DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

89 Kings Highway
Dover, DE 19901
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dnrec.delaware.gov

Sanitary Landfill Operating Permit SW-25/04
Solid-Waste Facility Permit

Effective Date: **[INSERT EFFECTIVE DATE]**

Last Modified: n/a

Expiration Date: **[INSERT EXPIRATION DATE]**

Permittee: Delaware Solid Waste Authority
601 Energy Lane
Dover, Delaware 19901

Pursuant to 7 **Del.C.** Ch. 60, §6003 and 7 **DE Admin. Code** §1301, Delaware's Regulations Governing Solid Waste, approval of the Department of Natural Resources and Environmental Control (DNREC; Department) is hereby granted to operate the Southern Solid Waste Management Center facility located in Georgetown, Delaware, subject to the terms and conditions of this permit. All terms and conditions of this permit are enforceable by the Department.

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I. GENERAL CONDITIONS

A. Permit Issuance

Pursuant to 7 **Del.C.** §6003 and 7 **DE Admin. Code** §1301, Delaware's Regulations Governing Solid Waste (DRGSW), the Department of Natural Resources and Environmental Control issues Solid-Waste Facility Permit SW-25/04 (Permit) to Delaware Solid Waste Authority's (DSWA) Southern Solid Waste Management Center (SSWMC) for the purpose of continued operation of the existing landfill, the construction of a new landfill cell, and other Department approved activities on the property located at 28560 Landfill Lane, Georgetown, DE 19947. Solid-Waste Facility Permit SW-25/04 incorporates the requirements of and replaces Solid-Waste Facility Permit SW-00/01.

B. Applicability

This permit applies to the 572-acre property illustrated within the Cell 6 Permit to Construct Application, dated March 24, 2024 (last revised August 2025).

1. Operation and maintenance for the solid-waste facility, including Cells 1, 2, 3, 4, 5, and 6.

2. Environmental monitoring, recordkeeping, and reporting for the solid-waste facility.

3. Closure and post-closure care of the solid-waste facility.

4. Long-Term Intermediate Cover demonstration for Cells 1 and 2 at the solid-waste facility.

5. Phased Capping Program (i.e., Cap-As-You-Go) portions of the solid-waste facility.

C. Definitions

For the purposes of this Permit, the following definitions shall apply:

CAPS – Compliance and Permitting Section of the WHS
NAVD88 – North American Vertical Datum of 1988
WHS – Division of Waste and Hazardous Substances of the DNREC

D. Application and Modification Documents

1. The Department issued permit SW-25/04 on **[INSERT EFFECTIVE DATE]** in accordance with the permit application dated March 24, 2024 (last revised August 2025) which included the following documents:

   a. SSWMC Operation Plan (dated August 2025)
   b. SSWMC Environmental Monitoring Program (dated Marh 2024)
   c. SSWMC Landfill Gas Migration Monitoring Plan (dated November 2023)
   d. SSWMC Contingency Plan (dated December 2023)
   e. SSWMC Operation and Maintenance Manual for the Geomembrane Cap for Cells 1 and 2 (dated April 2020)
   f. DSWA Policy on Special Solid Wastes (dated June 25, 2020)
   g. DSWA Solid Waste Screening Program (dated April 2020)
   h. DSWA Asbestos Policy and Procedures (dated April 15, 2002)
   i. Engineering Drawings (dated, as applicable, March 2024 - August 2025)
   j. Leachate Tank Drawings (dated, as applicable, November 2024 – July 2025)
   k. Technical Specifications (dated, as applicable, March 2024 – December 2024)

   And all communications related to the content of the application prior to this Permit being issued.

2. Other plans, letters, procedures, and policies specifically referenced in this Permit.

3. All previously approved and applicable documents, applications, or correspondence.

E. General Conditions

This Permit is issued subject to the following general conditions:

1. This Permit does not relieve the DSWA, nor any of its client generators, contractors, or persons/entities acting on the behalf of the DSWA from complying with any other applicable federal, state, or local laws, regulations or ordinances. All construction and operations at the solid-waste facility shall be conducted in accordance with all federal, state, county, and municipal environmental statutes, ordinances, and regulations, including but not limited to: Delaware's Regulations Governing Solid Waste, Delaware's Regulations Governing Hazardous Waste (DRGHW), Delaware's Regulations Governing the Control of Water Pollution, the Delaware Surface Water Quality Standards, Delaware's Regulations Governing the Construction and Use of Wells, and the Delaware's Regulations Governing the Control of Air Pollution.

