01005	117.2
Chromium	01030	10.33
Lead	01049	LLOQ
Lithium	01130	LLOQ
Molybdenum	01060	LLOQ
Radium (combined 226+228)	11500	LLOQ

NOTES: (1) In addition to meeting the individual concentration limit in the tables above, the following equation must be satisfied in order to protect against liver tumors.

$$\frac{[1,2\text{-dichloroethane}]}{0.005 \text{ mg/L}} + \frac{[\text{tetrachloroethylene}]}{0.005 \text{ mg/L}} +$$

$$\frac{[\text{trichloroethylene}]}{0.005 \text{ mg/L}} + \frac{[\text{vinyl chloride}]}{0.002 \text{ mg/L}} \leq 1.0$$

(2) In addition to meeting the individual Class in groundwater recommendations indicated in the tables above, the following equation must be satisfied in order to protect against liver toxicity.

$$\frac{[\text{cis-1,2-dichloroethylene}]}{0.07 \text{ mg/L}} + \frac{[\text{trans-1,2-dichloroethylene}]}{0.1 \text{ mg/L}} +$$

$$\frac{[1,1\text{-dichloroethylene}]}{0.007 \text{ mg/L}} + \frac{[1,1,1\text{-trichloroethane}]}{0.2 \text{ mg/L}} +$$

$$\frac{[1,1,2\text{-trichloroethane}]}{0.005 \text{ mg/L}} \leq 1.0$$

ND: Not Determined. Insufficient data were available upon which to base a concentration limit. If the chemical(s) is/are still detected after all other concentration limits have been achieved, then the Illinois EPA will establish appropriate concentration limits at that time.

2. The following hazardous constituents comprise the routine monitoring list for the Observation Zone wells identified below in Subsection III.E.1, hereafter this list is referred to as List E2:

LIST E2

<u>Hazardous Constituent</u>	<u>STORET</u>	<u>Concentration Limit (ug/L)</u>
<u>ORGANICS</u>		
Chloroethane	34311	ND
Chloromethane	34418	ND
1,2-dichloropropane	34541	5
trans 1,2-Dichloroethylene	34546	100
Dichlorodifluoromethane	34668	770
p-Dioxane	81582	0.78
Trichlorofluoromethane	34488	1,200
<u>INORGANICS (UNFILTERED)</u>		
Arsenic	01002	10
Barium	01007	2,000
Chromium	01034	100
Lead	01051	7.5
<u>INORGANICS (FILTERED)</u>		
Arsenic	01000	LLOQ
Barium	01005	117.2
Chromium	01030	10.33
Lead	01049	LLOQ

ND: Not Determined. Insufficient data were available upon which to base a concentration limit. If the chemical(s) is/are still detected after all other concentration limits have been achieved, then the Illinois EPA will establish appropriate concentration limits at that time.

3. The following parameters comprise the annual waste constituent list, hereafter referred to as List E3.

LIST E3 (Groundwater)

<u>Hazardous Constituent</u>	<u>STORET</u>	<u>LLOQ (ug/L)</u>
Toluene	34010	5
Benzene	34030	2
Chlorobenzene	34301	2
Methylene Chloride	34423	5
Methyl ethyl ketone	81595	10
Ethyl benzene	78113	2
Xylene	81551	5
Acetone	81552	100
Isobutanol	77033	50
ortho-Dichlorobenzene	34536	10
Carbon disulfide	77041	5
Pyridine	77045	5
Hexachloropropene	70304	10
Hexachlorophene	73575	50
Kepone	81281	20
Cadmium	01027	5
Mercury	71900	2
Iron [#]	01045	1,000

[#]Statistical evaluation of this parameter is not equivalent this time.

4. The following parameters comprise the field parameter list, hereafter referred to as List E4:

LIST E4 (Groundwater)

<u>Field Parameter</u>	<u>STORET</u>	<u>UNITS</u>
Specific Conductance at 25°C	00094	umhos/cm
pH	00400	(S.U.)
Temperature of Water Sample	00011	°F

<u>Field Parameter</u>	<u>STORET</u>	<u>UNITS</u>
Depth to Water (below land surface)	72019	Feet
Depth to Water (below measuring point)	72109	Feet
Elevation of Casing Measuring Point (MSL)	72110	Feet
Elevation of Groundwater Surface (MSL)	71993	Feet
Elevation of Well Bottom (MSL)	72020	Feet
Turbidity	00076	NTU
Oxidation Reduction Potential	00090	Millivolts

5. Pursuant to 35 IAC 724.194(a), the appropriate concentration limits that comprise the GPS are either: (1) background concentration; (2) 35 IAC 724.194 Table 1; or (3) an alternate concentration limit such as an appropriate 35 IAC Part 620 Groundwater Quality Standard or submit the information required by 35 IAC 724.194 (b). Total (unfiltered) values must be used for comparison to the 35 IAC Part 620 Groundwater Quality Standards. The following procedures may be used to change the established concentration limits (see List E1 above) or to propose a concentration limit when a constituent that is not currently part of the GPS (see List E1 above) is detected:

- a. To establish background of a constituent for the purpose of establishing the concentration limit, the following procedures must be followed:

Background must be established on data obtained from the quarterly sampling of each background well for a minimum of four events. Background must be proposed to the Illinois EPA for approval within 45 days of receipt of the fourth quarter analytical results. For those monitoring parameters or constituents not detected above the LLOQ during background gathering, the background values must be established as the appropriate 35 IAC Part 620 Groundwater Quality Standard or the laboratory LLOQ, whichever is lower.

- b. Alternate concentration limits may be established where the Permittee can determine a constituent will not pose a substantial hazard to human health or the environment in accordance with 35 IAC 724.194 (b).
- If the hazardous constituent has a standard listed in 35 IAC Part 620, the facility may also need to apply for an adjusted standard as outlined in Section 28.1 of the Act as part of the alternate concentration limit demonstration.
 - If the hazardous constituent does not have a 35 IAC Part 620 standard, the alternate quality standard proposed by the Permittee must be approved by the Illinois EPA.

- c. "Detected" shall mean a concentration equal to or above the Lower Limit of Quantitation (LLOQ) listed in USEPA's SW-846 (Third Edition) and finalized updates for the applicable analytical methods specified in the approved Sampling and Analysis Procedures, which are incorporated by reference in Condition III.G.3 for the application analytical methods specified in the approved Sampling and Analysis Procedures.
6. The compliance period (post-closure period) during which the GPS applies must be extended until the Permittee demonstrates that the GPS has not been exceeded at the point of compliance for three consecutive years.

E. CORRECTIVE ACTION PROGRAM

The Permittee must conduct the corrective action program and perform groundwater monitoring detailed in this section in accordance with the following:

1. Observation Zone Wells (GMZ wells within the Area of Contamination)
 - a. The wells identified in Condition III.C.1, Table 1 are the wells within the Observation Zone.
 - b. The Permittee must demonstrate the effectiveness of the groundwater recovery system by monitoring groundwater from wells identified in Condition III.C.1, Table 1. The effectiveness must be evaluated semi-annually in accordance with the procedures outlined in Sections C-8 and C-9 of the approved permit application and the following conditions:
 - i. Monitoring wells listed in Condition III.C.1, Table 1 must be sampled according to the schedule as noted on the table listed below.
 - ii. The hydraulic effects of the extraction system must be determined semi-annually at each well listed in Condition III.C.1, Table 1. To evaluate the hydraulic effects, scaled potentiometric maps with the zone of influence and capture created by the extraction system must be developed. The pumping rate must also be identified on the potentiometric maps.
 - iii. Sampling and analytical procedures utilized in the Groundwater Recovery System shall be in accordance with Condition III.G.

iv.	<u>Sampling event of calendar year:</u>	<u>Sampling Due:</u>	<u>Results submitted to Illinois EPA by the following:</u>
	Second Quarter	List E1, E3, E4 (all wells)	July 15
	Fourth Quarter	List E1, E4 (all wells) List E2 (Observ. Wells)	January 15

2. GMZ Boundary Wells (GMZ wells without exceedances of GPS)

- a. The Permittee must determine whether the GPS has been exceeded and whether groundwater has been degraded below established background values within the GMZ boundary (non-contaminated) wells. The wells identified in Condition III.C.1, Table 2, must be used for this evaluation. These wells must be evaluated semi-annually during the compliance period.
- b. Sampling and analytical procedures must be in accordance with Condition III.G below.
- c. The wells identified in Condition III.C.1, Table 2 must be sampled according to the schedule as noted on the table listed above.

3. Groundwater Recovery Wells (Extraction wells within the Area of Contamination)

- a. The wells identified in Condition III.C.1, Table 3, are the Groundwater Recovery Wells used for removal of groundwater contamination. The Permittee must implement, at these wells, the corrective measures detailed in Section C.8 and C.9 of the approved permit application, with the following conditions:
 - i. Groundwater extraction from the pumping wells must be maintained to ensure that groundwater flow is adequately controlled in the aquifer(s).
 - ii. Changes in the pumping rate must be explained in the annual report. Extended periods of "downtime" greater than monthly must be reported to the Illinois EPA.
 - iii. Hydraulic head measurements must be made semi-annually during the compliance period. This data must be used to evaluate the long-term seasonal trends of water-table surfaces when subjected to the pumping stress of the gradient and source control systems, and to determine the size of the resulting capture zone.

- iv. Flow rate data must be recorded on a weekly basis. The flow rate must be calculated from the cumulative discharge data of each well as measured by its cumulative flowmeter. The semi-annual report must present the weekly flowmeter data for the semi-annual period, and the flow rate calculated from this data. Flow rate data must be calculated as the average volume pumped in gallons per minute for each well during each weekly measurement period, as well as the average flow rate for the semi-annual reporting period.
- b. Upon initiation of the groundwater recovery system (detailed in Condition III.E.3.a) and when hydraulic control of the contaminated groundwater areas is achieved, a three-dimensional region containing groundwater within the uppermost aquifer is established as a GMZ pursuant to 35 IAC 620.250. The geographic location of the GMZ is defined by the wells listed in Condition III.C.1, Tables 1 and 2.

The GMZ must apply to the constituents comprising the GPS listed in Condition III.D.1. The GMZ must remain in place as long as corrective actions are being conducted in a timely and appropriate manner. The GMZ shall expire upon the groundwater meeting the GPS. The Illinois EPA shall review the on-going adequacy of controls and continued management at the facility if constituents, as specified in 35 IAC 620.450(a)(4)(B), remain in groundwater following completion of the corrective action.

4. The Permittee must determine the groundwater flow rate and direction in the uppermost aquifer at least annually from the wells listed in Condition III.C, Table 1 and 2, which excludes the groundwater extraction wells. The groundwater flow rate must be reported as a minimum and maximum range.

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 Condition III.I.3. Groundwater elevation measurements are not required from Groundwater Recovery wells.
2. The Permittee must determine the surveyed elevation of stick-up (top of casing), referenced to MSL, when a well is installed (with as-built diagrams) and every two years (during the first semi-annual sampling event), or whenever the elevation changes, beginning with the first groundwater sampling event required by this Permit. "Stick-up" refers to the height of the reference 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 determined at least annually. The mandatory measurement must be taken during the first semi-annual sampling event of each year. The mandatory measurement must be taken in accordance with Condition III.I.5 Below.

G. SAMPLING AND ANALYSIS PROCEDURES

The Permittee must use the following techniques and procedures, except as modified, when obtaining and analyzing samples from the groundwater monitoring wells described in Condition III.C.1:

1. Samples must be collected by the techniques described in Section C.8.4.3 of the approved permit application.
2. Samples must be preserved, shipped, and handled in accordance with the procedures specified in Section C.8.4.3 of the approved permit application.
3. Samples must be analyzed according to the procedures specified in Section C.8.4.3 of the approved permit application. Groundwater analysis must be in accordance with the most current version of the applicable methods found in USEPA's "Test methods for Evaluating Solid Waste, Physical /Chemical Methods", Third Edition (SW-846) and finalized updates.
4. Samples must be tracked and controlled using the chain-of-custody procedures specified in Section C.8.4.3 of the approved permit application.

H. STATISTICAL PROCEDURES

The Permittee must use the statistical procedures described in accordance with Section 8.4.5 of the approved permit application, except as modified herein. These are in keeping with USEPA's "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance" (March 2009).

1. The Permittee must evaluate the quality of groundwater samples acquired during the semi-annual sampling events in accordance with Condition III.E.
 - a. Observation Zone wells (see Subsection III.E.1.c.(1)) must be evaluated according to the following procedures:

During each fourth quarter sampling event, the Permittee must conduct the p-dioxane evaluation discussed in Section C.8.4.5 of the approved permit application.

- b. GMZ Boundary Wells (see Condition III.E.2.a) must be evaluated according to the following procedures:
 - i. The concentration of each hazardous constituent which comprises the GPS (List E1) must be compared to their respective Concentration Limit. If a parameter exceeds its Concentration Limit specified in Condition III.D above, the Permittee must follow the procedures specified in Conditions III.I.12 and/or III.I.13.
 - ii. Constituents detected below the LLOQ must be determined to show no change and no action is necessary.
- 2. The Permittee must evaluate the results of the annual analyses required by Conditions III.E.1.b and III.E.2.c by:
 - a. Comparing the list of substances found in samples to the list of hazardous constituents contained in List E3. If a given constituent is found above the LLOQ in the sample, collected from a well, the Permittee may resample within 30 days. This sample must be analyzed for the constituent(s) detected above the LLOQ in the initial sample.
 - i. If the constituent(s) of concern is (are) again detected above the LLOQ or the Permittee does not resample, the Permittee must conclude that the constituent(s) of concern is (are) in the groundwater and follow the procedures in Condition III.I.12 and/or III.I.13 below.
 - ii. If the constituent(s) of concern is (are) not detected in the resample, the Permittee will not be required at that time to continue sampling for the particular constituent(s).
 - b. Comparing the concentration of the samples from the GMZ Boundary wells to the Concentration Limits of the GPS identified in Condition III.D, List E3. If this comparison indicates a constituent exceeds its Concentration Limit, the Permittee must follow the procedures specified in Conditions III.I.12 and/or III.I.13.
 - c. Determining the concentration trend at each well to identify areas that may have increasing contamination and to evaluate the effectiveness of the extraction system for reducing the concentration of contaminants within the Observation Zone.
 - i. GMZ Boundary Wells must be evaluated as follows:
 - (1) Constituents detected below the LLOQ must be determined to be showing no change and no action is necessary.

