

**PERMIT NO. HW-101(D)**  
**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 amended through April 14, 2016), adopted pursuant to that Act, Permit No. HW-101(D), issued on September 28, 2001, to

Signal Energy Holdings Corporation

**I.D. No. GAD051011344**

**For the following:**

Post closure care for the closed sediment cell pond and corrective action for groundwater contamination.

**Is hereby amended as follows:**

By incorporating the Revised Corrective Action Plan dated June 2021 (submitted on July 6, 2021)

**Reason for Amendment:**

Modification to the permit is necessary to incorporate the Revised Corrective Action Plan dated June 2021 (submitted on July 6, 2021).

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **25** pages, which pages are a part of this Amendment. This Amendment is hereby made a part of Permit No. HW-101(D) 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 **July 2012**, 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.



**DRAFT**

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Richard E. Dunn, Director  
Environmental Protection Division

## **I. GENERAL PERMIT CONDITIONS**

### **I.A. Scope and Effect of Permit**

- I.A.1. The Permittee is allowed to treat, store, and dispose of hazardous waste only in accordance with the conditions of this permit. Any hazardous waste treatment, storage or disposal not authorized in this permit is prohibited. 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 260-268, 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 EPD.
- I.A.2. The issuance of this permit does not convey any property rights in either real or personal property, or 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.
- I.A.3. Compliance with this permit does not constitute a defense to any action brought by the Director under Section 18, Emergency Powers, of the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-75, as amended.
- I.A.4. Nothing in this permit shall be construed to preclude the institution of any legal action under § 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 - 12-8-82, as amended.
- I.A.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, 270.43, 270.50(d) and 270.51(a). The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability of any permit condition.
- I.A.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**

- I.B.1. The Permittee shall give notice to the Director as soon as possible of 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.

- I.B.2. The Permittee shall maintain at the facility, the following documents and amendments, revisions and modifications to these documents:
- a. Complete copy of this permit and permit application, including all amendments, revisions and modifications;
  - b. Post-closure care plan(s);
  - c. Operating record as required by 40 CFR 264.73;
  - d. Inspection logs;
  - e. Corrective action plan(s);
  - f. Groundwater sampling and analysis plan;
  - g. Cost estimate for facility post-closure care as required by 40 CFR 264.144; and
  - h. Proof of Financial assurance for post-closure care and corrective action, as required by 40 CFR 264.145 and the Georgia Hazardous Waste Management Act, O.C.G.A Section 12-8-68, as amended.
- I.B.3. All amendments, revisions and modifications to any plan or cost estimate required by this permit shall be submitted to the Director for approval and permit modification as necessary.
- I.B.4. When the Permittee becomes aware that the Permittee failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such corrected facts or information.
- I.B.5. 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 includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.
- I.B.6. The Permittee may not commence treatment, storage or disposal of hazardous waste at any new or modified portion of the facility or corrective action for contaminated groundwater or soil, until the Permittee has submitted to the Director by certified mail, or hand delivery, a letter signed by the Permittee and a registered professional engineer or, when appropriate, registered professional geologist, stating that the facility has been constructed or modified in compliance with the permit where appropriate; and the Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or the Director has either waived the inspection or, or within fifteen (15) days has not notified the Permittee of his or her intent to inspect.
- I.B.7. The Permittee shall treat, store and dispose of all contaminated groundwater and other contaminated environmental media in accordance with all applicable Federal, State and local laws.

I.C. Monitoring and Reporting

- I.C.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste 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, SW 846; or Standard Methods for the Examination of Water and Wastewater; (or an equivalent method as specified in the Waste Analysis Plan). Sampling and analyses of soil, sediment, surface water, and groundwater samples shall be conducted in accordance with methods and procedures acceptable to the Director.
- I.C.2. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, or 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.
- I.C.3. The Permittee shall maintain records on-site for all groundwater monitoring wells noted in the permit and associated groundwater surface elevations, including groundwater flow rate and direction, throughout the post-closure care period.
- I.C.4. Records of monitoring information shall include:
- a. The date, exact place, and time of sampling or measurements;
  - b. The individual(s) who performed 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 methods;
  - f. The flow directions and flow rates in the uppermost aquifer at least semiannually; and
  - g. The results of such analyses and measurements in table format.
- I.C.5. The Permittee shall report to the Director or his representative orally as soon as possible, but no later than twenty-four (24) hours from the time the Permittee becomes aware of any circumstances resulting from the operation of the hazardous waste management facility (including periods of noncompliance) which may endanger human health or the environment, including but not limited to:
- a. Release of any hazardous waste(s), hazardous waste constituent(s), or hazardous constituent(s) that may cause an endangerment to public drinking water supplies.

- b. Release or discharge of hazardous waste(s), hazardous waste constituent(s), or hazardous constituent(s) or a fire or explosion, which could threaten human health or the environment outside the facility.

