

PERMIT NO. HW-041(CA)

ISSUANCE DATE:



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

AMENDMENT TO HAZARDOUS WASTE FACILITY PERMIT

In accordance with the provisions of the Georgia Hazardous Waste Management Act and the Rules, Chapter 391-3-11, (as effective on the date of issuance of this permit) adopted pursuant to that Act, Permit No. HW-041(CA), issued on December 17, 2019, to

**University of Georgia (UGA)
Athens, Georgia**

EPA ID No. GAD073460941

For the following:

to conduct investigation and corrective action to remediate releases of hazardous constituents into the environment.

is hereby amended for the following:

to incorporate the final corrective action plan into the permit and the modifications on the attached pages.

at the following location:

**Will Hunter Road,
Athens, Georgia**

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 20 pages, which pages are a part of this Amendment. This Amendment is a modification of the permit previously issued on **December 17, 2019** and is hereby made a part of Permit No. HW-041(CA) and compliance with this Amendment is hereby ordered.

This Permit is subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in the application(s) dated September 2022, supporting data entered therein or attached thereto, or any subsequent submittals or supporting data; or for failure to disclose fully all relevant facts; or when the facility poses a threat to the environment or the health of humans.



Richard E. Dunn, Director
Environmental Protection Division

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The University of Georgia - Athens, Georgia, is hereinafter referred to as the Permittee.

SECTION I. GENERAL PERMIT CONDITIONS

I.A. Scope and Effect of Permit

1. The Permittee is required to investigate contamination at Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) and perform corrective action to remediate contamination in accordance with the conditions of this permit. The Permittee must comply with the Georgia Hazardous Waste Management Act and the Rules for Hazardous Waste Management, Chapter 391-3-11, which Rules include certain portions of the Federal Hazardous Waste Regulations (found at 40 CFR 260-266, 268, 270, 273, 279 and 124). Where a citation to the Federal Regulations is made in this permit, it refers to the specific regulations adopted by the Environmental Protection Division (EPD).
2. The issuance of this permit does not convey any property rights in either real or personal property, nor any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
3. Compliance with this permit does not constitute a defense to any action brought by the Director under Section 12-8-75, "Powers of the Director in situations involving imminent and substantial endangerments to the environment or to public health," of the Georgia Hazardous Waste Management Act, as amended.
4. Nothing in this permit shall be construed to preclude the institution of any legal action under Section 3008 of the Federal Resource Conservation and Recovery Act (RCRA) or under the Georgia Hazardous Waste Management Act, O.C.G.A. §§12-8-81 through 12-8-82, as amended.
5. This permit may be modified, revoked and reissued, or terminated for cause as specified in Rule 391-3-11.11(7) and 40 CFR §§270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated non-compliance on the part of the Permittee does not stay the applicability of any permit condition.
6. The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

I.B. Management Requirements

1. The Permittee shall give notice to the Director at least thirty (30) days prior to any planned physical alterations or additions to the permitted facility or of any planned changes in the process generating the hazardous waste which changes might affect the performance of the permitted facility.
2. The Permittee shall maintain at the facility, until corrective action is completed and certified by an independent registered professional engineer, the following documents and amendments, revisions and modifications to these documents:
 - a. Complete copy of this Permit and Permit Application;
 - b. Groundwater sampling and analysis plan; and
 - c. Corrective Action Plan(s).
3. All amendments, revisions and modifications to any plan required by this permit shall be submitted to the Director for approval and permit modification as necessary.
4. Unless otherwise specifically authorized by the Director, the Permittee may not treat, store or dispose of hazardous waste on any portion of the facility or perform corrective action not specifically authorized by this permit until the Permittee has submitted to the Director by certified mail or hand delivery an application for a permit modification to do so and the Director has modified the permit for that activity.
5. The Director may require the Permittee to establish and maintain an information repository at any time, based on factors set forth in 40 CFR 124.33(b). The information repository will be governed by the provisions in 40 CFR 124.33(c) through (f).