(2) Constituents detected above the LLOQ must be plotted on graphs which show historical concentration versus time. Plots indicating a trend that has a positive or greater than 1.0 slope must be reported, as part of Condition III.I.10, as a potential area of increasing contamination. In addition, the report must contain an evaluation on whether the corrective actions are operating effectively and whether adjustments or additional remedial actions are necessary based on the concentration trend.

ii. Observation Zone Wells must be evaluated as follows:

Constituents detected above the LLOQ must be compared to the historical data for each well and submitted as part of Condition III.I.10. The comparison must include graphs which show the concentration versus time. The information must be used to evaluate whether all constituents comprising the GPS are being adequately remediated. This evaluation must include an assessment of the current corrective actions and whether adjustments or additional remedial actions are necessary.

3. The Permittee must evaluate the effectiveness of the groundwater extraction system to hydraulically capture and withdraw the off-site plume of groundwater contamination. The information required by Conditions III.E.3.a, III.E.3.b and III.E.1.b must be used for this evaluation. This evaluation must be conducted semi-annually. If the evaluation indicates the offsite plume of contamination is not completely captured by the current extraction system design and present pumping rate status conditions, the Permittee must submit within 30 days of the semi-annual evaluation proper notification or modification (see Conditions III.E.3.a.ii and III.E.3.a.iii) to achieve capture of the groundwater contamination.

I. REPORTING AND RECORDKEEPING

1. The Permittee must enter all monitoring, testing and analytical data, obtained in accordance with Conditions III.D, III.E, III.F, III.G, and III.H, into the Operating Record.

2. Samples collected to meet the requirements of the groundwater monitoring program described in Conditions III.D, III.E, III.F, III.G, and III.H and III.I must be collected during the second and fourth quarters of each calendar year, as identified in the Table below. The results of the groundwater quality analyses conducted on the samples must be submitted in accordance with this schedule.

<u>Sampling event of calendar year:</u>	<u>Samples Collected During Months of:</u>	<u>Results submitted to Illinois EPA by the following:</u>
Second Quarter	April-may	July 15
Fourth Quarter	October-November	January 15

3. Groundwater surface elevation data measured pursuant to Condition III.F.1 must be collected semi-annually and submitted to the Illinois EPA as identified in Condition III.I.2.
4. The Permittee shall report groundwater flow rate and direction in the uppermost aquifer, as required by Condition III.E.4, annually each year.
5. The Permittee must report the surveyed elevation as required by Condition III.F.2 of the top of well casing "stick-up", referenced to MSL in accordance with the following schedule:
- For wells identified in Condition III.C.1 above, every two years (during the second quarter sampling event), or at the request of the Illinois EPA, or whenever elevation changes.
 - For any new well, at the time of installation and reported in the as-built diagrams, subsequent measurements must be made every two years (during the second quarter 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 Condition III.C.1 as referenced to MSL, is to be reported at least annually. The measurement must be taken during the first semi-annual sampling event in accordance with Condition III.E.
7. The Permittee must maintain all equipment associated with groundwater monitoring wells. Dedicated pumps found in monitoring wells identified in Condition III.C.1 must be removed, inspected, and repaired (if necessary) every five years. Information regarding the inspection and maintenance of pumps must be reported by July 15 of that year.

8. Information required by Conditions III.E.1.c.(2), III.E.1.c.(3), III.E.2.b, III.E.2.c, III.F.2, and III.F.3 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," and in accordance with the schedule found in Condition III.I.2. Additional guidance regarding the submittal of the information in an electronic format can be found on the Illinois EPA's website.
9. 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 facility's permit for identification purposes. Only one copy of the LPC-592 with wet signatures must accompany the submittal. However, the Permittee must submit one original copy of each notice or report submitted to the Illinois EPA in paper format and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two electronic copies (one addressed to the Bureau of Land Permit Section, and one addressed to the regional Field Operations Section). Additional paper and electronic copies must be provided upon Illinois EPA request. The form is not to be used for the permit modification requests.
10. 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.
11. The Permittee must submit a written report to the Illinois EPA annually which discusses the effectiveness of the Corrective Action Program and place it in the operating record for the facility. At a minimum, the report must include, but is not limited to, the following:
 - a. Address the information requirements in Conditions III.D, III.E, III.F, III.G, and III.H and contain the information specified in Section C.9 of the approved permit application.
 - b. Provide a discussion of any improvement in the quality of groundwater beneath the facility which has resulted from the corrective action.
 - c. Evaluate the effectiveness of the hydraulic groundwater control and groundwater contaminant removal from the GMZ.

12. If the Permittee determines pursuant to Condition III.H.1.b above that any Concentration Limits specified in the GPS are being exceeded at any groundwater monitoring well within the GMZ Boundary wells, the Permittee must:
 - a. Notify the Illinois EPA of this finding in writing within seven days. The notification must indicate what Concentrations Limits have been exceeded.
 - b. Within 90 days of the date that the increase is discovered, submit to the Illinois EPA a permit application for the Corrective Action Program meeting the requirements of 35 IAC 724.200. The permit application must at a minimum include the following information:
 - i. A detailed description of corrective actions that will achieve compliance with the GPS.
 - ii. A plan for a groundwater monitoring program that will demonstrate the effectiveness of the corrective action. Such a groundwater monitoring program may be based on a compliance monitoring program.
13. 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 the determination is made:
 - b. Take actions necessary to regain the control of groundwater flow as required by Condition III.H.3.
 - 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 report must contain information which demonstrates that groundwater flow is being adequately controlled.
 - d. Submit a permit application to the Illinois EPA within 60 days describing any changes which must be made to the Corrective Action Program to ensure that the groundwater flow is adequately controlled.
14. If the Permittee determines, pursuant to Condition III.H.1.b or III.H.2.b that the groundwater Concentration Limits in Condition III.D are being exceeded at any of the GMZ Boundary Wells, the Permittee may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by

an error in sampling, analysis or statistical evaluation, or natural variation in groundwater. In making a demonstration under this condition, the Permittee must:

- a. Notify the Illinois EPA in writing within seven days that it intends to make a demonstration under this condition;
 - b. Within 90 days, submit a report to the Illinois EPA which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation;
 - c. Within 90 days, submit to the Illinois EPA a permit application to make any appropriate changes to the corrective action monitoring system at the facility, and;
 - d. Continue to monitor in accordance with Condition III.E.
15. If the Permittee determines that additional constituents not currently part of the GPS are present in the groundwater, pursuant to Condition III.H.2.a.i above the Permittee must:
- a. Report the concentration of these additional constituents detected in the groundwater to the Illinois EPA within seven days after completion of the analyses, and;
 - b. Add the additional constituents to the monitoring list of the GPS, Lists E1 and E2, and establish the concentration limit for each additional constituent following procedures in Condition III.D.5 above.
16. The Permittee must submit to the Illinois EPA documentation associated with the groundwater extraction system maintenance procedures. The documentation must be submitted in semi-annual groundwater reports in accordance with the schedule found in Condition III.I.2. The documentation must include, at a minimum, the following:
- a. A brief description of the qualifications of personnel performing the maintenance procedures;
 - b. Dates of inspection and/or service, identification of wells or specific well system components inspected and/or serviced, average times servicing the system (including re-circulation times and down-times), and future maintenance frequency and schedule;

- c. Problems observed, such as excessive biofouling and/or scaling, structural damage to wells or well system components, malfunctions in equipment (valves, container housing, lines, etc.). This should include a brief discussion of any field observation made during the maintenance event and proposed procedures to address any problems, if necessary;
 - d. Values for the field parameters: conductivity, temperature, redox potential (Eh), and pH for comparison of water quality before and after cleaning events;
 - e. Supporting data confirming that groundwater quality returns to a natural level subsequent to the completion of the maintenance procedures (water must be pumped from the well until the water quality is essentially the same as prior to the treatment);
 - f. Identification of all cleaning compounds used for well maintenance, including, but not limited to, a discussion and supporting documentation regarding: (1) mixture concentrations, amounts, and injection rates; (2) general procedures used in the application of chemical compounds that are utilized to maintain the system; and (3) a performance evaluation. If the cleaning technique involves the application of acidic compounds, a total concentration of 15% (2-3 times zone volume) should not be exceeded.
17. In accordance with 35 IAC 620.250(c), a review of the GMZ must take place no less often than every five years and the results must be presented to the Illinois EPA in a written report.

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, the Permittee must, within 90 days, submit an application for a permit modification to the Illinois EPA, Bureau of Land, Permit Section to make any appropriate changes to the program which will satisfy the regulations.
2. Conditions in this section of the Permit may be modified 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, alteration 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 IV: CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS**A. INTRODUCTION**

1. In accordance with Section 3004(u) and (v) of RCRA and 35 IAC 724.201, the Permittee must institute such corrective action as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents, listed in 35 IAC 721, Appendix H, from any solid waste management units (SWMUs) and any area(s) of concern (AOCs) at its facility near Joliet, Illinois. This section contains the conditions which must be followed to ensure these requirements are met.
2. This facility was initially issued a RCRA permit by USEPA and Illinois EPA which became effective November 3, 1989. The USEPA portion of the permit (also known as "HSWA Perm it"), contained, among other things, corrective action requirements for two SWMUs (Ponds 1 through 4 and the Land Treatment Unit).
3. A RCRA Facility Investigation (RFI) has been completed for the two SWMUs identified in the original permit, with a third SWMU, known as the "Inactive Landfill Area". USEPA determined that, based on the results of the RFI, no corrective action was necessary at these three SWMUs. This determination was documented in a permit modification dated March 4, 1993.
4. The Laraway facility includes two piles (or stacks) of phosphogypsum material (referred to the North Stack and South Stack) and related surface water management system. This phosphogypsum material is a by-product of the production of phosphoric acid carried out at the former Olin facility located northeast of these piles. This section of the Permit sets forth the requirements which the Permittee must carry out to complete corrective action of the North Stack and South Stack and their associated surface water management systems.
5. The Olin ponds were purchased by Waste Management on August 8, 2020, per the quitclaim deed, which resulted in an additional three SWMUs which requires RCRA corrective action at the facility. The facility intends to develop this area as part of the proposed non-hazardous MSW landfill. The facility must conduct and complete corrective action prior to development of this area
6. Unless there is a desire to modify specific requirements set forth in this Section, information submitted to Illinois EPA regarding the corrective action requirements set forth in this Section is not a request to modify this Permit nor subject to the requirements of 35 IAC 703, Subpart G.

- a. A completed Illinois EPA RCRA Corrective Action Certification Form (LPC-632) (available on Illinois EPA's website) must accompany all corrective action-related information submitted to Illinois EPA.
 - b. To allow for proper review of all corrective action-related information submitted to Illinois EPA, one original and two copies of the information must be submitted.
7. The Permittee must provide corrective action, as appropriate, for: (1) any newly discovered SWMUs and AOCs; and/or (2) any future releases from SWMUs present at the facility.
8. The requirements of 35 IAC Parts 620 and 742 must be met, when applicable, in determining remediation objectives for all corrective action activities. In addition, all corrective action efforts must meet the requirements of 35 IAC 724.201.
9. The Permittee must incorporate, as necessary, climate change resilience and adaptation considerations into the corrective action required at this facility.
10. All Illinois EPA final decisions regarding RCRA corrective action at this facility are subject to the appeal provisions of Sections 39(a) and 40(a) of the Act.
11. Issuance of this Permit does not relieve the Permittee of the responsibility of complying with the provisions of 35 IAC Subtitle B (Air Pollution Control) or Subtitle C (Water Pollution Control).
12. All discharges of runoff from disturbed areas to Waters of the State must meet the requirements of 35 IAC Parts 304 and 309.

B. CORRECTIVE ACTION REQUIREMENTS

1. The Permittee must conduct and complete corrective action, as necessary, to determine the nature and extent of releases of hazardous wastes and hazardous constituents from the SWMUs and meet the corrective action requirements of this Permit:

Unit Name	Unit Description	Status of CA
SWMU No. 1 (a.k.a South SWMU)	Contaminated Soil	NFA on April 18, 2012
SWMU No. 2 (a.k.a North SWMU)	Contaminated Soil	NFA on April 18, 2012

North Stack	Waste Pile	NFA for Soil on April 18, 2012. Groundwater CA In Progress
South Stack (include Moat and Return Water Pond)	Waste Pile	In Progress
East Pond (SWMU 3a)	Approximately 30 acres and consists of two separate areas: the North End with a capacity of 33,235,000 gallons and the South End with a capacity of 6,842,000 gallons	In Progress
Central Pond (SWMU 3b)	Approximately 11 acres and has a capacity of 41,706,000 gallons	In Progress
West Pond (SWMU 3c)	Approximately 40 acres and has a capacity of 149,555,000 gallons.	In Progress

2. The following SWMUs have been identified and addressed under oversight of USEPA. Overview of corrective action completed for these units is described in Condition IV.C.

Unit Name	Unit Description	NFA Date by USEPA
Land Treatment Unit	Former Land Treatment Unit (Land Farming Area)	March 4, 1993
Ponds 1 through 4	Ponds associated with Land Farming Area	March 4, 1993
Inactive Landfill	Pre-RCRA Trench Landfill	March 4, 1993

3. The Olin Ponds consist of three ponds: The East Pond, Center Pond and West Pond which are used to manage phosphate slurry generated from the historical treatment of stormwater runoff and seepage from the phosphogypsum pile. Corrective action activities are in progress in the Olin pond areas to prepare the area for the

expansion of the municipal solid waste landfill, as described in Condition IV.H of this Permit.