The description of the occurrence shall include:

- i. Name, address and telephone number of the owner or operator;
  - ii. Name, address and telephone number of facility;
  - iii. Date, time and type of incident;
  - iv. Name and quantity of materials 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 this is applicable; and
  - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
- I.C.6. Within fifteen (15) days of becoming aware of any reportable incident as in Condition I.C.5. above, which may endanger human health or the environment, the Permittee shall submit a written report of the incident covering the following:
- a. Description of occurrence as in Condition I.C.5. above;
  - 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.
- I.C.7. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.
- I.C.8. The Permittee shall report instances of non-compliance, other than those described in Conditions I.C.5. and I.C.7., semi-annually on July 15 (covering January 1 - June 30) and January 15 (covering July 1 - December 31). The report shall cover the information requested in Condition I.C.56. for each incident.
- I.C.9. All reports or other information requested by the Director shall be signed and certified according to the requirements in 40 CFR 270.11.
- I.C.10. The Permittee shall immediately notify the Division through the Department of Natural Resources Emergency Operations Center of any spill or release of oil or a hazardous substance as soon as the Permittee knows of the spill or release, as required by O.C.G.A. § 12-14-3.

I.D. Responsibilities

- I.D.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 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 Georgia Hazardous Waste Management Act, any substances or parameters at any location.
- I.D.2. Transfer of Permits. This permit is not transferable to any person(s) except after notice to the Director. This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 40 CFR 270.40(b) or 270.41(b)(2). Before transferring ownership or operation of the facility during its operating life or during its post-closure care period, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270.
- I.D.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 constitutes a violation of the Georgia Hazardous Waste Management Act and is grounds for enforcement action, permit termination, revocation and reissuance, or modification or denial of a permit renewal application.
- I.D.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 180 days before this permit expires. Pursuant to 40 CFR 270.51, this permit and all conditions herein will remain in effect beyond the permit's 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.
- I.D.5. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a 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.
- I.D.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.

- I.D.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.
- I.D.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.
- I.D.9. Reporting Planned Changes. The Permittee shall give notice to the Director of any planned physical alterations or additions, which impact any SWMUs, AOCs or the areas contaminated by them, including voluntary corrective measures, to the SWMUs or AOCs .

I.E. Definitions

For purposes of this permit, terms used herein shall have the same meaning as those in 40 CFR Parts 124, 260, 264, 268 and 270, 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.

- I.E.1. Area of Concern (AOC) for the purposes of this permit includes any area having a probable release of a hazardous waste(s) or hazardous waste constituent(s) or hazardous constituent(s) 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.
- I.E.2. Contamination for the purposes of this permit refers to the presence of any hazardous waste(s), hazardous waste constituent(s) or hazardous constituent(s) in a concentration that exceeds the naturally occurring concentration of that waste or constituent(s) in the immediate vicinity of the facility (in areas not affected by the facility).
- I.E.3. Corrective Action for prior or continuing releases from solid waste management units, as well as for other releases as described in Condition I.E.13. below, for the purposes of this permit, shall be as specified in 40 CFR 264.101, and may include "corrective action" as provided for in 40 CFR 264.100 and other remedial actions for any environmental media as deemed appropriate by the Director to protect public health or the environment. The terms "releases" and "other releases", when used in reference to corrective action requirements of this permit, shall not include releases

that the Permittee can demonstrate have been fully remediated within 30 days of discovery.

- I.E.4. Corrective Action Management Unit (CAMU) for the purposes of this permit, includes any area within a facility that is designated by the Director under 40 CFR 264 Subpart S, for the purpose of implementing corrective action requirements under 40 CFR 264.101. A CAMU shall only be used for the management of remediation waste pursuant to implementing such corrective action requirements at the facility.
- I.E.5. Director shall mean the director of the EPD or his/her authorized representative.
- I.E.6. EPA shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.
- I.E.7. EPD shall mean the Georgia Environmental Protection Division of the Department of Natural Resources and any successor departments or agencies of the State of Georgia.
- I.E.8. Extent of Contamination for the purposes of this permit is defined as the horizontal and vertical area / volume in which the concentrations of hazardous waste(s), hazardous waste constituent(s) or hazardous constituent(s) in the environmental media being investigated are above estimated quantitation limits, as defined in the most recent version of SW-846, naturally occurring concentrations representative of the facility or other appropriate delineation approved by the Director.
- I.E.9. Hazardous Constituents for the purpose of this permit are those substances listed in 40 CFR Part 261 Appendix VIII, and 40 CFR Part 264, Appendix IX, The Ground-Water Monitoring List, as revised or superseded.
- I.E.10. Land Disposal Facility for the purposes of this permit is a facility, and all contiguous property under the control of the owner or operator, that uses a surface impoundment, landfill, land treatment unit, waste pile unit to manage or dispose of hazardous waste pursuant to Section 12-8-66 of the Georgia Hazardous Waste Management Act, as amended, and RCRA Section 3004, as amended.
- I.E.11. Qualified Groundwater Scientist for the purposes of this permit means a scientist or engineer 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, professional certifications, or completion of accredited university courses, that enable that individual to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.
- I.E.12. 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(s), hazardous waste constituent(s) or hazardous constituent(s).



I.E.13. Remediation Waste for the purposes of this permit includes all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediment) 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 40 CFR 264.101 and RCRA Section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA Sections 3004(v) or 3008(h) for releases beyond the facility boundary.

I.E.14. 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 might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous waste.

I.E.15. Temporary Unit (TU) for the purposes of this permit includes any temporary tanks and/or container storage areas used solely for treatment or storage of hazardous remediation waste during remediation activities. Designated by the Director, such units must conform to specific standards, and may only be in operation for a period of time as specified in this permit.