2. Permit SW-25/04 shall expire no later than **[INSERT EXPIRATION DATE]**.

3. The DSWA shall not operate the solid-waste facility without a valid and current Department approved financial assurance mechanism that meets the requirements of DRGSW §4.1.11. The DSWA shall submit and maintain financial assurance in accordance with DRGSW and this Permit.

4. Pursuant to DRGSW §4.1.6, the DSWA shall submit a permit application with all supporting documentation to the Department at least 180 days prior to the expiration of this Permit if applicant desires to renew the Permit. The application package should be submitted by **[INSERT DATE 180 DAYS PRIOR TO PERMIT EXPIRATION DATE]**. The DSWA may be required to submit additional documentation as needed at the Department's sole discretion.

5. The Department may initiate modification of this Permit, including, but not limited to, additional limitations, requirements, and/or special conditions, at any time if the Department finds that the existing conditions are either not adequate or not necessary to protect human health and the environment, as set forth in DRGSW §4.1.7.2, or in the event that regulations governing the activities authorized in this Permit are revised.

6. At least 60 days prior to the date of the proposed transfer, the DSWA must submit all documentation required by DRGSW §4.1.8. The actual transfer will be contingent upon the transferee meeting all Permit and regulatory requirements; until such time, the current permittee will remain liable for compliance regardless of who owns the solid-waste facility.

7. Within five (5) days of any modification to a lease agreement on file with the CAPS or of notification of lease termination of a lease agreement on file with the CAPS, the DSWA shall notify the CAPS in writing. The DSWA shall also provide the CAPS a copy of the modified lease agreement or termination notice.

8. The DSWA shall immediately make available, upon request, a readable copy of this Permit to any representative of the Department or any law enforcement officer.

9. Failure to comply with any condition of this Permit or any provisions within the aforementioned documents is a violation of this Permit.

10. Any violation of any condition of this Permit, promulgated regulations, Secretary's Orders, or provision of 7 **Del.C**. Chapters 60 and 63, shall justify termination of this Permit and implementation of appropriate enforcement action.

II. CONSTRUCTION

A. General Construction

1. The planning, design, and construction of Cell 6 shall be consistent with the requirements of DRGSW and this Permit.

2. The DSWA shall construct Cell 6 in accordance with the Cell 6 Permit to Construct Application, dated March 24, 2024 (last revised August 2025), and this Permit. Revisions to the March 24, 2024 (last revised August 2025) document related to leachate or landfill gas collection, transmission, storage or recirculation systems; construction within the limits of the landfill cell; the stormwater management systems, or the monitoring network shall require Department approval in writing or by documentation of Department approval in the minutes of the construction progress meetings.

B. Standards for Construction

1. The DSWA should not engage in clearing of the land between April 1st and July 31st. The DSWA may continue ongoing clearing operations so long as significant disturbance, resulting in at least 50 percent of the targeted land area being cleared, is performed prior to April 1st.

2. Prior to clearing or construction activities, the DSWA shall delineate the adjacent wetlands in a manner that identifies them for field staff and shall protect these wetlands from sediment and site activity throughout the construction of Cell 6.

3. Prior to construction of Cell 6, the DSWA shall provide the qualifications of the construction quality assurance (CQA) consultant team who will implement the CQA plan to the Department. The CQA consultant team must have qualified experience in monitoring the construction of the various components of the project and must include a qualified managing engineer registered as a Professional Engineer in Delaware.

4. Prior to the receipt of geomembrane, geosynthetic clay liner, filter fabric, fabric cushion, or composite drainage net at the solid-waste facility, the DSWA shall provide the Department with the manufacturer's recommendations for storage and handling of these materials. The DSWA shall also provide the manufacturer's installation instructions prior to the installation of these materials. All materials shall be stored, handled, and installed in accordance with manufacturer instructions.

5. Prior to installation of the liner system at Cell 6, the DSWA shall provide the qualifications of the geosynthetic installer including superintendent and master seamers to the Department.