4. The requirements of corrective action for groundwater under the requirements of 35 IAC 724.201 associated with the North Stack and South Stack are included in Section V and Section VI, respectively.
5. No further action (NFA) determination by the Illinois EPA must be obtained at the SWMUs identified in Condition IV.B.1 for the corrective action requirements set forth in this Permit.
6. A corrective action progress report must be submitted to the Illinois EPA by March 1 of each year describing the corrective action efforts completed during the previous calendar year (i.e., January to December), corrective action activities to be completed for the current year, and any corrective action activities still required to complete corrective action at the facility.

C. OVERVIEW OF CORRECTIVE ACTION COMPLETED FOR UNITS OTHER THAN NORTH STACK, SOUTH STACK, AND OLIN PONDS

1. A joint RCRA permit for the facility was issued by USEPA and Illinois EPA on September 29, 1989, and was effective on November 3, 1989. This Permit required the facility to, among other things: (1) provide post-closure care for a closed landfill (with oversight from Illinois EPA); and (2) conduct corrective action on the SWMUs of concern at the facility (with oversight from USEPA). The Permittee was required to submit to the USEPA within 120 days after the effective date of the RCRA Permit a written RCRA Facility Investigation (RFI) Phase I Workplan to document the absence or presence of hazardous waste or hazardous constituents in the groundwater, surface water, sediments, soils, and air from the Ponds 1 through 4 and the Land Treatment Unit.
2. An RFI Workplan for this facility was submitted to the USEPA on March 8, 1990. This workplan focused on the two SWMUs identified in the Permit and an additional SWMU known as the Inactive Landfill.
3. The USEPA approved the RFI Workplan on October 18, 1990, for Ponds 1 through 4, the Land Treatment Unit, and the Inactive Landfill.
4. The USEPA received the Final RFI Report on July 23, 1992. The final RFI report details the investigations results with respect to the three afore-mentioned SWMUs. A series of subsurface soil samples were taken and analyzed for all three SWMUs. Three wells were also installed downgradient of the surface impoundments to determine if any hazardous constituents from the impoundments were being released into the groundwater. Based on these investigations, the report concludes that there are no

continuing releases of hazardous constituents and no further corrective action activity is necessary.

5. The USEPA reviewed the Final RFI report for Ponds 1 through 4, the Land Treatment Unit, the Inactive Landfill and concurred with the conclusions made it. They issued a public notice to end corrective action as a permit modification on December 4, 1992, and then issued a final permit modification to end corrective action at this facility on March 4, 1993. In the March 4, 1993 permit modification, the USEPA determined a NFA for three SWMUs as described below:
 - a. Land Treatment Unit - The land treatment unit (also known as the land farming area) was located on approximately 25-acres in the eastern portion of the site. The land farming operation consisted of applying sludgy, oily waste materials to the land surface followed by shallow disking of the waste-treated soil. The nature of land farming confines the operation to the top several inches of soil. No special construction or engineering was performed to create the landform, however, a permit application indicated that short berms were constructed around the application area to prevent runoff during application. Land farming was limited to the warmer summer months and occurred from 1974 through May 1979. This unit was investigated under the oversight of USEPA in accordance with the corrective action requirements of the facility's original RCRA Permit. Based on the results of this investigation, USEPA determined no further corrective action was necessary at this unit in a permit modification dated March 4, 1993.
 - b. Ponds 1 Through 4 - Ponds 1 through 4, built between 1973 and 1978, were constructed using clay from the site. The center portion of each pond was excavated. The excavated soils were placed around the periphery of each pond and compacted. It was in this manner that the walls of the ponds were formed. The ponds were approximately 10 feet to 12 feet deep. The approximate measurements of the ponds are as follows:

Pond One -- 270 feet x 70 feet

Pond Two -- 260 feet x 80 feet

Pond Three -- 260 feet x 80 feet

Pond Four -- 280 feet x 80 feet

Use of the ponds generally coincided with land farming activities. When weather conditions for land farming were unsuitable, the ponds were used to store waste. Waste materials were accepted into the ponds year-round.

These ponds were investigated under the oversight of USEPA in accordance with the corrective action requirements of the facility's original RCRA Permit. Based on the

results of this investigation, USEPA determined no further corrective action was necessary at these ponds in a permit modification dated March 4, 1993.

- c. Inactive Landfill - Approximately 27,000 cubic yards of refuse were removed from the refuse trench from February 12 to March 3, 1991. The material which was classified as non-hazardous was placed within the Area 1 RCRA landfill unit. Potentially hazardous material, such as drums, were removed, placed in overpacks, staged, and sampled.

Following excavation of the refuse trench, a grid was established over the footprint of the refuse trench. The excavation was divided into four quadrants. Soil samples were acquired from the center of each quadrant as well as the center of the excavation. These five samples were identified as RFTR-1 through RFTR-5. Three groundwater monitoring wells (G-224, G225, and G226) were also installed as part of the RFI activities in July of 1990. The refuse trench was investigated under the oversight of USEPA in accordance with the corrective action requirements of the facility's original RCRA Permit. Based on the results of this investigation, USEPA determined no further corrective action was necessary at this unit in a permit modification dated March 4, 1993

- 6. Illinois EPA's letter of April 18, 1994, approved an investigation workplan for SWMU No. 1 (or South SWMU), which was contaminated soil in the vicinity of wells R-144 and G-169. This contamination was discovered during the installation of G-160. The Illinois EPA reissued the letter dated April 18, 1994 on August 10, 1994 to include the use of a backhoe to collect soil samples. The purpose of this investigation was to determine the vertical and horizontal extent of contamination discovered in the vicinity of groundwater monitoring wells R-144 and G-160.
- 7. The facility proposed to replace groundwater monitoring well R144 on September 30, 1999, as part of its application to renew the RCRA Permit.
- 8. The facility proposed installing a final cover over SWMU No. 1 in a submittal dated July 20, 2000.
- 9. A July 20, 2000 submittal also identified a new SWMU, SWMU No. 2 (or North SWMU) as being present at the facility. This SWMU is referred to as "SWMU 2" and is the location of a former underground storage tank. The Permittee proposed to extend the final cover system of the closed landfill over this area.
- 10. The facility has conducted investigative efforts at two other SWMUs within the facility in response to contamination encountered during post-closure activities near the former

hazardous waste landfill; the descriptions of the two SWMUs and action completed are described below:

- a. SWMU No. 1 (also known as South SWMU) - The contaminated soil present at this unit is suspected to have resulted from spills associated with the handling of drums during the operation of Trenches 7, 8, and 9 within Area 1 of the RCRA landfill unit. This contamination is near well R-144 and was discovered during the installation of Well G-160. It is an area suspected to be contaminated by spills associated with drum handling activities in the 1970s. The facility has completed the investigation of the South SWMU and determined the vertical and horizontal extent of the contaminated soil area. The extent of the contaminated area has been determined to be generally under the existing haul road adjacent to the south side of Area 1. A NFA determination for SWMU No. 1 was approved by Illinois EPA on April 18, 2012 (Log No. B-141R-CA-5, 6, and 7).
- b. SWMU No. 2 (also known as North SWMU) - An underground oil storage tank removed in the mid-1980s was once present at this location and is suspected to be the source of contaminated soil found here. The facility has completed the investigation of the North SWMU and has determined that the vertical and horizontal extent of the contaminated soil area of the North SWMU is contained within the upper clay above the aquifer. A NFA determination for SWMU No. 2 was approved by Illinois EPA on April 18, 2012 (Log No. B-141R-CA-5, 6, and 7).

D. GENERAL REQUIREMENTS FOR THE CORRECTIVE ACTION EFFORTS AT THE NORTH STACK AND THE SOUTH STACK

1. The Permittee must designate an independent third-party contractor as the Project Officer who must personally direct and be present for the execution of all tasks associated with the corrective action efforts described in this Section. The Project Officer must be a qualified Illinois licensed Professional Engineer who is independent from and not under the control of influence of the operator, any employee of the Permittee, or any other corporation, company or legal entity that is a subsidiary, affiliate, parent corporation or holding corporation associated with the Permittee.
2. The Project Officer must be responsible for ensuring implementation of an achievement of the plans and specifications in the approved corrective action efforts. The Project Officer may utilize one or more project managers who are under his/her direct oversight in carrying out these responsibilities. The Project Officer must develop reports each day summarizing the work completed that day. These reports must, for that day, include:
 - a. The date the work occurred.

- b. A summary of weather conditions.
- c. Identification of each area within the facility where work occurred, including diagrams and references to the interior horizontal and vertical control system.
- d. A description of the work carried out in each area.
- e. Identification of the equipment and personnel working in each area identified above.
- f. Photographs, as appropriate, to document the progress and acceptability of the work.
- g. Results of all construction monitoring and quality control/quality control inspections efforts carried out to ensure the work meets the requirements of this Permit (including location where these inspections occurred; the type of inspection; the inspection procedure used; and the name of the person(s) conducting the inspections).
- h. A description of any problems, incidents, etc. which occurred.
- i. Notes from the various project managers documenting the above information regarding the tasks they are overseeing.

A copy of this report must be placed in the operating record for this project.

- 3. All surface water control structures must be operated, as necessary, until the final cover is in place over the entire South Stack and the proper erosional stability has been established through a vegetative cover.
- 4. All discharge and diversion structures must be designed to have flow velocities that will not cause erosion or scouring of the natural or constructed lining of the structures themselves or the receiving stream channel.
- 5. All surface water management structures must be inspected on a quarterly basis. Repairs must be made, as necessary in response to erosion problems.
- 6. Proper steps must be taken to minimize the generation of fugitive dust during corrective action efforts at the North and South Stacks. Appropriate corrective measures must be taken if fugitive dust becomes a problem.

7. A horizontal and vertical control system must be established by a professional land surveyor. This system must consist of stakes and monuments which:
 - a. Define the boundaries of the property;
 - b. Define the boundaries of the final landform for the South Stack, as established by the siting approval from the Will County Board; and
 - c. Include a series of interior stakes and monuments to establish a horizontal and vertical grid system which can be used in documenting and monitoring corrective action efforts at both the North Stack and South Stack.
8. All stakes and monuments associated with the system above must be:
 - a. Clearly marked for identification;
 - b. Inspected annually for damage (and then repaired if needed by a professional land surveyor); and
 - c. Re-evaluated and resurveyed by a professional land surveyor once every five years (stakes/monuments found to be inaccurate must be replaced).
9. The requirements of 29 Code of Federal Regulations (CFR) 1910.120 and 1926 must be met during these corrective action efforts. An appropriate program must be developed and implemented to ensure no unacceptable levels of radon, radium, uranium, gross alpha, or gross beta in the air are generated during this project.
10. Conditions IV.E and IV.F of this Permit contain the requirements related to the corrective action efforts to be carried out at the North Stack and South Stack areas. Refer Sections V and VI of this Permit for groundwater related corrective action requirements.

E. CORRECTIVE ACTION REQUIREMENTS SPECIFIC FOR THE NORTH STACK

1. The North Stack is approximately 23 acres in size. It was constructed in the mid-1950s by placing an earthen dike across a broad drainageway. Phosphogypsum was placed behind the dike from approximately 1955 to 1961. Soil was subsequently placed over the material. Additional soil was subsequently placed in scattered piles/mounds in the eastern portion of the Stack. It is estimated that approximately 350,000 cubic yards of phosphogypsum and 280,000 cubic yards of soil were present in the North Stack.

2. On July 12, 2011, the Illinois EPA approved a report documenting the removal of the vast majority of the phosphogypsum material and associated contaminated soil at the North Stack. This letter also sets forth the procedures for completing the removal effort at this unit. On April 18, 2012, the Illinois EPA approved a submittal containing the results of an additional soil removal effort at the North stack. The letter stated that NFA is required for the soils at the North Stack.
3. Groundwater at the North Stack still must be addressed in accordance with Section V of this Permit.
4. Within 90 days of the effective date of this Permit, the Permittee must revise the 2018 North Stack Background Groundwater Evaluation Report, dated August 14, 2018 and received by Illinois EPA on August 17, 2018 (assigned a Log No. B-141R-CA-16) and North Stack Background Groundwater Evaluation, dated August 4, 2020 and received on August 6, 2020, (Log No. B-141R-CA-19) with any updated information and submit to the Illinois EPA to address the requirements previously required as below:

According to Condition V.F.8 of the previous permit (Log No. B-141R and associated modification), the approved corrective action for groundwater contamination associated with the North Stack consists of a six stage implementation of a groundwater interceptor trench downgradient of the North Stack and an engineered wetland to treat contaminated groundwater collected from the interceptor trench. Prior to detailed design and installation of the groundwater interceptor trench and engineered wetland, the Permittee shall establish groundwater area background concentrations for the Former North Stack using upgradient monitoring wells G105, G109, and G168. In establishing the Former North Stack groundwater area background concentrations:

- a. Wells shall be sampled on a quarterly basis for a minimum of four consecutive quarters.
- b. The wells shall be sampled for the parameters identified in List 1 Field Parameters and List 2 Inorganic Parameters.
- c. Area background groundwater concentrations shall be established for constituents listed in List 2 Inorganic Parameters. When establishing groundwater area background concentrations for the North Stack, the procedures of 35 IAC 742, Subpart D, shall be followed.
- d. The Permittee must submit an updated Title 35 IAC Part 742 evaluation for groundwater that includes, but is not limited to, the following:

- i. A comparison of the downgradient groundwater sampling results to the North Stack groundwater area background concentrations and the 35 IAC Part 742 (TACO), Tier 1, Class I Groundwater Remediation Objectives (GROs) where applicable;
 - ii. Isoconcentration maps for each contaminant exceeding applicable Tier 1 GROs;
 - iii. Recent potentiometric maps of groundwater in the vicinity of the North Stack;
 - iv. Trend analysis of contaminants that exceed applicable Tier 1 GROs;
 - v. Tier 2 or Tier 3 (if appropriate) evaluation for groundwater constituents that exceed applicable Tier 1 GROs;
 - vi. A recommendation for further activities in the event the downgradient groundwater concentrations cannot meet the applicable GROs at the nearest point of human exposure; and
 - vii. The report shall also include a completed Illinois EPA RCRA Corrective Action Certification Form.
- e. Based upon the updated information and recommendations included in the updated evaluation report required in Condition IV.E.4.d above, the Illinois EPA will evaluate the need for the groundwater interceptor trench and engineered wetland will be evaluated. In the event the interceptor trench and engineered wetlands are deemed necessary, the following conditions apply:
- i. Within 180 days of the Illinois EPAs response to the report, the facility must submit a detailed design report for the final trench system and treatment wetland. The design report must be submitted as a request to modify the Corrective Action Portion of the Permit.
 - ii. All construction efforts associated with the interceptor trench and the engineered wetland must be included in the report.
 - iii. The facility must obtain appropriate permit(s) from the Illinois EPA Bureau of Water and provide notification of acquiring those permits to the Illinois EPA Bureau of Land Permit Section before construction of the wetland can begin.
 - iv. If installed, the remediation wetland must be operated in accordance with

the requirements of any permit issued by the Illinois EPA Bureau of Water.