I.F. Conditions Related to Compliance with General Facility Standards  
(40 CFR Part 264 Subparts B, C, D, E, G, H)

I.F.1. The Permittee must follow the procedures and plans described in detail in the permit application dated July 2012, as amended, which are hereby incorporated by reference and include at least the following:

- a. Closure and Post-Closure Plans, Appendix 1 of the permit application
- b. Revised Corrective Action Plan dated June 2021 (submitted on July 6, 2021)
- c. Groundwater Monitoring, Section

I.F.2. The following activities must be carried out as prescribed in 40 CFR Part 264 Subparts B, C, D and E, and in accordance with the appropriate sections of the permit application:

- a. Inspections and Repairs Log - 40 CFR 264.15(c) and (d)
- b. Security - 40 CFR 264.14(b) and (c)
- c. Personnel training - 40 CFR 264.16
- d. Operating record - 40 CFR 264.73
- e. Disposition of records - 40 CFR 264.74; and
- f. Reports - 40 CFR 264.73, 264.74, 264.75 and 264.77.

I.F.3. The following activities must be carried out as prescribed in 40 CFR Part 264 Subpart G and H, in accordance with the appropriate sections of the permit application, and Rules 391-3-11-.05 and -.10:

- a. Post-closure care and use of property - 40 CFR 264.117
- b. Post-closure plan, amendment of plan - 40 CFR 264.118
- c. Notice to local land authority and in deed to property - 40 CFR 264.119 and 264.120; and
- d. Financial Assurance for Post-Closure. Continuous compliance with 40 CFR 264.145 must be maintained by the Permittee for the amount of the cost estimate for post-closure as required by 40 CFR 264.144 until released by the Director as provided in 40 CFR 264.145(i). Continuous compliance with Rule 391-3-11-.05 is also required.

I.F.4. Permittee must comply with 40 CFR 264.148 whenever necessary.

I.G. Special Conditions Applicable to Entire Facility

I.G.1. Annual Certification of Program to Reduce the Volume and Toxicity of Hazardous Wastes

The Permittee shall be required to certify no less often than annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable, and the proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment, in accordance with 40 CFR 264.73(b)(9).

I.G.2. Land Disposal Restrictions

40 CFR 268 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be placed on or in a land treatment, storage or disposal unit. The Permittee shall maintain compliance with the requirements of 40 CFR Part 268. Where the Permittee has applied for an extension, waiver or variance under 40 CFR 268, the Permittee shall comply with all restrictions on land disposal under 40 CFR 268 once the effective date for the waste has been reached pending final approval of such application.

**II. POST-CLOSURE CARE FOR SURFACE IMPOUNDMENT CLOSED AS A LANDFILL**

II.A. Unit Identification

The Permittee shall provide post-closure care for the RCRA Hazardous Waste Management Unit (HWMU) closed as a landfill in accordance with 40 CFR 264.310. The unit is identified

as Pond 1 Sediment Cell. The location of Pond 1 Sediment Cell is shown on Figure B-1 of the permit application.

II.A.1. The Permittee must maintain permanent and readily identifiable benchmarks showing the boundaries of the regulated units as established in the closure certification for each unit. Such benchmarks must be initially placed by a registered surveyor.

II.B. Waste Identification:

The Permittee has disposed of hazardous wastes F037 and F038 in the Pond 1 Sediment Cell HWMU as described in Part A of the permit application dated August 3, 2012. The units are closed with waste, waste residues, contaminated soil and contaminated groundwater remaining in-place.

II.C. Monitoring and Inspection:

II.C.1. The Permittee shall follow and document the inspections performed in accordance with the post-closure care plan in Section I.2.a. of the permit application and as required by 40 CFR 264.15 and 40 CFR 264.310.

II.D. Post-closure Care:

The Permittee shall perform post-closure care for the SWMU/AOC (M Tanks) in accordance with the post-closure plan in Section I.2.a of the permit application and as required by 40 CFR 264.117 through 264.120 and 264.310(b). Post closure care shall conclude, and this permit shall terminate upon accomplishment of the following:

- (a) Implementation of the Revised Corrective Action Plan dated June 2021, except for Section 5.3 – Frequency and Duration of Sampling Program.
- (b) EPD approval of a corrective action completion report that demonstrates the successful completion of the actions in II.D.(a).
- (c) Execution of an Order between the Director and the Permittee, pursuant to the Georgia Hazardous Waste Management Act, specifying the Permittee's remaining obligations as specified in Section 5.3 – Frequency and Duration of Sampling Program of the Revised Corrective Action Plan dated June 2021.