I.C. Monitoring and Reporting

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261. Laboratory methods must be those specified in the most recent editions of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Manual SW-846. Sampling and analyses of groundwater and other environmental media samples shall be conducted in accordance with methods and procedures found in the most recent version of EPA Region 4's Field Branches Quality System and Technical Procedures.
2. The Permittee shall retain all 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 including the certification required by 40 CFR 264.73(b)(9) for a period of at least three (3) years from the date of the sample, measurement, report or record. These periods are automatically extended during the course of any unresolved enforcement action regarding this facility and also may be extended at any time at the Director's discretion.
3. Records of monitoring information shall include:
 - a. The date, exact place and time of sampling or measurements;
 - b. The individual(s) who perform the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; the method of sample preservation; and quality assurance procedure including method blanks; and
 - f. The results of such analyses and measurements.
4. Twenty-Four Hour Reporting. The Permittee shall report to the Director or his representative orally within twenty-four (24) hours from the time the Permittee becomes aware of any circumstances resulting from the operation of the permitted facility which may endanger human health or the environment, or any unauthorized releases (including fires and explosions) from the operation of the facility (including periods of non-compliance).

The description of the occurrence shall include:

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- a. Name, address and telephone number of the owner or operator;
 - b. Name, address and telephone number of facility;
 - c. Date, time and type of incident;
 - d. Name and quantity of materials involved;
 - e. The extent of injuries, if any;
 - f. An assessment of actual or potential hazards to the environment and human health inside and outside the facility, where this is applicable; and
 - g. Estimated quantity and disposition of recovered material that resulted from the incident.
5. Within fifteen (15) days of becoming aware of any reportable incident as in Condition I.C.4, the Permittee shall submit a written report of the incident covering the following:
- a. Description of occurrence as in Condition I.C.4;
 - b. Cause of occurrence;
 - c. Period of occurrence, including exact dates and times;
 - d. Time occurrence expected to continue (if not already corrected); and
 - e. Steps taken or planned to reduce, eliminate, and prevent recurrence.
6. Compliance Schedules. Reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.
7. Other Non-compliance. The Permittee shall report incidents of non-compliance, other than those described in Conditions I.C.4 and I.C.6, semi-annually on July 15 (covering January 1 through June 30) and January 15 (covering July 1 through December 31). The report shall cover the information requested in Condition I.C.4 for each incident.
8. Signatory Requirements. All reports of other information requested by the Director shall be signed and certified according to the requirements in 40 CFR 270.11.
9. All reports and other documents containing geologic interpretation must be signed and affixed with the seal of a qualified groundwater scientist.

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10. Biennial Report. A biennial report must be submitted, if applicable, covering the facility activities during odd number calendar years in accordance with 40 CFR 264.75.
11. Monitoring Reports. Monitoring results shall be reported at intervals specified elsewhere in this permit.

I.D. Responsibilities

1. Right of Entry. The Permittee shall allow the Director of EPD, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon 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 Georgia Hazardous Waste Management Act, any substances or parameters at any location.
2. Transfer of Permits. This permit may be transferred to a new owner or operator only after notice to the Director and if it is modified or revoked and reissued pursuant to 40 CFR 270.40(b) or 270.41(b)(2) to identify the new Permittee and incorporate such other requirements as may be necessary under the appropriate Act. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the applicable requirements of 40 CFR Parts 264, 268, and 270.
3. Duty to Comply. The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such non-compliance is authorized by an emergency permit. Any non-compliance with this permit, other than any

noncompliance authorized by an emergency permit, constitutes a violation of the Georgia Hazardous Waste Management Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

4. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this permit, the Permittee must submit a complete application for a new permit at least one hundred eighty (180) days before this permit expires. If the Permittee has not met the groundwater protection standard for three (3) consecutive years, within one hundred eighty (180) days before the expiration date of this permit, the Permittee must submit a complete application for reissuance of the permit. This permit and all conditions herein will remain in effect beyond the permit expiration date if the Permittee has submitted a timely and complete application for a new permit and, through no fault of the Permittee, the Director has not issued a new permit on or before the expiration date of this permit.
5. 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.
6. Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment or human health resulting from non-compliance with this permit.
7. Duty to Provide Information. The Permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with the permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
8. Anticipated Non-Compliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in non-compliance with permit requirements.
9. Reporting Planned Changes. The Permittee shall give notice to the Director at least thirty (30) days prior to any planned physical alterations or additions to the permitted facility, including any investigative or corrective action activities (including voluntary corrective measures) which may impact any SWMUs or

AOCs. Compliance with the modification requirements of 40 CFR 270.42 must be adhered to.