F. CORRECTIVE ACTION REQUIREMENTS SPECIFIC TO THE SOUTH STACK

Currently, the South Stack is approximately 175 acres in size. The top of the stack is relatively flat, is approximately 100 acres in size, and is approximately 80 feet above the surrounding ground surface. The stack sits on at least 20 feet of fine-grained glacial deposits which overlie the bedrock. The side-slope of the stack consists of an upper portion and a lower portion, separated by a mid-level bench.

Run-off from the stack and any water discharging from around the perimeter of the stack flows into a ditch (referred to as the "Moat") which surrounds the stack and which conveys this water to the Return Water Pond. The water accumulating in the Return Water Pond is pumped to the Olin wastewater treatment plant for treatment before being discharged via an NPDES permit.

1. In general, the approved corrective action for the South Stack provides for proper closure and post-closure of the stack and includes:
 - a. Improving the management of precipitation and surface water at the unit;
 - b. Minimizing the amount of precipitation percolating into the stack by establishing a final cover system over the stack;
 - c. Placing certain soils over the stack, as appropriate, to provide for acceptable contours for the final cover system to be placed over the stack. The soils which can be used include:
 - i. Uncontaminated soils;
 - ii. Certain contaminated soils that have been bioremediated in accordance with Permit No. 2001-108-DE/OP and all associated supplemental permits (the most recent supplemental permit is Supplemental Permit No. 2011-506-SP dated January 19, 2012) and met the treatment standards set forth in these permits. The types of soils that can be bioremediated under this permit are: soil contaminated with petroleum hydrocarbons; coal-based hydrocarbon contaminated soil (i.e., from former manufactured gas plants); polynuclear aromatic hydrocarbon contaminated soils and chlorinated phenol contaminated soils;
 - iii. The four types of soil which already meet the treatment standards set forth in Permit No. 2001-108-DE/OP and associated supplemental permits;

- iv. During construction of the South Stack final landform, any rock, concrete, brick, or asphalt in soils may be left in place. However, any soils that are placed within the last one-foot increment of the south stack landform grades will not contain any of these materials that are larger than 10 inches in size.

The Permittee may carry out soil biotreatment on the top of the South Stack in places where a 60-mil geomembrane is present over the stack and which is turn is covered by 18 inches of cover soils and an additional one-foot of soils. These activities must also be carried out in accordance with Permit No. 2001-108-DE/OP and all associated modifications.

- d. Providing post-closure care of the final cover; and
 - e. Monitoring the groundwater during the time the afore-mentioned tasks are being carried out, including the post-closure care period in accordance with the requirements of Section VI of this Permit
2. An estimated schedule for completing the physical corrective action efforts at the South Stack was set forth in Section 8.2 of the approved permit application (Log No. B-141R) and as referenced in the approved permit application. It is understood the "2010" in the schedule is the first year that a full construction season is available for the project. It is estimated that it will take approximately 23 years to complete closure of the South Stack. Any proposed alternative schedule in future must be approved by the Illinois EPA.
3. The closure efforts at the South Stack (except groundwater monitoring) are described in detail in Section 8 of the approved permit application for the previous renewed permit (Log No. B-141R), revised July 2008, which consist of the following tasks (it must be noted that several of these tasks may be going on simultaneously in various portions of the stack or have been completed as described in Condition IV.H).
- a. Placement of phosphogypsum from the North Stack on top of the stack;
 - b. Placement of a 60-mil geomembrane and an overlying 18-inch protective bioremediated soil cover on the top portion of the stack (approximately 100-110 acres in size) to prevent further infiltration of surface water into the stack (this effort will be completed in two phases);
 - c. Construction/operation of an interim surface water management system;
 - d. Placement of a minimum three-foot thick interim bioremediated or uncontaminated soil cover on the upper slope, mid-level bench, and lower slope of the stack;

- e. Placement of bioremediated or uncontaminated soil over the stack to construct the final landform (approximately 200 acres in size) which will then receive a final cover;
 - f. Installation of a sideslope drain around the perimeter of the stack to collect/enhance drainage of any water in the stack (this installation will occur prior to placement of the lower slope interim cover system);
 - g. Installation of a forcemain to convey collected seepage from the sideslope drain to the return water pond and the Olin wastewater treatment facility (at some time during the project, the return water pond will be converted to a sedimentation basin and modifications will be made to the forcemain so that the Return Water Pond is by-passed).
 - h. Removal of any phosphogypsum sediments from the "moat", followed by preparation of the former moat for anticipated final use (may include bringing a portion of the moat to surrounding grade or use of a portion of the moat as part of the final surface water management system).
 - i. Eventual conversion of the Return Water Pond into a sedimentation basin, starting with removal of any remaining seepage water and any phosphogypsum contaminated sediment;
 - j. Placement of a final cover system two-feet of compacted low permeability soil and one-foot of vegetative support material over the completed landform).
 - k. Construction/operation of the final surface water management system.
 - l. Any other future actions required by the Illinois EPA associated with this effort through corrective action process.
4. Section 8.3.3 of the approved permit application for the previous renewed permit (Log No. B-141R) and as referenced in the approved permit application for this Permit describes the surface water management system which will be implemented from the time that corrective action first begins at the South Stack until such time as a final cover system is established over the entire landform. This interim surface water management system must provide for the routing of all water from uncovered areas of the stack to the Return Pond (via the "Moat") and then to the Olin wastewater treatment plan. Surface water from all areas which have received a minimum of 18 inches of bioremediated or uncontaminated soil may be directed to the various sedimentation basins associated with this interim system.

Discharge of any water from these interim sedimentation basins must be carried out in accordance with an NPDES permit issued by the Illinois EPA Bureau of Water.

- a. In 2014, a sedimentation basin constructed on the mid-level bench was installed to direct storm water from the covered portions of the upper slope and mid-level bench. This basin was lined with a geomembrane and discharges via an 18 inch above-ground pipe to the Southwest Basin.
 - b. From 2012 to 2012, Top Slope Interim Sedimentation Basin was installed to direct the storm water from the covered portions of the top slope. This basin in turn discharges to the Southwest Basin via an 18-inch above-ground pipe.
 - c. Storm water from the covered portions of the lower slope flows to one of three interim sedimentation basins (the Northwest interim basin, the Southwest basin, and the South basin).
 - d. To date, approximately 9850 foot (77%) of the moat was cleaned by removing phosphogypsum or phosphate solids contaminated sediment and filled with clean soil.
5. Section 8.3.8 of the approved permit application for the previous renewed permit (Log No. B-141R), and as referenced in the approved permit application for this permit describes the surface water management program for the finally covered landform. This program consists of diversion berms, downslope channels, energy dissipators, perimeter channels, culverts, and four sedimentation basins. Details of this system are contained in Drawings 24 and 28 of the original permit application and in the previous permit application assigned Log No. B-141R-M-100 by the Illinois EPA. The four sedimentation basins are referred to as the North Basin, the South Basin, the Northwest Basin (which will include a portion of the former Return Pond) and the Southwest Basin. Any discharge from these sedimentation basins must be carried out in accordance with NPDES permits issued by the Illinois EPA.
 6. All interim or final sedimentation basins located around the perimeter of the stack must be constructed, operated, and maintained such that erosion of the banks of the basins is minimized.
 7. Sediments removed from the Return Pond or "Moat" may be placed on the South Stack provided: (1) it is placed under the interim cover and final cover system approved herein; and (2) the area is properly graded and vegetated to allow for proper surface water runoff.

8. The facility must be operated such the level of noise audible outside the facility does not cause or contribute to a violation of 35 IAC Parts 900-905 or Section 24 of the Act.
9. The Quality Assurance/Quality Control Plan set forth in revised Appendix K of the application (Log No. B-141R-M-18; dated on December 22, 2010 and approved on September 1, 2011 by Illinois EPA) must be followed during all aspects of this project.
10. Once the final cover system has been established over the entire landform, quarterly inspections of the closed landform and associated sedimentation pond must be conducted:
 - a. All rills, gullies, and crevices six inches or deeper identified in the inspection shall be filled and seeded. Areas identified by the Permittee or the Illinois EPA as particularly susceptible to erosion must be recontoured.
 - b. All eroded and scoured drainage channels must be repaired (including replacement of lining material, as necessary).
 - c. All holes and depressions created by settling must be filled, re-vegetated, and recontoured so as to prevent standing water.
 - d. All areas with failed or eroded vegetation in excess of 100 square feet must be re-vegetated.
 - e. The drainage system around the perimeter of the landfill must be inspected to ensure it is operating properly.
 - f. All appurtenances associated with the sedimentation ponds must be inspected to ensure they are operating properly.
11. Post-closure use of this facility must not disturb the integrity of the final cover of the landfill or the drainage system installed around the perimeter of the landfill, unless: (1) necessary to comply with the requirement of this Permit; or (2) such disturbances are first approved by the Illinois EPA.
12. Within 60 days after completion of closure of the South Stack, the Permittee must submit a closure documentation report for the South Stack along with a closure certification signed by the Permittee and a qualified professional engineer as a permit modification request.
13. At least 180 days prior to the estimated completion date of the closure activities, the Permittee must submit an updated post-closure care plan for the South Stack to meet

the requirements of the 35 IAC regulations and the Act as a permit modification request. The plan must also provide an updated post-closure care cost estimate for the South Stack to establish the required financial assurance for post-closure care.

14. A corrective action progress report, required in Condition IV.B.6, to be submitted to the Illinois EPA by March 1 of each year must contain the following information:
 - a. Those areas of the stack which received interim cover during the previous calendar year;
 - b. The components of the interim or final surface water management system constructed during the previous calendar year;
 - c. The components of the sideslope drain and associated forcemain system installed during the previous calendar year for the management of liquid flowing from the stack and the status of the overall system used to manage this liquid;
 - d. Those areas which received bioremediated or uncontaminated soil during the previous calendar year beyond that needed for the interim cover and the approximate thickness of bioremediated or uncontaminated soil placed in these areas;
 - e. Those areas, if any, which received final cover during the previous calendar year;
 - f. A summary of any removal efforts carried out at the North Stack, the "moat", or the Return Water Pond during the previous calendar year;
 - g. A summary (including appropriate drawings) of the cumulative efforts to date regarding the overall project;
 - h. A discussion of the efforts to be carried out during the next calendar year; and
 - i. Drawings which identify those areas where petroleum contaminated soil was biotreated in accordance with Permit No. 2001-108-DE/OP and associated supplemental permits.
15. Removal of the sediments and any contaminated soil from the "moat" and the Return Water Pond must be carried out in accordance with the approved permit application.
16. Groundwater at the South Stack must be monitored in accordance with the requirements of Section VI of this Permit.

G. SUMMARY OF CORRECTIVE ACTION EFFORTS COMPLETED FOR SOUTH STACK

1. In 2011, the phosphogypsum was excavated from the north stack and placed on the top of the South Stack. The North Stack was then graded into the North Sedimentation Basin.
2. As part of the surface water management system components on the south stack landform, the southwest sedimentation basin was constructed in 2010, and a portion of south basin was completed in 2016. The mid-level bench interim basin was constructed in 2014, and the northwest interim basin was completed in 2017.
3. From 2010 through 2013, a total 101.2 acres of 60-mil thick geomembrane liner was installed incrementally. An overlying interim 18-inch thick protective soil cover was placed over the top slope area of the south area of the South Stack in 2013 and 2014 to prevent further infiltration of surface water.
4. In 2015 and 2016, total 11,340 feet of sideslope drain was installed around the perimeter of the south stack to collect seepage and to facilitate the drainage of liquid from within the stack.
5. In 2018, a forcemain was installed to convey seepage collected from the sideslope drain to the return pond and the Olin Wastewater Treatment Plant.
6. From 2019 to 2025, a final cover system totaling 35.59 acres was constructed, consisting of two feet of compacted, low permeability soil overlain by one foot of vegetative support material.
7. Between 2011 to 2023, the 3-foot thick interim soil cover on the upper slope, mid-level bench and lower slope of the south stack has been completed.
8. By June 2026, the removal of the phosphogypsum or phosphate soil-contaminated sediment from approximately 9850 foot (77%) of the moat was completed.