### III. **GROUNDWATER MONITORING AND CORRECTIVE ACTION**

III.A. Monitoring Well Location and Construction

The Permittee shall install and/or maintain a groundwater monitoring system to comply with the requirements of 40 CFR 264.95, 264.97 and 264.100, and The Revised Corrective Action Plan dated June 2021 as specified below:

III.A.1. The Permittee shall maintain the following groundwater monitoring wells as shown on Figure E-1 of the permit application. For those wells located outside of the facility boundary, the Permittee should maintain such wells consistent with the Permittee's ability to gain access to the property on which they are located.

a. On Signal Property

MW-1B	MW-2R	MW-2B	MW-3R	MW-4R
MW-4B	MW-5R	MW-6R	MW-6B	MW-7B
MW-8R	MW-9R	MW-9B	MW-10R	MW-11B
MW-12B	MW-13B	MW-15R	MW-15B	MW-16R
MW-19R	MW-22R	MW-23R	MW-24R	MW-25R
MW-26R	MW-27R	MW-28B	POCW-2	POCW-3
POCW-4				

b. On Arrivec Chemicals Property

MW-17R	MW-17B	MW-18R
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III.A.2. The following groundwater monitoring wells shall define the point of compliance (POC), as required by 40 CFR 264.95.

a. The Pond 1 Sediment Cell HWMU

POCW-2	POCW-3	POCW-4
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III.A.3. The Permittee shall maintain MW-7B as the background monitoring well for the entire facility at the location specified on Figure E-1 of the permit application, with MW-11B as an alternate background well.

- a. If the groundwater in these wells no longer represents background water conditions for the facility, the Permittee shall submit a plan to install an additional well(s) as necessary to determine the quality of groundwater unaffected by facility operations. The Permittee shall submit the plan within 90-days of a determination by either the Permittee or the EPD that the wells no longer represent background water conditions. The Permittee shall further take all steps necessary, within its control, to ensure the additional well(s) are installed within one-year of said determination.

III.A.4 The following groundwater monitoring wells shall be sampled as indicated in the Revised Corrective Action Plan, dated June 2021.

MW-6R	MW-50	MW-51	MW-15R
AW-1	MW-6B	MW-15B	

III.A.5 The Permittee shall install and maintain additional groundwater monitoring wells as necessary, or as specified by the Director, to assess changes in the rate and extent of any plume of contamination, to assess the effectiveness of corrective action, or as otherwise deemed necessary to maintain compliance with 40 CFR 264.95, 40 CFR 264.97 and 40 CFR 264.100. A plan for the design, location, and

installation of any additional monitoring well(s) shall be submitted to the Director ninety (90) days prior to any well installation which, at a minimum, shall include:

- b. Well construction technique(s) including casing depth(s), screen length and proposed total depth of well(s);
- c. Well development method(s);
- d. A complete description of well construction materials;
- e. A schedule of implementation for well construction; and
- f. Provisions for determining the lithologic character, hydraulic conductivity and grain size distribution for the applicable aquifer unit(s) at the location of the new well(s).

### III.B. Groundwater Protection Standard

III.B.1. The groundwater protection standard as required under 40 CFR 264.92, shall consist of Table I, which lists the hazardous constituent(s) and their respective concentration limits as required under 40 CFR 264.93 and 264.94, respectively.

III.B.2. The groundwater protection standard further applies to all hazardous waste, hazardous waste constituents or hazardous constituent releases, as deemed appropriate by the Director, to protect human health and the environment.

III.B.3. Background concentrations for the groundwater protection standard shall be determined pursuant to Condition III.F.

### III.C. Compliance Period

III.C.1. The compliance period under 40 CFR 264.96 shall begin with the effective date of this permit and continue until the end of the post-closure care period defined in 40 CFR 264.117.

III.C.2. If the Permittee is engaged in a corrective action program at the end of the compliance period, as defined in Condition III.C.1. above, the compliance period is extended until the Permittee demonstrates that the groundwater protection standard of 40 CFR 264.92 has not been exceeded for a period of three (3) consecutive years, as required by 40 CFR 264.96(c), and until corrective action as required under 40 CFR 264.100 has been terminated, as specified in Condition III.I.2.

### III.D. Corrective Action Program

It is anticipated that implementation of the Revised Corrective Action Plan dated June 2021 will significantly reduce the time for groundwater monitoring after the permit has been terminated. Regardless, the sampling and monitoring program will be conducted under the previously mentioned order in Condition II.D.(c). between the Permittee and the Director of EPD.

- III.D.1. The Permittee shall conduct a corrective action program to remove or treat in place any hazardous constituent(s) above the groundwater protection standard (Condition III.B.) that exceed concentration limits in Table I in groundwater between the point of compliance and the downgradient property boundary, as required under 40 CFR 264.100(e)(1), and beyond the property boundary, as required under 40 CFR 264.100(e)(2), unless the Permittee can demonstrate to the satisfaction of the Director that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such action beyond the property boundary, or such action is not necessary to protect human health or the environment.
- III.D.2. The Permittee shall treat, store, and dispose of all contaminated groundwater in accordance with all applicable Federal, State and local laws.
- III.D.3. If the groundwater protection standard is met during the compliance period, the Permittee must continue corrective action to the extent necessary to ensure that the groundwater protection standard is not exceeded. Corrective action must continue until the groundwater protection standard has not been exceeded for three (3) consecutive years, as required under 40 CFR 264.100(f).