6. The following adds, clarifies, or supersedes requirements within the Technical Specifications.

    a. **Electrical Geomembrane Leak Detection Survey**

        i. The DSWA shall conduct an electrical geomembrane leak detection survey for all the lined area where feasible to detect any leakage from the liner system and shall repair that before proceeding to the next construction process.
        ii. The DSWA's shall prepare the Cell 6 area for the leak location survey, including means to make electrical contact with the conductive material under the primary HDPE liner. Specifically, bare copper wires shall be installed between the primary HDPE liner and primary GCL. The bare copper wires shall be 10AWG or heavier. The bare copper wires shall be placed roughly perpendicular to the machine direction of the GCL. The wires shall be spaced to be within 100 feet of every point under the primary HDPE liner and shall exit from between the primary HDPE liner and primary GCL at opposite edges of the cell. Twenty-five feet of insulated 16 AWG or heavier copper wire shall be attached to the bare copper wire before the bare copper wire exits from between the primary and secondary HDPE liners. The ends of the insulated copper wire shall remain accessible until after the completion of the leak location survey.
        iii. The DSWA shall ensure that the sand drainage layer above the primary composite drainage net contain sufficient moisture to conduct a leak location survey. In particular, the primary composite drainage net placed on the primary HDPE liner must be wet, either from a rainfall, from excess moisture in the sand, or by wetting the primary composite drainage net with the equivalent of 0.1 inch of water (2,700 gallons/acre) immediately prior to installing the sand on the primary composite drainage net. Adequate moisture in the sand is indicated when the material appears to be darker than the dry surface material. If the surface of the sand layer is dry, water must be sprayed on the sand layer immediately prior to the leak location survey.
        iv. The DSWA shall provide electrical isolation between the material above and below the primary HDPE liner by ensuring that a minimum of 4-ft of primary HDPE liner is continuously exposed around the edge of the landfill cell near the liner anchor trench per Paragraph 3.02. Any conducting penetrations through the primary

HDPE liner such as metal pipes or concrete structures should also be isolated using complete insulating coatings.

v. The DSWA shall conduct the leak location survey on the bare secondary HDPE liner in accordance with ASTM D7002.

vi. After the primary composite drainage layer and 24-inch sand layer is placed on the primary HDPE liner and before the scrim-reinforced tarp is installed, the DSWA shall conduct a leak location survey on the sand layer using the practices for surveys with earth materials covering geomembranes in accordance with ASTM D7007. Use a 9.5-mm diameter (0.375-inch diameter) actual or artificial leak for calibration.

b. **Section 312050 - Earthwork for Solid Waste**

i. The disposal of unsuitable material cited within Part 2 Article 2.1.A.2 should read "Disposal of Unsuitable, Waste and/or Surplus Excavated Material".

ii. Common Fill sieve analysis shall meet the following limits

Sieve Size	% Finer by Weight
6-in	100
1-in	95-100
No. 4	70-100
No. 40	5-100
No. 200	0-20

iii. Structural sieve analysis shall meet the following limits

Sieve Size	% Finer by Weight
4-in	100
No. 4	20-90
No. 40	5-75
No. 200	0-40

iv. The DSWA shall perform screening required per the specification, including the maximum size, in any dimension.

c. **Section 313240 - Geocomposites**

i. Source control testing must be completed at the frequencies specified below and at least once per lot of geocomposite.

Geonet Density	50,000 sqft
Geonet Thickness	50,000 sqft
Geotextile Mass Per Unit Area	90,000 sqft
Geotextile Water Flow Rate	540,000 sqft
Geocomposite Transmissivity	540,000 sqft
Geocomposite Ply Adhesion	50,000 sqft

ii. The DSWA shall perform two project specific transmissivity tests. Test Conditions shall be: Steel plate/geomembrane/geocomposite/ steel plate, i=0.02 @ 1,200 psf, 1 hour seat time and at 15,000 psf, 100 hour seat time. Minimum Transmissivity: shall be $5.0x10^{-3}$ m^2/sec at 15,000 psf.

C. Final Report

1. After construction has been completed and prior to the placement of solid waste, the DSWA shall submit a final report for the Department's approval. The final report shall certify that the construction of the cell was completed in accordance with the Cell 6 Permit to Construct Application and related documents. The DSWA shall not place solid waste into Cell 6 until the Department has provided its written notification that the construction and the final report meet the requirements of DRGSW and this Permit. The final report shall include:

   a. A cover letter presenting the final report and signed by the permittee after their review and concurrence.

   b. Title page to include date, facility, project name, responsible party (DSWA), and preparing firm.

   c. Signature page (in accordance with the DRGSW §4.2.2.2).

   d. Table of contents, to include a detailed list of the contents of the appendices

   e. Introductory narrative with project overview.