H. OVERVIEW AND CORRECTIVE ACTION REQUIREMENTS FOR THE OLIN PONDS

1. The facility 's approximately 289 acres, located on a permitted facility property of 1,010 acres. Located within the facility is a wastewater treatment plant and the three wastewater holding ponds, referred to as the three Olin Ponds. The following three Olin Ponds occupies a total of approximately 81 acres and are newly identified as three SWMUs 3a, 3b, and 3c and must be properly closed and remediated to meet the corrective action requirements of this Permit prior to the landfill expansion. This proposed expansion is to the north of the existing facility and is depicted on Figure 1

(Expanded Solid Waste Unit) dated March 2017, and was included as part of Waste Management's July 31, 2017, Class 3 permit application.

The Olin Ponds are used to manage phosphate slurry generated by the treatment plant from the treatment of stormwater runoff and seepage from the South Stack. The treatment plant operates pursuant to Illinois EPA Bureau of Water Permit No. IL0002020. The East Pond (SWMU 3a) was constructed in 1970, to manage inorganic wastewater from the now razed Olin manufacturing plant that was located north of the Ponds. The West and Center Ponds were constructed in 1973.

2. The three Olin Ponds (SWMU 3), as identified in Condition IV.B.1, consist of three different areas separated by interior earthen berms, identified as the East Pond (North and South), the West Ponds, and the Center Pond.
3. The facility conducted the preliminary sediment and soil investigations in the Olin Pond area in 2014 to assess the conditions of the Ponds. The preliminary assessment data demonstrated potential for a release of hazardous waste or hazardous waste constituents from the Olin Ponds (SWMUs 3a through 3c).
4. On November 10, 2023, the Permittee submitted a workplan for the proposed activities commenced at the Olin Ponds in preparation for the on-site MSW Landfill expansion. The Illinois EPA approved this workplan subject to conditions and modification on March 3, 2025 (Log No. B-141R-CA-23).
 - a. Within 90 days after receipt of the sediment sampling results, the Permittee must submit a SWMU Assessment Plan for the Olin Ponds (SWMUs 3a, 3b, and 3c) for Illinois EPA's review and approval. This SWMU Assessment Plan must document the activities conducted and propose confirmation sampling and additional investigations as necessary to determine the release potential to specific environmental media at the three Olin Ponds. The SWMU Assessment Plan must demonstrate that the sampling and analysis program is capable of yielding representative samples from the remaining underlying soils at the Olin Ponds and must include parameters sufficient to identify migration of hazardous waste and hazardous constituents from the SWMU(s) to the environment.
 - b. The SWMU Assessment Plan must also satisfy all the conditions outlined in the Illinois EPA response letter dated March 3, 2025 (Log No. B-141R-CA-23).
5. Procedures for developing the remediation objectives must meet the requirements of 35 IAC Part 742.

6. The Permittee may remove and treat all Standing Liquids from the Olin Ponds. The Permittee must comply with the provisions of 35 IAC Subtitle C (Water Pollution Control).
7. Requirements set forth in this Permit must be met for corrective action activities at the Olin Pods.
8. NFA for the three Olin Ponds must be obtained from the Illinois EPA prior to initiating the development of the proposed expansion of the municipal solid waste landfill in this area as described in Section III of this Permit.
9. A corrective action progress report, required in Condition IV.B.6, to be submitted to the Illinois EPA by March 1 of each year must contain the following information:
 - a. Summary of activities completed during the previous year;
 - b. Summary of all actual or potential problems encountered during the reporting period
 - c. Proposed work for the next calendar year
 - d. Other information or data requested by the Illinois EPA.

I. INTERIM MEASURES

At any time during the course of this Permit, the Permittee may, subject to the Illinois EPA review and approval, initiate interim measures for the purpose of preventing continuing releases and/or mitigating the results of releases and/or mitigating the migration of hazardous wastes or hazardous constituents. It shall not be necessary to conduct all phases of an investigation prior to implementing an interim measure if the Illinois EPA and the Permittee agree that a problem can be corrected, or a release cleaned up, without additional study and/or without a formal corrective measures study (CMS).

1. Prior to implementing any interim measures, the Permittee must submit detailed information regarding the proposed interim measure to the Illinois EPA for approval. This information must include, at a minimum:
 - a. Objectives of the interim measures; how the proposed measure will mitigate the potential threat to human health and the environment and/or will be consistent with and integrated into any long-term solution at the facility;
 - b. Design, construction, and maintenance requirements;

- c. Schedules for design and construction; and
 - d. Schedules for progress reports.
2. If the Illinois EPA determines that a release cannot be addressed without additional study and/or a formal CMS, then the Illinois EPA will notify the Permittee that these must be performed. Any proposal made under this provision or any other activity resulting from such proposal, including the invocation of dispute resolution, must not affect the schedule for implementation of any other corrective action efforts being carried out at the facility or of any other portion of the Permit.
 3. If the Illinois EPA determines that interim measures are necessary to protect human health or the environment, then the Permittee will be allowed to proceed under plans, procedures, and schedules approved by Illinois EPA.

J. REQUIREMENTS FOR ADDRESSING NEWLY IDENTIFIED SWMU(S) AND AOC(S)

1. The Permittee must notify the Illinois EPA in writing of any newly identified SWMU and/or AOC discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than 30 days after discovery. Such a notification must also be submitted if the Permittee discovered that a possible release has occurred from one of the SWMUs identified in this Permit. The notification must provide the following information, as available:
 - a. The location of the newly identified SWMU and/or AOC in relation to other SWMUs or AOCs on a scaled map or drawing;
 - b. The type and past and present function of the unit;
 - c. The general dimensions, capacities, and structural description of the unit (available drawings and specification provided);
 - d. The period during which the unit was operated;
 - e. The specifics on all materials, including but not limited to, wastes and hazardous constituents, that have been or are being managed at the SWMU/AOC, to the extent available; and
 - f. The results of any relevant available sampling and analysis which may aid in determining whether releases of hazardous wastes or hazardous constituents have occurred or are occurring from the unit.

2. If the submitted information demonstrates a potential for a release of hazardous waste or hazardous constituents from the newly identified SWMU/AOC, 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)/AOC(s) discovered subsequent to the issuance of this Permit.
3. Within 90 days after receipt of the Illinois EPA's request for a SWMU Assessment Plan, the Permittee must submit a SWMU Assessment Plan to the Illinois EPA for review and approval. The SWMU Assessment Plan must propose investigations, including field investigations, if necessary, to determine the release potential to specific environmental media for the newly identified SWMU/AOC. 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 identified SWMU/AOC 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 approved, the Permittee must begin to implement the Plan within 45 days of receiving such written notification or according to the terms and schedule established within the Plan and any conditions placed on it. If the Plan is disapproved, the Illinois EPA will 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 the approved Plan to the Illinois EPA in accordance with the schedule in the approved Plan. The SWMU Assessment Report must describe all results obtained from the implementation of the approved Plan.
6. Additional investigation plans and reports must be submitted to and approved by the Illinois EPA, as necessary, to ensure the nature and extent of contamination at the SWMU/AOC is adequately characterized. Once the contamination is characterized, the Permittee must develop remedial objectives for the SWMU/AOC in accordance with 35 IAC Part 742; such objectives are subject to the Illinois EPA review and approval.
7. The Permittee must implement a Corrective Measures Program (CMP), as necessary, to properly address any contamination encountered during the assessment. Guidance regarding the implementation of this program will be provided at the time the Illinois EPA notifies the Permittee of the need for such a program.
8. All efforts carried out at the newly identified SWMU(s)/AOC(s) must meet the requirements of 35 IAC 724.201.

K. FUTURE RELEASES FROM SWMUS

There exists a potential that a release may occur in the future from SWMUs identified in the RCRA Facility Assessment (RFA) which did not require any corrective action at the time that the RFA or RFI was completed. If the Permittee discovers that a release has occurred from such a SWMU in the future, then the Illinois EPA must be notified of this release within 30 days after its discovery following the procedures set forth in Condition IV.J.1. Additional investigation and, as necessary, corrective measures efforts at this SWMU must be carried out in accordance with the procedures set forth in Condition IV.J. The results of all corrective action efforts required by this condition must meet the requirements of 35 IAC 724.201.

L. FINANCIAL ASSURANCE FOR CORRECTIVE ACTION

1. The Permittee must prepare a detailed cost estimate for the completion of any investigation or corrective measure required under this Permit, in order to provide financial assurance for completion of corrective action, as required under 35 IAC 724.201(b). Such a cost estimate will be based upon the cost of contamination investigations and assessments for the SWMU(s), and design, construction, operation, inspection, monitoring, and maintenance of the corrective measure(s) to meet the requirements of 35 IAC 724.201 and this Permit. All calculations and unit costs made in developing this estimate must be provided, as well as justification for all values used. These estimates must be included in each workplan or report submitted to the Illinois EPA for review and approval. The approved cost estimate for the corrective action efforts approved herein is as indicated in Attachment A.
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 approved corrective action cost estimate. The words "completion of corrective action" must be substituted for "closure and/or post-closure", as appropriate in the financial instrument specified in 35 IAC 724.251. The documentation must be submitted to the Illinois EPA within 60 days after the approval of the initial or revised cost estimates. The Illinois EPA may accept financial assurance for completion of corrective action in combination with another financial mechanism that is acceptable under 35 IAC 724.246 at its discretion.
3. Financial assurance for corrective action must be updated, as necessary, to reflect the current status of the hazardous waste cleanup program at this facility. In addition, this financial assurance must be adjusted annually for inflation.

Section V: GROUNDWATER MONITORING PROGRAM FOR THE NORTH STACK

To monitor the effectiveness of corrective action activities and demonstrate compliance with the applicable groundwater quality standards (AGQS), the groundwater monitoring program must be conducted as follows:

1. Unless there is a desire to modify specific requirements set forth in this section, information submitted to Illinois EPA regarding the corrective action requirements set forth in this section is not a request to modify this Permit nor subject to the requirements of 35 IAC Part 703 Subpart G.
 - a. A completed Illinois EPA RCRA Corrective Action Certification Form (LPC-632) (available on Illinois EPA's website) must accompany all corrective action related information submitted to Illinois EPA. Professional Engineer signatures are not required for routine groundwater reports required by this section.
 - b. To allow for the proper review of all corrective action related information submitted to Illinois EPA, one original and two copies of the information must be submitted.
2. Groundwater monitoring wells must be maintained in the locations shown in Figure C-3a of Appendix C-3 of the permit application. At this time, the North Stack groundwater quality monitoring network must consist of the monitoring wells listed in Table 1 below:

Table 1 – North Stack Monitoring Well Network

<u>Facility Well Number</u>	<u>Illinois EPA Well Number</u>
WT-301-07	G1H1
WT-302-07	G1H2
WT-303-07	G1H3
WT-308-07	G1H8
*G-105-05	*G105
*G-109-05	*G109
*G168	*G168

* Upgradient monitoring well

- a. The following list of parameters must comprise the List 1 Field Parameters:

LIST 1

<u>FIELD PARAMETERS</u>	<u>UNITS</u>	<u>STORET</u>
Bottom of Well Elevation	Ft. ref MSL*	72020
Depth to Water	Ft-bgs	72019
Depth to Water	Ft.-MSL	72109
Elevation of Groundwater Surface	Ft. ref MSL	71993
pH (unfiltered)	S.U.	00400
Specific Conductance (unfiltered)	umhos/cm	00094
Temperature of Water Sample	°F	00011
Elevation of Well Casing Measuring Point	Ft-MSL	72110
Turbidity	NTU	00076
Oxidation Reduction Potential	millivolts	00090

* = To be reported a minimum of once every five years
or whenever maintenance activities are conducted.

- b. The following list of parameters must comprise the List 2 semi-annual Inorganic Parameters

LIST 2

<u>SEMI-ANNUAL INORGANIC PARAMETERS FILTERED</u>	<u>UNITS</u>	<u>STORET</u>
Arsenic , Dissolved	ug/L	01000
Lead , Dissolved	ug/L	01049
Manganese , Dissolved	ug/L	01056
Phosphorous, Dissolved	mg/L	00666
Sulfate , Dissolved	mg/L	00946

LIST 2

<u>SEMI-ANNUAL INORGANIC PARAMETERS UNFILTERED</u>	<u>UNITS</u>	<u>STORET</u>
Arsenic, Total	ug/L	01002
Lead, Total	ug/L	01051
Manganese, Total	ug/L	01055
Phosphorous, Total	mg/L	00665
Sulfate, Total	mg/L	00945
Total dissolved Solids (TDS)	mg/L	70300
Radium 226, Total	pCi/L	09501
Radium 226, Total, Counting Error	pCi/L	09502
Radium 228, Total	pCi/L	11501
Radium 228, Total, Counting Error	pCi/L	11502
Gross Alpha, Total	pCi/L	01501
Gross Alpha, Total, Counting Error	pCi/L	01502
Gross Beta, Total	pCi/L	03501
Gross Beta, Total, Counting Error	pCi/L	03502
Total Uranium	ug/L	28011

- c. Groundwater quality monitoring and reporting must be conducted at the wells listed in Table 1 for the List 1 and List 2 constituents in accordance with the following schedule:

<u>Quarter of Calendar Year:</u>	<u>Samples Collected During Months of:</u>	<u>Results Due to Illinois EPA by:</u>
Second	April-May	July 15
Fourth	October-November	January 15

- d. Groundwater quality results 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," and in accordance with the schedule found in Condition V.2.c. Additional guidance regarding the submittal of the information in an electronic format can be found on the Illinois EPA's website.

- e. 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 facility's permit for identification purposes. Only one copy of the LPC-592 with wet signatures must accompany the submittal. However, the Permittee must submit one original copy of each notice or report submitted to the Illinois EPA in paper format and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two electronic copies (one addressed to the Bureau of Land Permit Section, and one addressed to the regional Field Operations Section). Additional paper and electronic copies must be provided upon Illinois EPA request. The form is not to be used for the permit modification requests.
- f. Reports summarizing groundwater monitoring activities must be submitted in accordance with the schedule provided in Condition V.2.c above. The reports must include, but not be limited to, the following:
 - i. Brief background information and description of the purpose for the submittal;
 - ii. Copies of laboratory reports;
 - iii. A tabulated summary of groundwater quality results. The tabulation must provide the appropriate 35 IAC Part 620, Class I GQS or 35 IAC 742, Tier 1, Class I, GRO and must highlight any detected exceedances of those standards;
 - iv. A tabulated summary of groundwater elevation data;
 - v. Potentiometric maps based on the current groundwater elevation data;
 - vi. A discussion of any problems encountered during the reporting period.
- g. Annually, the Permittee must prepare an assessment of the monitoring program which must include an evaluation of the groundwater flow rate and direction. This assessment must be submitted with the monitoring results due on July 15.