10. Obligation for Corrective Action. The Permittee will continue corrective action as required in this permit. The permit will be continued as necessary to complete corrective action.
11. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities 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 a backup or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of this permit.
12. Signatory Requirements. All applications, reports or other information submitted to the Director shall be signed and certified pursuant to §270.11.
13. Other Information. When the Permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.

I.E. Definitions

For purposes of this permit, terms used herein shall have the same meaning as those in 40 CFR Parts 124, 260 through 268, 270, 273 and 279, unless this permit specifically provides otherwise. Where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

1. Area of Concern (AOC) for the purposes of this permit includes any area having a probable release of a hazardous waste or hazardous constituent which is not from a solid waste management unit and is determined by the Director to pose a current or potential threat to human health or the environment. Such areas of concern may require investigations and remedial action as required under the Georgia Hazardous Waste Management Act §12-8-60, et seq. and 40 CFR §270.32(b)(2) in order to ensure adequate protection of human health and the environment.

2. Contamination for the purposes of this permit refers to the presence of any hazardous waste, hazardous waste constituents or hazardous constituents in a concentration which exceeds the concentration of that waste or constituent in the immediate vicinity of the facility (in areas not affected by the facility).
3. Corrective Action for prior or continuing releases from any solid waste management units at the facility, as well as for other releases, for the purposes of this permit shall be any measure necessary to protect human health and the environment for all releases of hazardous waste, hazardous waste constituents, or hazardous constituents from said solid waste management units at the facility, regardless of the time at which waste was placed in the unit, as required under 40 CFR §264.101 and/or 40 CFR §264.100 and as required under the Georgia Hazardous Waste Management Act, §12-8-60, et.seq. Corrective action may address releases to air, soils, surface water, sediment or groundwater.
4. Extent of Contamination for the purposes of this permit is defined as the horizontal and vertical area in which the concentrations of hazardous waste, hazardous waste constituents or hazardous constituents in the environmental media being investigated are above estimated quantitation limits, as defined in the most recent version of SW-846 or naturally occurring concentrations representative of the facility.
5. Facility for purposes of this permit includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g. one or more landfills, surface impoundments, or combination of them). For the purposes of implementing corrective action under §264.101, a facility includes all contiguous property under the control of the owner or operator seeking a permit under the Georgia Hazardous Waste Management Act.
6. Hazardous Constituents for the purpose of this permit are those substances listed in 40 CFR Part 261 Appendix VIII and Part 264 Appendix IX "Ground-Water Monitoring List", as revised or superseded.
7. Interim Measures for purposes of this permit are actions necessary to minimize or prevent the further migration of contamination or limit actual or potential human and environmental exposure to contamination while long-term corrective action remedies are evaluated and, if necessary, implemented.

8. Land Disposal Facility for the purposes of this permit refers to a facility that uses a surface impoundment, landfill, land treatment or waste pile unit to manage or dispose of hazardous waste pursuant to §12-8-66 of the Georgia Hazardous Waste Management Act, as amended, and Section 3004 of RCRA, as amended.
9. Landfill for the purposes of this permit includes any disposal facility or part of a facility where hazardous waste is placed in or on the land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, or a cave.
10. Qualified Groundwater Scientist for the purposes of this permit means a scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable that individual to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.
11. Release for the purposes of this permit includes any unpermitted spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste, hazardous waste constituents or hazardous constituents.
12. Remediation waste for the purposes of this permit includes all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under §264.101 and Section 12-8-71(b) of the Georgia Hazardous Waste Management Act. For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing corrective action required under §264.101(c) for releases beyond the facility boundary.
13. Solid Waste Management Unit (SWMU) for the purposes of this permit includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank (including storage, treatment and accumulation tanks), container storage unit, wastewater treatment unit, including all conveyances and appurtenances used in waste management or storm water handling, elementary neutralization unit, transfer station, or recycling unit from which hazardous waste, hazardous waste constituents or hazardous constituents