   f. Qualifications and responsible parties. The engineer shall make a determination if specified qualifications were met throughout the project for Quality Assurance Laboratories, the general contractor, the master seamer(s), all CQC and CQA staff, and the manufacturers and installers. This section shall also include a listing of key personnel involved with the project with business contact information to include the DSWA project engineer, the design engineer, the project engineer, the general contractor's representative(s) on-site, the installers representative(s) on-site, master seamer(s), surveyor, and all staff providing CQC and CQA oversight including those responsible for off-site conformance sampling.

   g. The engineer's discussion and certification or other determination for each major component of the Cell 6 construction. The engineer shall certify if the component was completed in accordance with the permit requirements; if materials were manufactured/mined, tested, transported,

stored on-site, installed and protected in accordance with the permit requirements; and whether the work achieved the performance standard intended by the design. Major components include:

i. Earthwork and Subgrade, including materials, lines/grades, and the installation and status of instruments installed to monitor foundation settlement.
ii. Installation and quality of liner systems and materials.
iii. Installation and quality of leachate collection/detection, transport and recirculation systems, and materials, including pipes, drainage materials, composite drainage net, pumps, controls and alarms.
iv. Installation and quality of gas collection systems and materials.
v. Installation and quality of sand drainage layer.
vi. Installation and quality of surface water management systems, controls and materials.

h. Site topographic drawing showing property boundaries, outlines of landfill cells, stormwater controls, stormwater flow directions, and all environmental monitoring locations required by this permit.

i. Supporting documents for CQA to include manufacturer's quality control program manuals, manufacturer's installation recommendations (as required by the technical specifications), site visits to manufacturing facilities, CQA forms, logs, daily reports, record drawings, field quality control testing results, laboratory results, manufacturer's certifications and warranties, and project meeting minutes.

j. Record drawings including detail drawings for control components.

k. Project photographs. Images shall be sorted by date and labeled to include a description of the material or activity pictured.

l. The DSWA shall provide the final report in a format agreed upon by the Department.

III. FACILITY OPERATION

A. General Operations

The DSWA shall operate the solid-waste facility in accordance with this Permit and approved plans, manuals, policies, programs, and procedures cited within Condition I.D of this Permit. The solid-waste facility shall be operated in a manner that will prevent degradation of adjacent land, air, surface water, or groundwater.

B. Protection of Control Systems

1. The DSWA shall operate the solid-waste facility in a manner that will protect the landfill liner systems, gas control systems, landfill cap systems, and leachate collection, storage, and distribution systems.

2. The DSWA shall take special precautions while placing the first two (2) feet of the first lift of solid waste. Incoming waste shall be screened to identify preferential loads to be used for the initial lift. Waste that contains solid waste that may be detrimental to the liner system shall be diverted to an active area where the initial first two (2) feet of waste are already in place. A spotter shall be present during initial lift placement to identify and remove objects that may cause damage to the liner system.

3. The DSWA shall limit the height of the waste placed over tire chips, installed in limited areas as part of the protective cover on the liner system along the North and West boundaries of Cell 4, to 67 feet.

C. Operating Hours

All receiving, processing, storing, and landfilling of acceptable wastes shall be limited to the hours specified within the Department approved Operation Plan.

D. Access

Access to the solid-waste facility shall be limited to those times when staff are on duty and to those persons authorized to deliver or remove solid waste to/from the solid-waste facility. Access to the solid-waste facility by unauthorized persons shall be prevented by the use of barriers, fences and gates, or other suitable means. Representatives of the Department may, at any reasonable time, enter the solid-waste facility to verify compliance with the conditions of this Permit, DRGSW, and 7 **Del.C.** Chapter 60.

E. Staffing

Sufficient numbers and types of personnel shall be available at the solid-waste facility to ensure operations are in accordance with DRGSW and this Permit.

F. Equipment

1. All equipment/containers necessary to ensure the operations of the solid-waste facility in accordance with the Department approved Operation Plan, DRGSW, and this Permit shall be maintained at the solid-waste facility. This shall include at least one (1) backup leakage detection system and leachate collection system pump for each cell. Backup pumps must be compatible with

the existing control and alarm systems and capable of withdrawing leachate from the leachate collection system and leak detection system. The DSWA shall use appropriate measures to manage leachate during power outages. These measures may include vacuum trucks, electrical generators, pumps with alternative power supplies, or other effective means. The DSWA may rely on the capacity of the landfill collection system for the short-term power outages. Generators shall be used in accordance with Delaware's Regulations Governing the Control of Air Pollution.

2. All equipment/containers being utilized to manage solid waste/recyclables shall be routinely cleaned and maintained according to the manufacturer's specifications.