III.E. Monitoring Program

The Permittee shall maintain a groundwater monitoring program to demonstrate the effectiveness of the corrective action program required under 40 CFR 264.100, and 40 CFR 264.101 as related to other releases intersecting any contaminant plume emanating from the regulated units. Groundwater monitoring shall be conducted in conformance with the requirements of 40 CFR 264.100(d), The Revised Corrective Action Plan dated June 2021, and as specified below:

- III.E.1. The Permittee shall collect, preserve, track, control, ship and analyze all groundwater samples as required by Condition I.C.1. and as specified by the Sampling and Analysis Plan in Section E.4.c of the permit application.
- III.E.2. The Permittee shall determine groundwater quality at all compliance point monitoring wells identified in Condition III.A.2.a for all constituents specified in Table I semi-annually throughout the compliance period, including any extension to the compliance period, as defined under Condition III.C.2.
- III.E.3. The Permittee shall collect and analyze samples for those constituents specified in Table I semi-annually through the compliance period specified by Condition III.C., at the following monitoring wells:

MW-1B	MW-2R	MW-2B	MW-3R	MW-4R
MW-4B	MW-5R	MW-6R	MW-6B	MW-7B
MW-8R	MW-9R	MW-9B	MW-10R	MW-11B
MW-12B	MW-13B	MW-15R	MW-15B	MW-16R
MW-19R	MW-22R	MW-23R	MW-24R	MW-25R

MW-26R	MW-27R	MW-28B	POCW-2	POCW-3
POCW-4				

for the purpose of demonstrating the effectiveness of the corrective action program required by Condition III.D.

The following groundwater monitoring wells shall be sampled as indicated in the Revised Corrective Action Plan, dated June 2021.

MW-6R	MW-50	MW-51	MW-15R
AW-1	MW-6B	MW-15B	

- III.E.4. The groundwater monitoring program shall include a determination of the groundwater surface elevation and total depth in all monitoring wells each time groundwater is sampled. Permittee shall determine the groundwater flow rate and direction in all aquifers at least semi-annually.
- III.E.5. Compliance with the groundwater protection standard, as defined under Condition III.B., will be based upon groundwater monitoring data obtained under Condition III.E. that all constituents listed in Table I no longer exceed the groundwater protection standard at the point of compliance or any other monitoring point within or adjacent to the plume of contamination. Comparisons for the purpose of determining compliance shall be made, when necessary, utilizing the procedure described in 40 CFR 264.97(h) and (i).
- III.E.6. The Permittee shall analyze a sample from at least one of the compliance point monitoring wells identified in Conditions III.A.2.a., plus any additional wells specified by the Director, for all constituents in Appendix IX of 40 CFR Part 264, at least annually, to determine whether additional hazardous constituents are present in the uppermost aquifer and, if so, at what concentrations. The Appendix IX sampling will be rotated annually among the compliance point wells so that each well is sampled every three years. The Appendix IX results must be submitted within 120 days of the sampling. If the Permittee finds Appendix IX constituent(s) in the groundwater that are not identified in Table I, then the Permittee may resample within one (1) month of receiving the laboratory analytical report and repeat the analysis. If the second analysis confirms the presence of new hazardous constituents, then the Permittee must report those concentrations of these additional constituents to the Director within seven (7) days of receiving the results of the second analysis, and request that these additional hazardous constituents be added to Table I. If the Permittee chooses not to resample, then the Permittee must report those additional concentrations to the Director within seven (7) days after receiving the results of the initial analysis and request that these hazardous constituents be added to Table I.
  - a. The Permittee shall not be required to add constituents to Table I if they appear in Table II, as having been determined to have originated from the Arrivec Chemical facility; and

- b. Due to the ubiquity and immobility of dioxins at the facility, they need be added to Table I only when the Permittee desires to make the demonstrations referenced in Conditions III.C.1., III.E.5. and III.I.2.
- c. Compliance point wells with free product in them may be excluded from the sampling rotation but must be included as part of the LNAPL Corrective Action Plan contained in in Section E.5.d.6. of the permit application.

### III.F. Determination of Background Concentrations

III.F.1. The Permittee shall determine background concentrations in monitoring well MW-7B for all constituents specified in Table I semi-annually throughout the compliance period, including any extension to the compliance period, as defined under Condition III.C.2.

III.F.2. Upon establishment, the background concentrations shall automatically be incorporated into Table I.

### III.G. Sampling and Analysis Procedures

The Permittee shall use the following techniques and procedures when obtaining and analyzing samples from the groundwater monitoring wells described in condition III.A., to provide a reliable indication of the quality of the groundwater as required under 40 CFR 264.97(d) and (e):

III.G.1. Groundwater sampling must be performed in accordance with the EPA's Region IV Science and Ecosystem Support Division (SESD) Procedures found in its Field Branches Quality System and Technical Procedures. This includes sampling of groundwater and management of samples prior to analysis, pump operation, groundwater level and well depth measurement, and field measurement procedures.

III.G.2. Samples shall be collected, preserved, shipped and analyzed in accordance with the procedures specified in Condition I.C.1. and Section E.4.c of the permit application or as specified in the most recent EPA Manual SW-846, using whichever procedure is most recent at the time of analysis.

III.G.3. Samples shall be tracked and controlled using the chain of custody procedures specified in Section E.4.c. of the permit application.

### III.H. Reporting, Recordkeeping and Response

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

III.H.2. The Permittee shall submit a report to the Director on the effectiveness of the corrective action program semi-annually as required by 40 CFR 264.100(g),



including all monitoring, testing and analytical data obtained under Conditions III. and IV.