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might migrate, irrespective of whether the unit was intended for the management of solid and/or hazardous waste. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents.

14. Treatment for the purposes of this permit refers to any method, technique, or process, including neutralization, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of ; or amenable for recovery, amenable for storage or reduced in volume.

I.F. Special Conditions Applicable to Entire Facility

1. Land Disposal Restrictions: The Permittee shall comply with all provisions of 40 CFR Part 268 (Land Disposal Restrictions) for all wastes to which they are applicable.
2. Monthly inspections of the landfill cap are to be conducted in accordance with the checklist contained in Attachment 3 of the permit application, dated September 30, 2022.

SECTION II. CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS (SWMUs) AND AREAS OF CONCERN (AOCs)

II.A. Applicability

The conditions of this section apply to the Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) listed below and any additional SWMUs or AOCs discovered by any other means. The determination of the need for and subsequent implementation of corrective action is required by 40 CFR §264.101(a) and 12-8-66 of the Georgia Hazardous Waste Management Act for releases from all SWMUs and AOCs contained within the facility property boundaries and, as required by §12-8-66 of the Georgia Hazardous Waste Management Act and 40 CFR §264.101(c), for releases extending beyond the facility property boundaries.

SWMUs requiring further action:

SWMU #1 Milledge Avenue Site (formerly called the Botanical Gardens Landfill)

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AOCs requiring institutional controls:
HMTF Ditch

SWMUs requiring no further action at this time:
SWMU #2 Animal Carcass Burial Site
SWMU #3 Upper Chicopee Paint Crib
SWMU #4 Lower Chicopee Paint Crib
Structure D Detonation Shell

II.B. Notification and Assessment Requirements for Newly Identified SWMUs and AOCs

1. The Permittee shall notify the Director in writing, within fifteen (15) calendar days of discovery, of any additional SWMUs and/or AOCs discovered during the course of groundwater monitoring, on-going field investigations, environmental audits, or any other means. This shall include, but not is limited to, newly discovered releases at previously identified SWMUs or AOCs. Notification shall include, at a minimum, the location of the SWMU and/or AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release, etc.). The permit shall be modified in accordance with 40 CFR Part 270 to incorporate the newly discovered SWMUs or AOCs.
2. The Permittee shall prepare a SWMU Assessment Report (SAR) for each additional SWMU and/or AOC discovered subsequent to issuance of this permit which is known or suspected to have releases to the environment. The SAR shall be submitted within sixty (60) days of discovery of a new SWMU or AOC. The report must also include, at a minimum, the following information for each SWMU or AOC:
 - a. Type of unit;
 - b. Location of each unit on a topographic map of appropriate scale;
 - c. General dimensions, capacities and structural description of the unit(s) (supply any available plans/drawings);
 - d. Function of unit;
 - e. Dates that the unit was operated;
 - f. Description of the wastes that have been managed at/in the unit(s) to the extent available. Include any available data on hazardous constituents in the wastes; and

pathways, actual or potential receptors and applicable background concentrations. The RFI Report(s) shall address all releases which extend beyond the facility property boundary unless the Permittee demonstrates to the Director's satisfaction that, despite the Permittee's best efforts, the Permittee was unable to obtain permission to undertake actions required by the workplan(s).