G. Waste Transportation

1. All vehicles transporting solid waste to or from the solid-waste facility shall have a valid Delaware Solid Waste Transporter Permit issued by the Department permitted to haul solid waste associated with facility operations. Vehicles transporting solid waste must be in compliance with all other applicable federal, state, or local laws, regulations or ordinances of the jurisdiction(s) traveled to reach the next facility permitted to accept those solid wastes.

2. Any solid wastes transported off-site must go to a facility permitted to accept those solid wastes.

3. A record of transporters (company name, address, and telephone number) hauling wastes to and from the solid-waste facility shall be maintained in accordance with Condition VI of this Permit.

4. A report of the transporters that hauled wastes to and from the solid-waste facility shall be submitted to the CAPS in accordance with Condition V of this Permit.

H. Acceptable Wastes

1. The solid-waste facility is permitted to accept the following wastes for disposal in accordance with DRGSW and this Permit.

   a. Municipal Solid Waste. Municipal solid waste is defined as household waste and solid waste that is generated by commercial, institutional, and industrial sources and is similar to household waste.

   b. Special Solid Wastes. Special Solid Wastes are those waste that require extraordinary management. They include non-hazardous industrial wastes

or sludges, oil spill debris, or other related wastes not included in the municipal solid waste stream which have been accepted in accordance with the Department approved DSWA Policy on Special Solid Wastes.

c. Dry Waste. Dry Waste is defined as waste such as construction and demolition debris and other materials which have reduced potential for environmental degradation and leachate production.

2. The solid-waste facility shall **not accept regulated asbestos-containing material for disposal** into any landfill cell at the solid-waste facility. Regulated asbestos-containing solid waste may be accepted if properly packaged and placed into designated roll-off containers for transfer to and disposal at an approved disposal facility. Asbestos receipt, storage, handling, and transfer shall be done in accordance with the Department approved DSWA Asbestos Policy and Procedures.

3. The solid-waste facility shall **not accept for disposal** into any landfill cell at the solid-waste facility, whole tires in quantities greater than ten (10) per truckload or as allowed by DRGSW, whichever is more restrictive.

4. Requests to modify the list of acceptable waste shall be submitted in writing to the CAPS. The DSWA shall not implement any requested changes to the list of acceptable waste without written approval from or a permit modification by the CAPS.

I. Prohibited Wastes

1. The solid-waste facility shall not accept any waste other than what is listed within Condition III.H of this Permit. The DSWA shall exercise reasonable care to ascertain whether incoming waste is or contains prohibited waste and shall not accept the following prohibited waste:

a. Regulated hazardous waste.

b. Regulated infectious waste.

c. Licensed radioactive material (as described in the Delaware Radiation Control Regulations), and any radioactive material considered source, special nuclear, or by-product material as defined by Atomic Energy Act of 1954.

d. Liquid waste as restricted by 40 CFR §258.28.

2. Requests to modify the list of prohibited waste shall be submitted in writing to the CAPS. The DSWA shall not implement any requested changes to the list

of prohibited waste without written approval from or a permit modification by the CAPS.

3. Prohibited waste received by the solid-waste facility shall be managed in accordance with the Department approved Operation Plan.

4. Reporting the receipt of a prohibited waste at the solid-waste facility shall be in accordance with Condition V of this Permit.

J. Waste Capacity

1. The DSWA estimates that up to 2,500 tons of waste will be hauled to the facility per day and that up to 15,000 tons of waste will be hauled to the facility in a week. The DSWA does not have a limit on the amount of solid waste able to be accepted by the solid-waste facility per day.

2. Records documenting incoming loads shall be maintained in accordance with Condition VI of this Permit. Reporting shall be in accordance with Condition V of this Permit.

K. Waste Storage **[RESERVED]**

L. Waste Acceptance Procedures

1. The DSWA shall quantify, by weight and type, all acceptable incoming waste and all rejected/prohibited waste that arrives at the solid-waste facility. Records shall be maintained in accordance with Condition VI of this Permit. Reporting shall be in accordance with Condition V of this Permit.

2. The DSWA shall accept and reject incoming waste at the solid-waste facility in accordance with the Department approved DSWA Solid Waste Screening Program. All solid-waste facility personnel responsible for waste inspection, including weigh masters, heavy equipment operators, and inspector/spotters, shall comply with these procedures.

3. Records demonstrating compliance with waste acceptance procedures shall be maintained in accordance with Condition VI of this Permit. Reporting shall be in accordance with Condition V of this Permit.