### III.I. Permit Modification

III.I.1. If the Permittee at any time determines that the corrective action program no longer satisfies the requirements of 40 CFR 264.100 or Condition III.D. for releases of a hazardous waste, hazardous waste constituent, or hazardous constituents that originate from the regulated unit, he must, within ninety (90) days, submit an application for a permit modification to make any appropriate changes in the program.

III.I.2. If the Permittee meets or exceeds the requirements of 40 CFR 264.100 and meets the groundwater protection standard at the point of compliance and throughout the contaminant plume for three (3) consecutive years, the Permittee may submit an application for a permit modification pursuant to 40 CFR 270.41 and 40 CFR 270.42 to terminate corrective action and establish an alternate groundwater monitoring program.

### III.J. Duty of Permittee

III.J.1. The Permittee shall assure that groundwater monitoring and corrective action measures necessary to achieve compliance with 40 CFR 264.100 and the groundwater protection standard are taken during the compliance period.

## IV. **CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN**

### IV.A. Applicability

IV.A.1. The requirements of this Section apply to the determination of the need for and subsequent implementation of corrective action for releases from all solid waste management units (SWMUs) and areas of concern (AOCs) contained within the facility property boundary as required by 40 CFR 264.101(a) and, as required by 40 CFR 264.101(c) and Section 12-8-66 of the Georgia Hazardous Waste Management Act, those extending beyond the facility property boundary. The requirements of this Section apply but are not limited to the following SWMUs and AOCs identified in the permit application:

- a. The SWMUs and AOCs identified in Appendix A.I which require further investigation through a Verification Investigation and/or a RCRA Facility Investigation;
- b. The SWMUs and AOCs identified in Appendix A.II which require no further investigation at this time;

- c. The SWMUs identified in Appendix A.III which are regulated units as defined by 40 CFR 264.90(a)(2);
- d. The SWMUs and AOCs identified in Appendix A.IV which require corrective action; and
- e. Any additional SWMUs or AOCs discovered after the date of issuance of this permit due to groundwater monitoring, on-going field investigations, environmental audits, and other means.

IV.B. Notification and Assessment Requirements For Newly Identified SWMUs and AOCs

IV.B.1. Within fifteen (15) days of the Permittee's discovery of any SWMU's or AOC's under Condition IV.A.1.e., the Permittee shall notify the Director in writing of such discovery.

IV.B.2. The Director shall notify the Permittee in writing of the discovery of any SWMUs or AOCs under Condition IV.A.1.e.

IV.B.3. Within sixty (60) days of the Permittee's discovery pursuant to Condition IV.B.1. or within sixty (60) days of receipt of the Director's notification under Condition IV.B.2., the Permittee shall submit to the Director the following information for each SWMU or AOC:

- a. Location on a topographic map of appropriate scale as required under 40 CFR 270.14(b)(19);
- b. Designation of type and function of the unit;
- c. General dimensions, capacities and structural description (supply any available plans/drawings);
- d. Dates that the unit was operated;
- e. Specification of all wastes that have been managed at/in the SWMU or AOC to the extent available; and
- f. All available information pertaining to any release of hazardous waste, hazardous waste constituents or hazardous constituents (to include groundwater data, soil analyses, air, and/or surface water data).

IV.B.4. The Director shall review the information submitted pursuant to Condition IV.B.3. and notify the Permittee in writing as to the need for further investigation, interim measures/stabilization requirements and/or corrective action as required by Condition IV.D., IV.E., IV.F., or IV.G.

IV.C. Notification Requirements for Newly Discovered Releases at Previously Identified SWMUs and AOCs

IV.C.1. Within thirty (30) days of the Permittee's discovery of a previously unidentified release(s) from any SWMU or AOC identified under Condition IV.A.1., the Permittee shall notify the Director in writing of such discovery.

IV.C.2. The Director shall notify the Permittee in writing of the discovery of any previously unidentified release(s) from any SWMU or AOC previously discovered under Condition IV.A.1.

IV.C.3. Within ninety (90) days of the date of the Permittee's discovery under Condition IV.C.1., or within ninety (90) days of the date of the Director's notification under Condition IV.C.2., the Permittee, if requested by the Director, shall submit to the Director an RCRA Facility Investigation Workplan pursuant to Condition IV.F.

IV.D. Verification Investigation (VI)

IV.D.1. The Director may require the Permittee to submit a VI Workplan for any SWMU or AOC discovered under Condition IV.A.1.e. on a schedule to be determined by the Director. The VI Workplan shall describe all actions necessary to verify the presence or absence of a release for any SWMU or AOC. The VI Workplan shall include a schedule of implementation which includes intermediate milestones beginning with the Permittee's receipt of the Director's written approval of the VI Workplan continuing through submission of the VI Report required by Condition IV.D.3.

IV.D.2. Upon receipt of the Director's written approval of the VI Workplan, the Permittee shall implement the Workplan in accordance with the schedule of implementation contained therein.

IV.D.3. The Permittee shall submit a VI Report in accordance with the schedule of implementation contained within the approved VI Workplan. The VI Report shall describe all actions taken to verify the presence or absence of releases including all data collected during the VI. The Director shall review the VI Report and notify the Permittee in writing of the need for further investigation, interim measures and/or corrective action pursuant to Condition IV.E., IV.F. and/or IV.G., or of a finding of no further action required.