- b. If the time required to conduct the RFI(s) is greater than one hundred eighty (180) calendar days, the Permittee may be required to provide the Director with quarterly RFI Progress Reports (90-day intervals) beginning ninety (90) calendar days from the initiation of the RFI(s), as specified in the approved RFI Workplan(s). The Progress Report(s) shall, at a minimum, contain the following information:
 - i. A description of the portion of the RFI completed;
 - ii. Summaries of findings;
 - iii. Summaries of any deviations from the approved RFI Workplan during the reporting period;
 - iv. Summaries of all contacts with local community public interest groups or State government regarding RFI investigations;
 - v. Summaries of any problems or potential problems encountered during the reporting period;
 - vi. Actions taken to rectify problems;
 - vii. Changes in relevant personnel; and
 - viii. Projected work for the next reporting period.

5. The Director shall review the RFI Report(s) required by Permit Condition II.C.4., and upon determination that each report is complete, shall notify the Permittee of the need for further investigative actions and/or the need for corrective action as required under §264.101(a), §264.101(c) of the Georgia Rules for Hazardous Waste Management, and §12-8-71(b) of the Georgia Hazardous Waste Management Act.

II.D. Corrective Action Plan (CAP)

1. The Permittee shall implement the CAP as detailed in the 100% Remedial Design for Corrective Action dated May 31, 2022 in accordance with the schedules, conditions, and specifications contained therein.
2. Upon issuance of the modified permit by the Director, Permittee shall implement the corrective actions in accordance with the Remedy Implementations Schedule specified in the approved CAP.
3. Permittee shall perform annual effectiveness evaluations to demonstrate CAP effectiveness in protecting surface water and addressing all groundwater

contamination above applicable groundwater protection standards related to SWMU #1. The evaluations with recommendations, as appropriate, for enhancements or other modifications to the CAP and/or the Groundwater Performance Monitoring Plan shall be included in the Annual Site Monitoring Reports.

II.E. Interim Measures (IM)

1. Requirement for Interim Measures

The Permittee shall conduct Interim Measures (IM) for any SWMU and/or AOC, either upon notification by the Director that IM are necessary or if the Permittee wishes to implement IM at a SWMU and/or AOC in order to stabilize a release.

2. IM Workplan

- a. If the Permittee is notified by the Director that IM are necessary, an IM Workplan shall be submitted within thirty (30) days of such notification. If the Permittee chooses to conduct IM prior to notification by the Director, the Permittee shall submit a workplan for that activity. IM may be conducted concurrently with investigations required under the terms of this permit.
- b. An IM Workplan submitted pursuant to Permit Condition II.E.2.a. above shall be consistent with and, if required by the Director integrated into any long-term corrective action at the facility. The IM Workplan shall include: the IM objectives; procedures for implementation (including any designs, plans, or specifications); schedules for implementation and completion; and schedules for submittal of progress reports.
- c. The IM Workplan must be approved by the Director, in writing, prior to implementation.

3. IM Implementation

- a. The Permittee shall implement the IM in accordance with the schedule contained in the approved IM Workplan.
- b. The Permittee shall give notice to the Director, for approval, at least fifteen (15) days prior to any planned changes, reductions or additions to the IM Workplan.
- c. If corrective action required by §264.101 and/or Permit Section II.D. is achieved through IM, the Permittee shall apply for a permit modification

pursuant to §270.42(c) to incorporate the IM into the permit as the final corrective action.

4. IM Reports

- a. Within forty-five (45) days of completion of IM, the Permittee shall complete and submit to the Director an IM Report. The report shall provide, but is not limited to, the following information:
 - i. A description of IM implemented;
 - ii. A summary of all data or other information obtained during implementation of IM;
 - iii. A summary of the effectiveness of the IM in achieving the objective of containing, removing and/or treating contamination resulting from a release from a SWMU and/or AOC in order to protect human health and the environment;
 - iv. A summary of all problems encountered during the IM implementation, and the solutions to those problems; and
 - v. Copies of all relevant laboratory/monitoring data.
- b. If the time required for completion of IM is greater than one year, the Permittee shall provide the Director with progress reports at intervals specified in the approved IM Workplan. The progress reports shall contain the following information at a minimum:
 - i. A description of the portion of the IM completed;
 - ii. Summaries of any deviations from the IM Workplan during the reporting period;
 - iii. Summaries of any problems or potential problems encountered during the reporting period and the solutions to those problems;
 - iv. Projected work for the next reporting period; and
 - v. Copies of laboratory/monitoring data.