Section VI: GROUNDWATER MONITORING PROGRAM FOR THE SOUTH STACK

To identify any releases from the South Stack and demonstrate compliance with the applicable groundwater quality standards (AGQS), the groundwater monitoring program must be conducted as follows:

1. Unless there is a desire to modify specific requirements set forth in this section, information submitted to Illinois EPA regarding the corrective action requirements set forth in this section is not a request to modify this Permit nor subject to the requirements of 35 IAC Part 703 Subpart G.
 - a. A completed Illinois EPA RCRA Corrective Action Certification Form (LPC-632) (available on Illinois EPA website) must accompany all corrective action related information submitted to Illinois EPA. Professional Engineer signatures are not required for routine groundwater reports required by this section.
 - b. To allow for the proper review of all corrective action related information submitted to Illinois EPA, one original and two copies of the information must be submitted.
2. The monitoring program must be capable of determining background groundwater quality hydraulically upgradient of and unaffected by the units and to detect any discharge of contaminants from any part of a potential source of discharge from the units. The Illinois EPA reserves the right to require installation of additional monitoring wells as may be necessary to satisfy the requirements of this Permit.
3. The groundwater monitoring program must include consistent sampling and analysis procedures to ensure that monitoring results will provide a reliable indication of groundwater quality in the zone being monitored.
4. The Permittee must sample all groundwater monitoring points for all potential sources of contamination on a semi-annual basis including a minimum of 30 years after certification of closure.
5. The Permittee must use the methods in Section C.8.4.5 of the approved permit application or propose for the Illinois EPA's approval, a more appropriate method to statistically evaluate the groundwater monitoring data. The selected method must provide for statistical comparisons between upgradient and downgradient groundwater quality data and a reasonable balance between the probability of obtaining Type I (false positive) and Type II (false negative) errors. The Type I error rate must be no less than 5%. The proposal must consider the gathering of a background data set (from upgradient wells), sufficient to provide an accurate representation of the variability in the quality of groundwater that is

unaffected by operations at the facility, and to assure that the selected test has a reasonable chance of detecting releases should they occur.

6. The Permittee must examine the distribution of data from each well for each parameter to determine if the statistical methods specified in Condition VI.5 above are appropriate to determine an impact to groundwater using the comparisons in Condition VI.8. If the data for a given well and parameter is not normally distributed, the Permittee must propose a more appropriate method for those wells and/or parameters to statistically evaluate the groundwater monitoring data in accordance with Condition VI.5 above.
7. For each sampling event, using the methods in Condition VI.5 above, the Permittee must determine if a significant change in groundwater quality has occurred by comparing sample results from each downgradient well to the upgradient well's background data established during the first two years of monitoring. This comparison must evaluate each parameter for each well. The sample results from the S series wells must be compared to the upgradient S series data. The sample results from the D series wells must be compared to the upgradient D series data.
8. The Permittee must conclude that a significant change in groundwater quality has occurred if the results of the evaluation in Condition VI.7 above indicate that the value for any parameter exceeds:
 - a. The Groundwater Protection Standards (GPS) are listed in Condition VI.20 below. Modifications to the background values must be provided as a Class 1* modification to this Permit. The GPS are to be determined as follows:
 - i. The background value established in accordance with Section C.8.4.4 of the approved permit application; or
 - ii. The Class I GQS listed in 35 IAC Part 620 Subpart D;.
 - b. A statistically significant increasing concentration trend at the 95% confidence level determined in accordance with Section C.8.4.5 of the approved permit application.
9. Within 60 days of the original sample date, the Permittee may resample and test the determination made in Condition VI.8 above. If the evaluation of the resample result confirms the determination made, the Permittee must conclude that a significant change in groundwater quality has occurred.
10. In the event a significant change in groundwater quality has occurred or has been confirmed, the Permittee must:

- a. Notify the Illinois EPA Bureau of Land Permit Section in writing, within seven days of the change in groundwater quality, identifying each well and each parameter;
 - b. Submit an assessment monitoring plan within 30 days of the significant change as determined in Condition VI.8 or Condition VI.9 above in the form of a request to modify the Corrective Action portion of the Permit. The assessment monitoring plan must include appropriate methods for determining the source of the increase, the potential threat to human health and the environment and the concentration and extent of the contaminants if any. The assessment monitoring plan must, at a minimum, include expanded sampling requirements for the affected well(s) and must be implemented within 30 days of approval from the Illinois EPA.
 - c. Submit an assessment report, based on and including the data and information generated from the completion of Condition VI.10.b above to the Illinois EPA within 90 days of approval of the Assessment Monitoring Plan.
 - d. Propose a corrective action plan if assessment monitoring indicates that the facility has impacted groundwater. The Corrective Action Plan must be submitted within 30 days of approval of the assessment report required by Condition VI.10.c above in the form of a request to modify the Corrective Action portion of the Permit and must include appropriate response action to address any impact of the facility. The plan must be implemented within 30 days of Illinois EPA approval.
11. All monitoring wells must be constructed in a manner that maintains the integrity of the bore hole and prevents contamination of the samples and groundwater. The casing material must be inert so as not to affect the water sample.
 12. A padlocked protective cover must be installed over the portion of the well casing extending above the ground surface to protect against damage.
 13. Wells must be easily visible and identified with the Illinois EPA monitoring point designation.
 14. 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 wells are 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 via a Class 1* permit application and designated as a new well. If the facility determines that a replacement well will be a dry well, then it must submit for Illinois EPA approval either a proposal to install a new monitoring well or a proposal not to replace the well with appropriate rationale.

15. Monitoring well and piezometer construction must comply with the minimum standards set forth in 77 IAC Part 920 regulations. The Permittee must submit boring logs, construction diagrams, and data sheets from the installation and development of each new or replacement well to the Illinois EPA at the address below within 30 days of the date that 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 77 IAC Part 920 and the approved Illinois EPA procedures to the Illinois EPA at the address below within thirty 30 days of the date that the well is plugged and abandoned. All information must be submitted to the appropriate Agencies.

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

16. All groundwater monitoring wells and piezometers not utilized in the approved groundwater monitoring program, but retained by the facility, must be constructed and maintained in accordance with 77 IAC Part 920 regulations. Monitoring wells and piezometers that are improperly constructed must be abandoned in accordance with Condition VI.14 above.
17. Written approval from the Illinois EPA must be obtained prior to changes being made to the facility's groundwater monitoring program. The Permittee must submit a proposal for the installation and addition, replacement, or for the removal of any groundwater monitoring program well.
18. Surveyed elevation of top of casing (stick-up) is to be reported when the well is installed (with as-built diagrams) and every two years, or whenever the elevation changes.

19. Groundwater monitoring wells must be maintained in the locations shown in Figure C-3a of Appendix C-3 of the permit application. The following monitoring points are to be used in the groundwater monitoring program for this SWMU. These monitoring points supersede all previously required monitoring points and represent the entire list of monitoring points now required for this SWMU.

<u>Facility Designation</u>	<u>Illinois EPA Designation</u>
^S G-128-05	G1F1
^S +G-129-05	+G1F2
^S MW-2	G1F3
^S WT-131-05	GF2S
^D MW-6	GF2D
^S MW-5	G1F4
^S G208	G1F5
^S G205	G1F6
G1F7	G1F7
G1F8	G1F8
+GF2S	+GF3S
+GF2D	+GF3D

+ - represents upgradient monitoring point(s)

- represents monitor point(s) added to the monitoring program

^S - represents an S-series well

^D - represents a D-series well

~~##~~ - represents monitoring point to be deleted from the monitoring program

20. The groundwater monitoring data for the parameters contained in Lists 1 and 2, any statistical calculations, and groundwater surface elevation data must be determined for samples collected from the groundwater monitoring points and reported according to the schedule in Condition VI.22 and evaluated in accordance with Condition VI.8.

LIST 1

<u>FIELD PARAMETERS</u>	<u>STORET</u>	<u>GWPS</u>	
<u>GWPS</u>		<u>S-Series Wells</u>	<u>D-Series Wells</u>
Bottom of Well Elevation (ft. ref MSL)*	72020	--	--
Depth to Water (ft. below land surface)	72019	--	--
Depth to Water (ft. from measuring point)	72109	--	--
Elevation of Groundwater Surface (ft. ref MSL)	71993	--	--
pH (S.U., unfiltered)	00400	6.5 – 9.0	6.5 – 9.0
Specific Conductance (umhos/cm, unfiltered)	00094	--	--
Temperature of Water Sample (°F)	00011	--	--
Elevation of Well Casing Measuring Point (ft MSL)	72110	--	--
Turbidity (NTU)	00076	--	--
Oxidation Reduction Potential (millivolts)	00090	--	--

* = To be reported a minimum of once every five years or whenever maintenance activities are conducted.

LIST 2

<u>INORGANIC</u>	<u>UNITS</u>	<u>STORET</u>	<u>S-Series Wells</u>	<u>D-Series Wells</u>
<u>PARAMETERS</u>				
<u>FILTERED</u>				
Antimony Sb, Dissolved	ug/L	01095	20	20
Arsenic As, Dissolved	ug/L	01000	10.0	29.3
Cadmium Cd, Dissolved	ug/L	01025	1	1
Chromium Cr, Dissolved	ug/L	01030	4	4
Copper Cu, Dissolved	ug/L	01040	34.3	25.0
Fluoride, Dissolved	mg/L	00950	0.274	0.55
Iron Fe, Dissolved	ug/L	01046	3,260	3,733
Lead Pb, Dissolved	ug/L	01049	5	5
Manganese Mn, Dissolved	ug/L	01056	170.1	171.0
Nickel Ni, Dissolved	ug/L	01065	10	10
Phosphorous P, Dissolved	mg/L	00666	0.01	0.32
Sulfate SO ₄ , Dissolved	mg/L	00946	450	227
Zinc Zn, Dissolved	ug/L	01090	10	10

LIST 2

<u>INORGANIC PARAMETERS UNFILTERED</u>	<u>UNITS</u>	<u>STORET</u>	<u>S-Series Wells</u>	<u>D-Series Wells</u>
Antimony Sb, Total	ug/L	01097	20	20
Arsenic As, Total	ug/L	01002	50	50
Cadmium Cd, Total	ug/L	01027	5	5
Chromium Cr, Total	ug/L	01034	35.4	100
Copper Cu, Total	ug/L	01042	650	650
Fluoride, Total	mg/L	00951	4	4
Iron Fe, Total	ug/L	01045	18,152	9,609
Lead Pb, Total	ug/L	01051	12.1	7.5
Manganese Mn, Total	ug/L	01055	353	323
Nickel Ni, Total	ug/L	01067	100	100
Phosphorous P, Total	mg/L	00665	1.22	0.19
Sulfate SO ₄ , Total	mg/L	00945	418	400
Total Dissolved Solids (TDS)	mg/L	70300	1,289	1,200
Zinc Zn, Total	ug/L	01092	5,000	5,000
Radium 226, Total	pCi/L	09501	0.64	0.69
Radium 226, Total, Counting Error	pCi/L	09502	----	----
Radium 228, Total	pCi/L	11501	1.47	1.64
Radium 228, Total, Counting Error	pCi/L	11502	----	----
Gross Alpha, Total	pCi/L	01501	50.2	13.1
Gross Alpha, Total, Counting Error	pCi/L	01502	----	----
Gross Beta, Total	pCi/L	03501	65	13.1
Gross Beta, Total, Counting Error	pCi/L	03502	----	----
Total Uranium	ug/L	28011	9.5	3.25

21. All monitoring points must be maintained in accordance with the approved permit application such that the required samples and measurements may be obtained.

22. The schedule for sample collection and submission of semi-annual monitoring results is as follows:

<u>Sampling Quarter</u>	<u>Sampling Due</u>	<u>Report Due Date</u>
April-May (2nd)	List - 1 and 2	July 15
Oct-Nov (4th)	List - 1 and 2	January 15

1 - Field Parameters

2 - Indicator Parameters

23. Groundwater quality results must be submitted in an electronic format. The information is to be submitted as fixed-width text files formatted in accordance with the schedule. Additional guidance regarding the submittal of the information in an electronic format can be found on the Illinois EPA's webpage titled, Electronic Reporting of Groundwater Data.
24. 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 facility's permit for identification purposes. Only one copy of the LPC-592 with wet signatures must accompany the submittal. However, the Permittee must submit one original copy of each notice or report submitted to the Illinois EPA in paper format and (excluding the groundwater and leachate monitoring results submitted in an electronic format) a minimum of two electronic copies (one addressed to the Bureau of Land Permit Section, and one addressed to the regional Field Operations Section). Additional paper and electronic copies must be provided upon Illinois EPA request. The form is not to be used for the permit modification requests.
25. Annually, the Permittee must prepare an assessment of the monitoring program which must include an evaluation of the groundwater flow rate and direction. This assessment must be submitted with the monitoring results due on July 15.

Section VII: SPECIAL CONDITIONS

1. 39(i) CERTIFICATION

- a. The Permittee must provide a completed Illinois EPA permit application form LPC-PA23 with all permit modification requests, additional information, and permit applications that are submitted to the Illinois EPA.
- b. The Permittee must submit a current 39(i) certification and supporting documentation with all permit applications.