IV.E. Interim Measures

IV.E.1. The Permittee may conduct interim measures to contain, remove or treat contamination resulting from releases from any SWMU or AOC as necessary to protect human health and the environment. Such interim measures may be conducted concurrently with any investigations required by this permit.

IV.E.2. Within thirty (30) days of the Permittee's determination that interim measures are necessary, or within thirty (30) days of receipt of the Director's written notice that interim measures are necessary, the Permittee shall submit to the Director an Interim Measures (IM) Workplan. The IM Workplan shall describe all measures necessary to contain, remove or treat contamination resulting from releases from any SWMU or AOC. The IM Workplan shall include a schedule of implementation which includes intermediate milestones beginning with the Permittee's receipt of the Director's written approval of the IM Workplan and continuing through submission of the IM Report required by Condition IV.E.5.

IV.E.3. Upon receipt of the Director's written approval of the IM Workplan, the Permittee shall implement the Workplan in accordance with the schedule of implementation contained therein.

IV.E.4. The Permittee shall provide written notice to the Director as soon as possible of any planned changes, reductions or additions to the interim measures described in the IM Workplan.

IV.E.5. The Permittee shall submit an IM Report in accordance with the schedule of implementation contained in the approved IM Workplan. The IM Report shall describe all interim measures taken to contain, remove or treat contamination resulting from releases from any SWMU or AOC. The IM Report shall also provide a summary of all data or other information obtained during implementation of the IM Workplan and a summary of the effectiveness of the interim measures in achieving the objective of Condition IV.G.

#### IV.F. RCRA Facility Investigation (RFI)

IV.F.1. Within ninety (90) days of the date of receipt of the Director's written notice pursuant to Condition IV.B.4., IV.C.2. and/or IV.D.3., or within ninety (90) days of the date of the Permittee's discovery under Condition IV.C.1., the Permittee shall submit to the Director a RCRA Facility Investigation (RFI) Workplan.

IV.F.2. The RFI Workplan shall provide a description of the specific actions necessary to determine the nature and extent of releases from any SWMU and AOC identified by Condition IV.A., IV.B., IV.C. and IV.D., including potential migration pathways for those releases (e.g. air, land, surface water, and groundwater), actual or potential receptors and applicable background concentrations. The Permittee must provide sufficient justification that migration through a potential pathway is not likely if a potential migration pathway associated with a release is not included in the Workplan. Such deletions are subject to the approval of the Director.

IV.F.3. The RFI Workplan shall include a schedule of implementation which includes intermediate milestones beginning with the Respondent's receipt of the Director's written approval of the RFI Workplan and continuing through submission of the RFI Report required by Condition IV.F.4. Upon approval by the Director, the Permittee

shall implement the RFI Workplan in accordance with the schedule contained in the approved Workplan.

IV.F.4. The Permittee shall submit an RFI Report in accordance with the schedule of implementation contained in the approved RFI Workplan. The Report shall provide a summary of all activities undertaken during the RFI to implement the approved Workplan. The Report shall provide a complete description of the full nature and extent of all releases identified during the RFI including sources, migration pathways, actual or potential receptors and applicable background concentrations. The RFI Report 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. or such action is not necessary to protect public health or the environment.

IV.F.5. The Director shall review the RFI Report required under Condition IV.F.4. and notify the Permittee in writing of the need for further investigation and/or corrective action as required by Condition IV.G. and 40 CFR 264.101(a) and 264.101(c).

IV.F.6. Within ninety (90) days of Permittee's receipt of Director's written notice for further investigation referenced in Condition IV.F.5., the Permittee shall submit an addendum to the RFI Workplan to the Director. The addendum shall provide a description of investigation activities that will be conducted to further define the nature and extent of releases from any SWMU and/or AOC.

#### IV.G. Corrective Action Program

IV.G.1. Within ninety (90) days of the Permittee's receipt of the Director's written notice for corrective action referenced in Condition IV.D.3. or IV.F.5., the Permittee shall submit a Corrective Action Plan (CAP) to the Director. The CAP shall provide a description of the corrective measures to be taken with regard to releases from any SWMUs and AOCs identified in Condition IV.D.3. or IV.F.1. The CAP shall be submitted as a request for permit modification in accordance with 40 CFR 270.41 and 270.42.

IV.G.2. The CAP shall include a schedule of implementation with intermediate milestones beginning with the issuance of the permit modification requested pursuant to Condition IV.G.1. and continuing through the post-closure period.

IV.G.3. The CAP shall include a demonstration of financial responsibility conforming to Condition I.F.3.

IV.G.4. The Permittee shall identify media remediation levels for corrective action based upon the Georgia EPD Guidance For Selecting Media Remediation Levels At RCRA SWMUs.

IV.G.5. The Permittee shall conduct a corrective action program as to remove or treat in place any hazardous waste(s), hazardous waste constituent(s), or hazardous constituent(s) that have been released to groundwater, surface water and/or soils that exceed the remediation levels identified per Condition IV.G.4.

- a. Within the facility property boundary; and
- b. Beyond the facility property boundary, unless the Permittee can demonstrate to the satisfaction of the Director that:
  - i. despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such action; or
  - ii. such action is not necessary for the protection of human health or the environment.