II.F. Compliance Schedule

1. The Permittee shall implement the CAP as detailed in the 100% Remedial Design for Corrective Action dated May 31, 2022 in accordance with the schedules, conditions, and specifications contained therein.
2. Within 180 days of issuance of the modified permit, Permittee shall submit a revised groundwater monitoring plan for SWMU #1 to address semiannual groundwater sampling and corrective action plan performance and evaluation data as applicable to Permittee's CAP. The revised groundwater monitoring plan shall include a schedule for periodic reevaluation of the most impacted landfill

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monitoring well for 40 CFR, Part 264 Groundwater Monitoring List constituents (Appendix IX) to ensure that the monitoring plan remains appropriate for site evaluations.

3. All plans or other submittals required under this permit shall include implementation schedules, beginning with EPD approval and ending with a final report on the implementation.

II.G. Reporting, Recordkeeping and Response

1. All workplans and schedules shall be subject to approval by the Director prior to implementation. Upon approval, the Permittee shall implement all workplans and schedules as written, or as specified by the Director.
2. Two (2) copies of all reports and workplans shall be provided by the Permittee to the Director.
3. All workplans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submittals may be granted by the Director based on the Permittee's demonstration that sufficient justification for the extension exists.
4. The Permittee shall enter all monitoring, testing and analytical data obtained pursuant to the conditions of this permit into the operating record, as required by §264.73(b)(6).
5. The Permittee shall have all workplans and reports, which involve installation of groundwater monitoring wells or systems and/or the interpretation of data gathered from those wells or systems, prepared and certified by a qualified groundwater scientist.
6. All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and any other supporting information gathered or generated during activities undertaken pursuant to this section shall be maintained at the facility during the term of this permit, including any reissued permits.
7. If the Director or the Permittee at any time determines that any reports or activities conducted pursuant to any plan required by this permit, no longer satisfies the requirements of 40 CFR §264.101, this permit, or the intent of that plan or report for prior or continuing releases, the Permittee must submit an amended plan to the Director within sixty (60) days of such determination.

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8. The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Director required in this Section are signed and certified in accordance with 40 CFR 270.11.

SECTION III. MONITORING SYSTEM

III.A. Monitoring Well Network

1. The Permittee shall maintain the groundwater monitoring system as described in the Botanical Gardens Landfill RCRA Facility Investigation Final Report dated October 1989 for the Milledge Avenue Site.
2. The Permittee shall maintain, well-marked and in good working order, the following groundwater monitoring wells (MW), well points (WP), and piezometers (P):

| | | |
|--------|--------|--------|
| MW-1 | MW-2 | MW-3 |
| MW-4 | MW-5b | MW-5c |
| MW-6a | MW-6b | MW-7a |
| MW-7b | MW-8a | MW-8b |
| MW-9a | MW-9b | MW-9c |
| MW-10a | MW-10b | MW-11 |
| MW-12a | MW-12b | MW-13 |
| MW-14a | MW-14b | MW-14c |
| MW-15 | MW-16a | MW-16b |
| MW-16b | MW-17 | MW-18 |
| MW-19 | MW-20 | |
| WP-1 | WP-2 | WP-3 |
| WP-4 | | |
| P-1 | P-3 | P-4 |
| P-6 | P-7 | P-8 |
| P-9 | P-10 | P-11 |
| P-12 | | |

3. The Permittee shall install additional wells as necessary to assess changes in the rate and extent of any plume of contamination. Any plan for the design and installation of any additional monitoring wells shall be submitted to EPD for approval thirty (30) days prior to installation.
4. The Permittee shall determine the concentrations of constituents listed in Condition III.B.1. semi-annually for each monitoring well and well point listed in

the 2020 Approved Groundwater Monitoring Plan until a revised Groundwater Monitoring Plan is approved by the Director. Upon approval by the Director, the revised Groundwater Monitoring Plan will be incorporated into this permit by reference and become an enforceable part of this permit.