2. COMPLIANCE SCHEDULE

- a. Submit a Class 1* modification containing a proposal addressing all conditions relative to the HWMU listed in the June 1, 2026 Illinois EPA letter (Log Nos. B-141R-M-156,M-165,M-173,M-175,M-184,M-185,M-187,M-189,M-190,M-191,M-192) as proposed in the approved permit renewal application, with conditions and modifications listed below.

The schedule is outlined below:

- i. Within seven days of the effective date of this Permit, submit results of the well integrity investigation subject to 77 IAC Part 920 and Section III of the Permit at background well R112 and either: (1) propose repair or replacement of the well and propose establishment of revised background values; or (2) submit the proposed Alternate Source Demonstration (ASD). Establishment or revisions to background values must include the data in tabular form and associated laboratory reports.
- ii. Within 60 days of the effective date of this Permit, the facility must submit a revised Groundwater Sampling and Analysis Plan (SAP) with a proposed timeline and methodology to develop background values for all existing and new 35 IAC Part 620 parameters using the Lower Limit of Quantitation (LLOQ).
- iii. Within 180 days of the approval of background values proposed in Condition 2.a.ii above, submit a reevaluation of the Groundwater Management Zone (GMZ) addressing Areas 1 and 2. The submittal must also include, but not be limited to: revised Figures 1 and 2, new cross-sections which indicate the maximum groundwater elevations from Areas 1 and 2 for 2018 to current at the time of submittal, revised calculations estimating the time required to reach the groundwater standards, address exceedances of chloroethane, dissolved barium, p-dioxane, vinyl chloride, and any other identified exceedances up to the time of submittal, and propose revisions to current corrective actions and/or propose additional corrective action to remediate groundwater in a timely manner. The

facility is not subject to the requirements of Condition III.I.12 during this interim period while development of background values and reevaluation of the GMZ is ongoing

- iv. Within 90 days of the effective date of this Permit, submit a workplan to delineate the groundwater plume based on current 35 IAC Part 620 standards.
 - vi. Within 90 days of approval or denial of the ASD at well R112 submit the ASD for well G281. If the repair or replacement of well R112 is instead required per Condition VII.2.a.i, submit a proposal to address any remaining exceedances at well G281.
 - v. Within 45 days of the effective date of this Permit, install bladder pumps at the nine remaining wells which currently use bailers.
 - vi. In the interim period prior to meeting the compliance schedule identified in Conditions VII.2.a.i through VII.2.a.vi above, the Permittee must operate the groundwater extraction system to maximize remediation of groundwater to prevent migration of the dissolved plume to achieve hydraulic control.
- b. The facility must revise the following portions of the approved permit application to meet the following requirements within 90 days of the effective date of this Permit:
- i. Section C.8.4.2 (Table C.8.4.2-10): Revise Groundwater Remediation Objectives based on current 35 IAC Part 620 standards.
 - ii. Section C.8.4.2: Revise and remove the use of Association for Soil Testing Material Standard (ASTM) D5092 for well construction, and reference approved well construction in Illinois Department of Public Health (IDPH) Title 77 IAC Part 920. In addition, indicate well completion reports available on the Illinois EPA website will be used.
 - iii. Section C.8.4.4: Indicate that the most recent version of "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance (2009)" (2009 Unified Guidance) is utilized to validate appropriate techniques. If changes are necessary to Section C.8.4.4 to meet the requirements of the 2009 Unified Guidance, those changes must be proposed when revised pages are submitted.
- c. Within 90 days of the effective date of this Permit, submit a current conditions report in accordance with Section VI.1 of this Permit for the groundwater monitoring program associated with the South Stack which either demonstrates the extent of the groundwater plume is defined by the current groundwater monitoring network and includes a proposal for a Groundwater Management Zone (GMZ), or additional

delineation must be proposed. At a minimum, the report must contain: maps identifying the unit, monitoring well locations, and identification of any exceedances, evaluation of the source, discussion of the effectiveness of the corrective action, conclusions, and proposed next steps. Establishment of a GMZ must be submitted in accordance with the guidance, "Establishing a Groundwater Management Zone at RCRA Facilities" available at the Illinois EPA website.

- c. The last certified survey plat of Area 1 and Area 2 Landfill identified in Condition II.B.1 submitted to Illinois EPA was from 1992 as included in the approved application for this Permit. Exhibit E-10a included graphical display for landfill settlement. Within 90 days of the effective date of this Permit, the Permittee must conduct a survey the post-closure unit identified in Condition II.B.1 (Area 1 and Area 2 Landfill) and submit a certified copy of survey plat by a professional surveyor licensed in Illinois to update that current conditions of the post-closure unit a Class 1* permit modification request. The survey plat must accurately describe the elevation and contour of the area, the boundaries of the unit, all groundwater wells, any landfill leachate and gas management structures, permanent benchmarks, legal boundary of the facility, a detailed legend, and any other necessary information to accurately describe the current conditions of the unit and the facility.

Section VIII: STANDARD CONDITIONS FOR POST-CLOSURE CARE**GENERAL REQUIREMENTS**

1. **EFFECT OF PERMIT.** The existence of a RCRA permit must not constitute a defense to a violation of the Environmental Protection Act (Act) or Subtitle G, except for prohibitions against development, modification or operation without a Permit. Issuance of this Permit does not convey property rights or any exclusive privilege. Issuance of this Permit does not authorize any injury to persons or property or invasion of other private rights, or infringement of state or local law or regulations. (35 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 35 IAC 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 35 IAC 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 35 IAC 703.125)
7. **PERMIT EXPIRATION.** This Permit and all conditions herein will remain in effect beyond the Permit's expiration date if the Permittee has submitted a timely, complete application (see 35 IAC 703.181 - 703.209) and through no fault of the Permittee, the Illinois EPA has not issued a new permit as set forth in 35 IAC 702.125.
8. **NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE.** It shall not be a defense for the

Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. (35 IAC 702.143)

9. DUTY TO MITIGATE. In the event of noncompliance with the Permit, the Permittee 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 Part 721, Appendix A. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 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 shall include:
 - i. The date(s), exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical technique(s) or method(s) used; and
 - vi. The result(s) of such analyses. (35 IAC 702.150)

14. **REPORTING PLANNED CHANGES.** The Permittee 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 (HWM) facility, 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 35 IAC 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 than 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 HOUR REPORTING (35 IAC 702.152 (f) and 35 IAC 703.245).

- a. The Permittee must report to the Illinois EPA and the National Release Center any noncompliance with the Permit which may endanger 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 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 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 724.244(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).

PREPAREDNESS 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 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 that increases 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 and 703.241(a)(2) by providing documentation of financial assurance, as required by 35 IAC 724.251, in at least the amount of the cost estimates required by 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 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 IX: GENERAL FACILITY REPORTING AND NOTIFICATION REQUIREMENTS

The reporting and notification requirements of Sections II, III, and VIII of this Permit are summarized below. This summary is provided to highlight the various reporting and notification requirements of this Permit.

<u>Condition</u>	<u>Submittal</u>	<u>Due Date</u>
Section II: Post-Closure Care for HWMUs		
C.5	Permit application to authorize a change in the approved post-closure plan	As needed.
D.2.c	Submit results of leachate analysis	June 1 of each year.
D.2.e	Modification request to create or revise reduced list.	As needed.
D.3	Post-Closure Care Effectiveness Evaluation Report for the Area 1 and Area 2 Landfills.	90 days before the five-year anniversary of the issuance date of this Permit.
E.1	Request permit modification to remove the liner or hazardous waste.	Prior to removing the liner or wastes.
E.2	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.
F.3	A corrective action plan to the Illinois EPA for approval if subsurface gas becomes a problem.	Within 30 days after discovery of the problem.
Section III: Groundwater Corrective Action Program for HWMUs		
B.6	Proposal for establishment of a Point of Compliance.	Upon attainment of GPS within the GMZ.
C.2	Proposal for installation and addition or replacement, or for the removal of any Groundwater Recovery System well located within the GMZ.	As needed. Illinois EPA approval required prior to implementation.
C.5	Notify the Illinois EPA if any well has been damaged, the structural integrity has been compromised, or has become consistently dry or unserviceable. A proposal for a replacement well(s) must be included with this submittal.	Within 30 days of discovery.

<u>Condition</u>	<u>Submittal</u>	<u>Due Date</u>
C.7	Submit completed boring logs, construction diagrams, and data sheets from installation and development of each new or replacement well.	Within 30 days of the date that installation of the well is completed.
C.7	Submit well plugging and abandonment certifications.	Within 30 days of the date the well is plugged and abandoned.
D.5.a	Establishing background values / concentration limits.	Within 45 days of receipt of the fourth quarter groundwater analytical results.
H.3	Submit evaluation of effectiveness to hydraulically capture and withdraw the off-site plume of groundwater contamination.	Semi-annually
H.3	Submit notification or modification if off-site plume of contamination is not completely captured by the current extraction system design.	Within 30 days of the semi-annual evaluation.
I.2 and I.3	Groundwater monitoring data, statistical calculations, and groundwater surface elevation data.	Semi-annually
I.5	Report surveyed elevation of stick-up.	When a well is installed (with as-built diagrams) and every two years (during the second quarter sampling event) or whenever the elevation changes.
I.5 and I.6	Report elevation (MSL) of the bottom of each groundwater monitoring well and information regarding inspection and maintenance of pumps.	Annually by July 15 of each year

<u>Condition</u>	<u>Submittal</u>	<u>Due Date</u>
I.11	Report on effectiveness of Corrective Action Program	Annually by July 15 each year
I.12.a	Submit notification if any concentration limits specified in the Groundwater Protection Standard are being exceeded at any GMZ boundary well.	Within seven days after discovery of exceedance.
I.12.b	Submit permit modification to Corrective Action Program.	Within 90 days of the date an increase is discovered.
I.13.a	Notify Illinois EPA that groundwater flow is not being adequately controlled.	Within seven days of determination.
I.13.c	Report to Illinois EPA describing changes to corrective action program to ensure groundwater flow is adequately controlled.	Within 30 days of determination.
I.13.d	Request for permit modification describing changes to corrective action program to ensure groundwater flow is adequately controlled.	Within 60 days of determination.
I.14.a	Submit notification to make determination that another source caused the increase or that the increase resulted from error in sampling, analysis, or evaluation.	Within seven days of discovery of increase.
I.14.b	Submit report that demonstrates that a source other than a regulated unit caused the standard to be exceeded or that that apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation.	Within 90 days of discovery of exceedance.
I.14.c	Submit an application for a permit modification to make any appropriate changes to the Corrective Action Program, if necessary.	Within 90 days of discovery of exceedance.
I.15.a	Report concentration of additional constituent(s) detected in the groundwater.	Within seven days after completion of the analysis.
I.16	Submit documentation that well maintenance procedures are completed.	Semi-annually

<u>Condition</u>	<u>Submittal</u>	<u>Due Date</u>
I.17	Evaluation of the Groundwater Management Zone.	Every five years
J.1	Submit application for permit modification.	Within 90 days of determination that the corrective action program no longer satisfies 35 IAC Part 724 Subpart F.
Section VIII: STANDARD CONDITIONS FOR POST-CLOSURE CARE		
<u>Condition</u>	<u>Submittal</u>	<u>Due Date</u>
14	Notify Illinois EPA of planned physical alterations or additions.	Prior to planned change. Illinois EPA approval required prior to implementing change.
17	Application for permit modification indicating permit is to be transferred.	At least 90 days prior to transfer date.
19	Submission of any information required in a compliance schedule.	Within 14 days after each schedule date.
20	Report to Illinois EPA any noncompliance which may endanger health or environment: by telephone in writing	Within 24 hours after discovery Within five days after discovery
21	Report all other instances of non-compliance.	March 1 of each Year along with Annual Report.
34	Application for permit modification amending post-closure plan	Within 60 days prior to the proposed change in facility design or operation, or not later than 60 days after an unexpected event has occurred
35.a	Adjust post-closure cost estimate for inflation	Within 60 days before anniversary date, or within 30 days after close of the firm's fiscal year
35.b	Revision of post-closure cost estimate	As needed, within 90 days of discovery of revision
36	Change in financial assurance mechanism for post-closure care	As needed

<u>Condition</u>	<u>Submittal</u>	<u>Due Date</u>
37	Notify the Illinois EPA of commencement of voluntary or involuntary bankruptcy proceedings	Within 10 days after commencement of proceeding

Section X: CORRECTIVE ACTION REPORTING AND NOTIFICATION REQUIREMENTS

The reporting and notification requirements of Sections IV, V and VI of this Permit are summarized below. This summary is provided to highlight the various reporting and notification requirements of this Permit.