IV.G.6. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility's boundary where off-site access is denied.

IV.G.7. The Permittee shall treat, store, and dispose of all contaminated groundwater, surface water, sediments, and soil materials in accordance with all applicable federal, state and local laws.

#### IV.H. Schedule of Compliance

IV.H.1. All plans and reports required by this Section are subject to the approval of the Director prior to implementation. The Permittee shall revise all submittals as specified by the Director.

IV.H.2. For any schedule of implementation required by this Section, if the time required to complete any activity is more than one year, the schedule shall specify interim dates for the submission of reports of progress towards satisfaction of the interim requirements.

IV.H.3. Extensions of the due date for the submittal of any plan or report may be granted by the Director based on the Permittee's demonstration that sufficient justification for the extension exists. . Extensions of over thirty (30) days must be requested in writing.

IV.H.4. Upon approval by the Director, all plans and reports shall be enforceable as conditions of this permit.

IV.H.5. If at any time the Permittee determines that any plan or report required under this Section no longer satisfies the requirements of this permit or 40 CFR 264.101, the Permittee must submit an amended plan or report to the Director within thirty (30) days of such determination.

IV.H.6. If at any time the Director determines that any plan or report required under this Section no longer satisfies the requirements of this permit or 40 CFR 264.101, the Director will so notify the Permittee in writing and request that an amended plan or report be submitted in accordance with a schedule to be specified.

IV.I. Permit Modification

IV.I.1. If required to develop a corrective action plan under Condition IV.G., the Permittee shall apply for a permit modification pursuant to 40 CFR 270.42 to incorporate the plan into the permit.

IV.I.2. If at any time the Permittee determines that the corrective action plan(s) no longer satisfies the requirements of 40 CFR 264.101 or Condition IV.G. for releases of hazardous constituents originating from a SWMU or AOC, the Permittee must, within ninety (90) days, submit an application for a permit modification to make any appropriate changes in the plan(s).

IV.I.3. If the Permittee meets or exceeds the requirements of 40 CFR 264.101 and Condition IV.G.5. for three consecutive years for any SWMU or AOC, the Permittee may submit an application for permit modification pursuant to 40 CFR 270.42 to the Director to discontinue the active portion of the corrective action plan(s) and to establish an alternate groundwater monitoring program for that unit(s).

**TABLE I.**  
**GROUNDWATER PROTECTION STANDARDS**

<u>HAZARDOUS CONSTITUENT(S)</u>	<u>CONCENTRATION LIMIT (mg/l)</u>
Benzene	Background*
Ethyl Benzene	Background*
Toluene	Background*
Xylene	Background*
Naphthalene	Background*
Isopropyl Benzene	Background*
n-Propylbenzene	Background*
1,3,5-Trimethylbenzene	Background*
1,2,4-Trimethylbenzene	Background*
n-Butylbenzene	Background*
sec-Butylbenzene	Background*
tert-Butylbenzene	Background*
Isopropyltoluene	Background*
Acetone	Background*
2-Methylnaphthalene	Background*
1,2-Dichlorobenzene	Background*
Chlorobenzene	Background*
cis-1,3-Dichloropropene	Background*
1,1-Dichloropropene	Background*
4-Methylphenol	Background*
di-n-Octylphthalate	Background*
Diethylephthalate	Background*

\* Determined according to procedures specified in Condition III.F.



**TABLE II.**

**GROUNDWATER CONSTITUENTS ATTRIBUTABLE TO ARIVEC CHEMICALS**

HAZARDOUS CONSTITUENT(S)

Perchloroethene

Trichloroethene

cis-1,2-Dichloroethene

trans-1,2-Dichloroethene

1,1-Dichloroethene

Vinyl chloride

Chloroethane

1,1,1-Trichloroethane

1,1,2-Trichloroethane

1,1-Dichloroethane

1,2-Dichloroethane

Carbon Tetrachloride

Methylene chloride

Chloromethane

Methyl Ethyl Ketone

Methyl-n-Butyl Ketone

Methyl Isobutyl Ketone

2-Methylphenol

2,4-Dimethylphenol

1,4-Dichlorobenzene

1,2-Dichloropropane

1,2,3-T richloropropane

2-Chlorotoluene

1,2,4-Trichloro benzene

**Appendix A**

I. Solid Waste Management Units and Areas of Concern that require no further action at this time:

Production Area	SWMU # 1
Wastewater Treatment Ponds	SWMU # 2
API Separator (closed)	SWMU # 3
Recreation Building	SWMU # 4
Railroad Spur	SWMU # 5
M-Tank Dump	SWMU # 6
Warehouse Area	SWMU # 7
Tanks (8-1 through 8-4)	SWMU # 8-1
	SWMU # 8-2
	SWMU # 8-3
	SWMU # 8-4
Tanker Loading Area	SWMU # 9
East Corner	SWMU # 10
Abandoned Tanker #1 and #2	SWMU # 11-1
	SWMU # 11-2
Surface Ditches	SWMU # 12
Cracker Creek	SWMU # 13
Waste Pile	SWMU # 14

II. Solid Waste Management Units which are regulated units as defined by 40 CFR 264.90(a)(2) and cleaned closed:

Pond 1 Sediment Cell (HWMU)  
Tank 100