5. The groundwater monitoring program must include a determination of groundwater surface elevations at all monitoring wells and piezometer identified in Condition III.A.2. each time the groundwater is sampled.

III.B. Groundwater, Surface Water, and Sediment Monitoring Parameters

1. The concentration of the following hazardous constituents shall be determined as described in Condition III.A.4.:

| | |
|--------------------------|-----------------------------|
| Methylene Chloride | Acetone |
| 1,2-Dichloroethane | Chloroform |
| 1,2-Dichloropropane | Trichloroethylene |
| Benzene | 1,1,2,2-Tetrachloroethane |
| Tetrachloroethylene | Toluene |
| Ethylbenzene | Xylene |
| Cis-1,2-Dichloroethylene | Trans-1,2-Dichloroethylene |
| Carbon Tetrachloride | Napthalene |
| 1,2,3-Trichloropropane | 1,2-Dibromo-3-Chloropropane |
| Vinyl Chloride | Mercury |
| Lead | Cobalt |
| Barium | Zinc |
| Lindane | 1,4-Dioxane |

2. The Permittee shall continue to collect and analyze surface water samples for the constituents listed in Condition III.B.1. above at the following locations, as described in Section I of the permit modification request, dated September 30, 2022: SW-A1, SW-A2, SW-A3, SW-A4, and SW-A5.
3. The Permittee shall continue to collect and analyze sediment samples for the constituents listed in Section III.B.1. above at the following locations, as described in Section I of the permit modification request, dated September 30, 2022: S-A1, S-A2, S-A3, S-A4, and S-A5.

III.C. Reporting, Recordkeeping and Response

1. The Permittee shall enter all monitoring, testing, and analytical data obtained pursuant to Section III in the operating record, as required by 40 CFR §264.73(b)(6).

2. The Permittee shall report the findings of the monitoring program annually to EPD. The first annual report shall be due one (1) year following the effective date of this permit. Each subsequent annual report shall be made by the same date in each successive year. This report shall include, but is not limited to, the following information:
 - i. Maps depicting groundwater flow in the uppermost and bedrock aquifers;
 - ii. Laboratory results from semi-annual sampling and analysis;
 - iii. Quality assurance/quality control procedures; and
 - iv. Map of concentration isopleths for hazardous constituents.
3. The Permittee shall submit the analytical results of the semi-annual groundwater, surface water and sediment sampling as required in Sections III.B.1., III.B.2. and III.B.3. within sixty (60) days of the collection of the samples. This includes groundwater elevation data collected during the sampling event.
4. Records of monitoring information shall include:
 - i. The date, exact place and time of sampling or measurement,
 - ii. The individual(s) who performed the sampling,
 - iii. The depth to the groundwater surface measured to the nearest 0.01 foot,
 - iv. The depth to the well bottom measured to the nearest 0.01 foot,
 - v. The amount of water purged from the well,
 - vi. The temperature, pH and specific conductance of the sampled groundwater at each well,
 - vii. Completed chain-of-custody forms,
 - viii. The date(s) analyses were performed,
 - ix. The individual(s) who performed the analyses,
 - x. The analytical techniques or methods uses; the method of sample preservation; and quality assurance methods, and
 - xi. The results of such analyses.
5. The Permittee shall enter all monitoring, testing and analytical data obtained pursuant to the conditions of this permit into the operating record, as required by §264.73(b)(6).
6. The Permittee shall have all workplans and reports, which involve installation of groundwater monitoring wells or systems and/or the interpretation of data gathered from those wells or systems, prepared and certified by a qualified groundwater scientist.
7. The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Director required in this Section are signed and certified in accordance with 40 CFR 270.11.

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8. All plans and schedules required by the conditions of this Section are, upon approval by the Director, incorporated into this permit by reference and become an enforceable part of this permit. Any non-compliance with such approved plans and schedules shall be termed non-compliance with this permit.