<u>Condition</u>	<u>Submittal</u>	<u>Due Date</u>
Section IV: Corrective Action for SWMUs		
B.6	Corrective action progress report for the previous calendar year.	By March 1 of each year.
E.4	Submit updated report required in this Condition for the North Stack.	Within 90 days of the effective date of this Permit.
F.12	Closure documentation report with certificate for South Stack.	Within 60 days after completion of closure.
F.13	Updated Post Closure Plan with updated cost estimate.	At least 180 days prior to the estimated completion date closure activities.
F.14	Corrective Action Progress Report for the South.	By March 1 of each year.
H.9	Correction Action Progress Report for the Olin Ponds.	By March 1 of each year.
I.1	Proposal for interim measures.	Prior to implementation. Illinois EPA approval required prior to implementation.
J.1	Notification of Newly Identified SWMUs	30 calendar days after discovery
J.3	SWMU Assessment Plan	Within 90 calendar days of request by Illinois EPA.
J.4	Begin to implement the SWMU Assessment Plan approved by Illinois EPA.	Within 45 days of receiving such written notification or according to the terms and schedule established within the Plan.
J.5	Report documenting results of SWMU Assessment Plan	In accordance with schedule in SWMU Assessment Plan.
K	Notify Illinois EPA of a new release(s) form a SWMU(s).	Within 30 days after its discovery

<u>Condition</u>	<u>Submittal</u>	<u>Date</u>
L.1	Cost estimate for investigation and/or corrective measures.	Include with each workplan or report
L.2	Documentation of Financial Assurance	60 calendar days after approval of initial or revised cost estimate
Section V: Groundwater Monitoring Program for the North Stack		
2.c	Groundwater Quality Report (including details required by Condition V.2.f).	Semi-annually
2.g	Assessment of groundwater flow rate and direction.	Annually by July 15 of each year
Section VI: Groundwater Monitoring Program for the South Stack		
10.a	Notification of significant change in Groundwater quality.	Within seven days of change.
10.b	Assessment Monitoring Plan.	Within 30 days of change.
10.c	Assessment Report.	Within 90 days after approval of Assessment Monitoring Plan.
10.d	Corrective Action Plan	Within 90 days of approval of the Assessment Report in Condition VI.10.c
14	Submit completed boring logs, construction diagrams, and data sheets from installation and development of each new or replacement well.	Within 30 days of the date that installation of the well is completed.
15	Submit well plugging and abandonment certifications.	Within 30 days of the date the well is plugged and abandoned.
18	Surveyed elevation of stick-up.	When a well is installed (with as-built diagrams) and every two years (during the second quarter sampling event) or whenever the elevation changes.
20 and 22	Groundwater monitoring data, any statistical calculations, and groundwater surface elevation data	Semi-annually
25	Assessment of groundwater flow rate and direction.	Annually by July 15 of each year

ATTACHMENT A

COST ESTIMATES

STATE ID No: 1970450002

USEPA ID No: ILD074411745

Attachment A: COST ESTIMATES

The following values must be used when establishing financial assurance in accordance with this Permit, applicable rules, and regulations. The cost provided below are expressed in **2025 dollars**.

I. HWMUs Post-Closure Care:	
A. HWMUs Post-Closure Care	\$17,322,965
II. South Stack Closure, Post-Closure Care, and Corrective Action Activities:	
B. South Stack Closure (from Table 10-1)	\$6,775,425
C. South Stack Post-Closure Care (from Table 11-2)	\$5,846,895
D. Corrective Action (from Table 10-2)	\$5,564,259
E. South Stack Sub-Total	\$18,186,579
III. Summary of Costs:	
A. HWMUs Post-Closure Care	\$17,322,960
E. South Stack Sub-Total	\$18,186,579
F. Grand Total	\$35,509,539

ATTACHMENT B

APPROVED PERMIT APPLICATION IDENTIFICATION

STATE ID No: 1970450002

USEPA ID No: ILD074411745

Attachment B: APPROVED PERMIT APPLICATION IDENTIFICATION

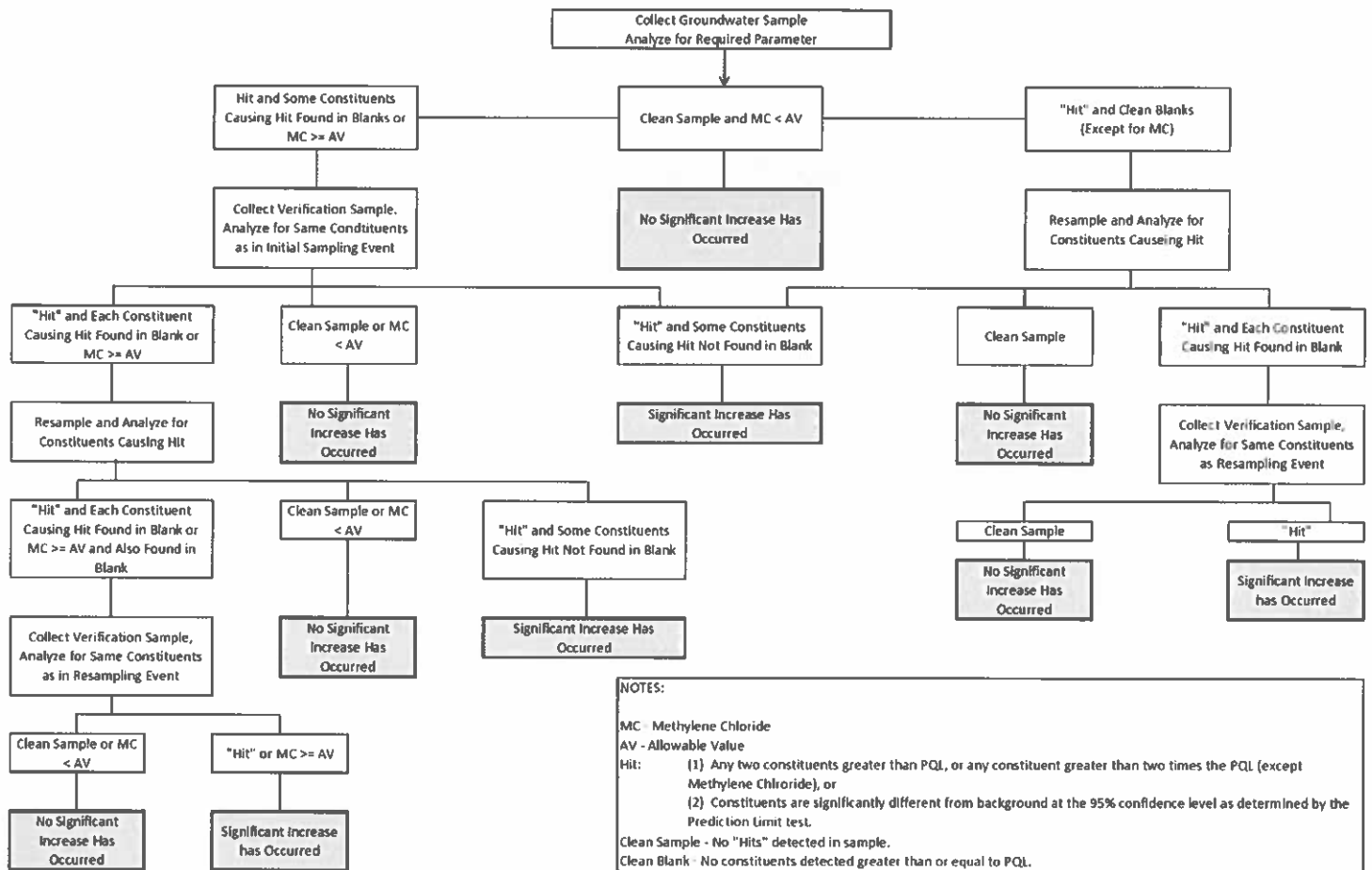
1.	Application for Renewed RCRA Post-Closure Permit (B-141R2)
A.	Original Application dated February 27, 2020 and received February 28, 2020.
B.	Additional Information dated August 18, 2023 and received August 21, 2023.
C.	Additional Information dated February 7, 2024 and received February 8, 2024.
D.	Additional Information dated November 20, 2024 and received November 21, 2024.
E.	Additional Information dated July 15, 2026 and received July 17, 2026.

ATTACHMENT C

STATISTICAL PROCEDURES FLOW CHART

STATE ID No: 1970450002

USEPA ID No: ILD074411745



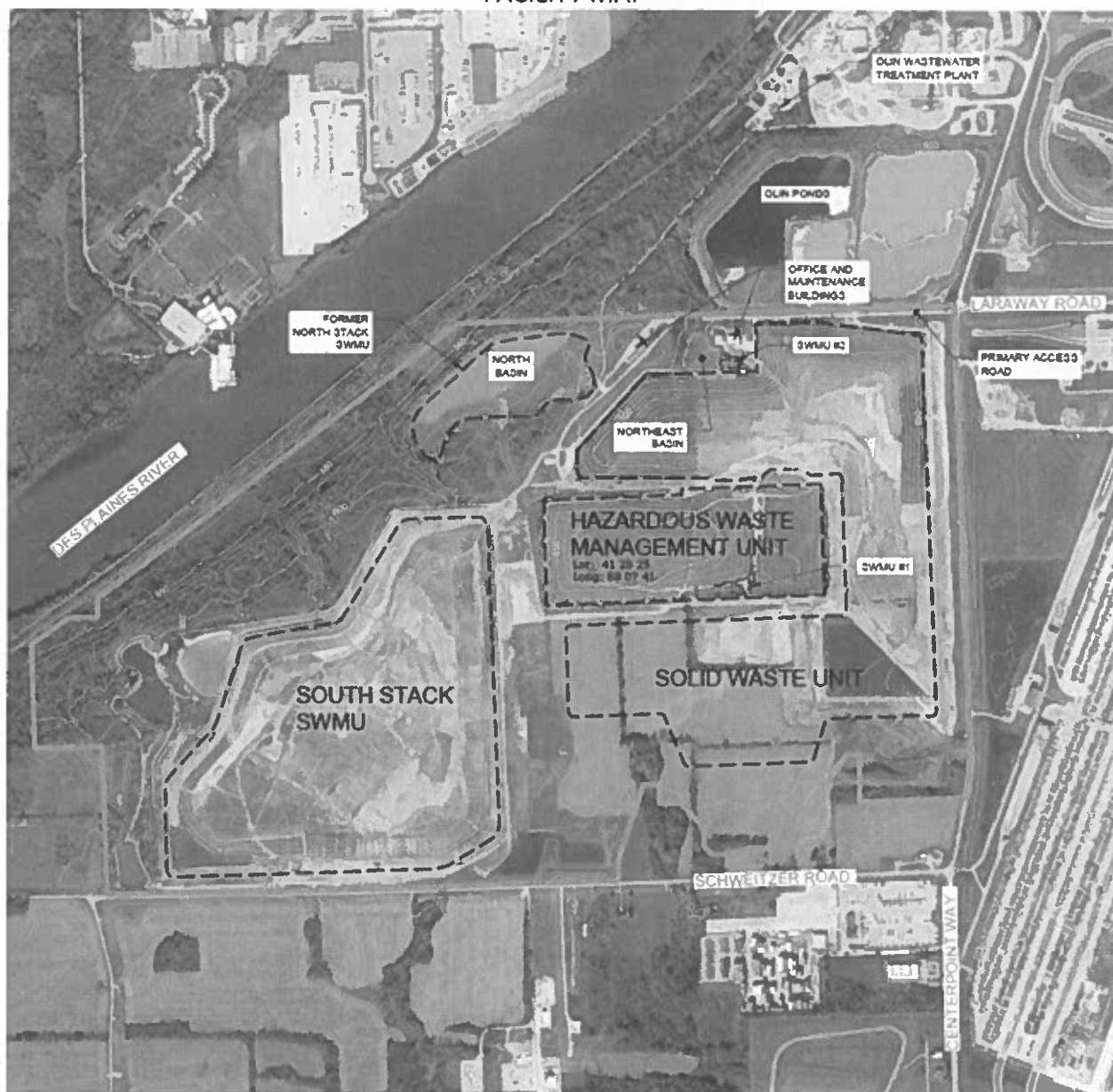
ATTACHMENT D

FACILITY MAP

STATE ID No: 1970450002

USEPA ID No: ILD074411745

FACILITY MAP



ATTACHMENT E

CHRONOLOGICAL SUMMARY OF CORRECTIVE ACTION SUBMITTALS

STATE ID No: 1970450002

USEPA ID No: ILD074411745

Attachment E: Chronological Summary of Corrective Action Submittals

The table below summarizes the plans/reports/documents submitted to Illinois EPA regarding the corrective action efforts at the Laraway in Joliet, Illinois.

Log No.	Submittal	Status
B-141-CA-1	Phase I Report	Approved 18, 1994
B-141R-CA-1	1,1,1-trichloroethane Groundwater Monitoring Assessment	Approved November 10, 2020
B-141R-CA-2	Supplemental RFI Work Plan for North SWMU	Approved July 5, 2011
B-141R-CA-3	Corrective Measure for South SWMU	Approved July 5, 2011
B-141R-CA-4	North Stack Soil Sampling Results	Approved April 18, 2012
B-141R-CA-5	Corrective Measures Report for SWMU #1	Approved April 18, 2012
B-141R-CA-6	Report on Certification Completion of Soil Cleanup Objective at North Stack and Completion of North Sedimentation Basin	Approved April 18, 2012
B-141R-CA-7	Soil Sampling Results at North SWMU #2	Approved April 18, 2012
B-141R-CA-8	2011 Annual Report for the North and South Stack	Approved September 21, 2012
B-141R-CA-9	2013 South Stack Annual Report	Approved October 4, 2017
B-141R-CA-10	2014 South Stack Annual Report	Approved March 31, 2015
B-141R-CA-11	2015 South Stack Annual Report	Approved March 29, 2016
B-141R-CA-12	2016 South Stack Annual Report	Approved July 10, 2017
B-141R-CA-13	2012 South Stack Annual Report	Approved May 19, 2017
B-141R-CA-14	2016 South Stack Corrective Action Report	Approved October 7, 2025
B-141R-CA-15	2017 South Stack Annual Report	Approved March 19, 2018

B-141R-CA-16	North Stack Background Groundwater Report	Received August 17, 2018 (pending IEPA review)
B-141R-CA-17	2018 South Stack Corrective Action Report	Approved October 7. 2025
B-141R-CA-18	2019 South Stack Corrective Action Report	Approved October 7. 2025
B-141R-CA-19	August 2020 North Stack Background Groundwater Evaluation	Received August 6, 2020 (pending IEPA review)
B-141R-CA-20	2020 South Stack Corrective Action Report	Approved October 7. 2025
B-141R-CA-21	2021 South Stack Corrective Action Report	Approved October 7. 2025
B-141R-CA-22	2022 South Stack Corrective Action Report	Approved October 7. 2025
B-141R-CA-23	Olin Ponds Corrective Action Workplan	Approved 3/3/2025
B-141R-CA-24	2023 South Stack Corrective Action Report	Approved October 7. 2025
B-141R-CA-25	2024 South Stack Corrective Action Report	Approved October 7. 2025
B-141R-CA-26	2025 South Stack Corrective Action Report	Approved February 13, 2026