M. Waste Management/Processing Procedures

1. Only waste specified within Condition III.H shall be handled/processed/landfilled at the solid-waste facility.

2. Waste handling/processing/landfilling shall be performed in accordance with the Department approved Operation Plan and limited to those areas approved by the Department.

3. The DSWA must adhere to all Waste Capacity (Condition III.J) and Waste Storage (Condition III.K) requirements at all times. Waste shall be removed from the solid-waste facility at a frequency to ensure compliance with waste capacity and waste storage criteria, as applicable.

4. Transportation of waste from the solid-waste facility must comply with all other applicable federal, state, or local laws, regulations or ordinances while waiting to be in-transit and then while in-transit to a facility permitted to accept the waste.

5. Records demonstrating compliance with waste processing procedures shall be maintained in accordance with Condition VI of this Permit. Reporting shall be in accordance with Condition V of this Permit.

N. Scavenging

Scavenging is prohibited at the solid-waste facility.

O. Salvaging

1. Salvaging shall be conducted in accordance with the Department approved Operation Plan and in a manner protective of human health and the environment. Salvaging operations shall not interfere with the management of solid waste at the solid-waste facility.

2. The DSWA shall inspect stockpile areas at least once each operating day to ensure that unwanted solid wastes (such as trash) have not been deposited. Such solid wastes shall be removed for proper disposal no later than the next business day. The DSWA shall record the results of these inspections.

3. Loads of dry waste may be diverted to a designated area on the lined area of the landfill for salvaging. Salvaged dry waste shall not include solid waste prohibited by Condition **Error! Reference source not found.** of this permit, special wastes, or regulated asbestos-containing solid wastes.

P. Groundwater Monitoring Network Maintenance and Preservation

1. The DSWA shall maintain and protect all groundwater monitoring wells associated with the solid-waste facility in accordance with Delaware's Regulations Governing the Construction and Use of Wells. The DSWA shall implement controls to protect groundwater monitoring wells from damage and

shall ensure that groundwater monitoring wells remain accessible for environmental monitoring required by this Permit. The DSWA shall report any damage to monitoring wells in accordance with Condition V of this Permit.

2. The DSWA shall replace any groundwater monitoring well that can no longer be used to provide monitoring data required by this permit. The DSWA shall notify the CAPS at least fifteen (15) days prior to installing or abandoning any groundwater monitoring wells. The installation of new groundwater monitoring wells or abandonment of existing groundwater monitoring wells shall be performed in accordance with Delaware's Regulations Governing the Construction and Use of Wells after receiving approval from the CAPS to proceed.

3. The DSWA shall inspect each groundwater monitoring well at least once per quarter. The DSWA shall document observations made during the inspections using a form acceptable to the Department and shall promptly correct all deficiencies required to maintain compliance with this permit. The DSWA shall maintain records of these inspections in accordance with Condition VI of this Permit.

Q. Surface Water[1] Management and Erosion & Sediment Controls

1. The DSWA shall provide for surface water management and erosion and sediment controls in accordance with the Department approved Operation Plan and this Permit.

2. The DSWA shall properly operate, inspect, manage, and maintain all devices, structures, conveyances, and ponds designed to monitor or manage surface water at the solid-waste facility.

3. The DSWA shall take all necessary steps to identify and prevent the discharge of pollutants and contaminated surface water[2] from the solid-waste facility. Of most significance would be the protection of the nearby Asketum Branch and Beverdam Branch. The DSWA shall take all reasonable steps in areas where waste is handled or stored off the landfill cells, and in areas where the DSWA conducts equipment maintenance, washing or refueling to use Best Management Practices to eliminate or reduce the contact of solid waste and petroleum products with surface water.

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[1] "Surface water" means water occurring generally on the surface of the earth and includes stormwater.

[2] For the purpose of this Permit, contaminated surface water means water which comes in direct contact with landfill wastes or landfill wastewater. Landfill wastewater means all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, and groundwater from monitoring or production wells on-site. Landfill wastewater includes leachate, gas collection condensate, laboratory derived wastewater, contaminated stormwater, and contact wash-water used to wash solid wastes from equipment.

4. Conveyance and discharge systems shall be kept free of debris, waste, and sediment buildup. Conveyance and discharge systems shall be inspected at least monthly. Inspection records shall be maintained in accordance with Condition VI of this Permit. Cleanouts, maintenance, and structural repairs to the surface water control systems shall be coordinated with DNREC's Sediment and Stormwater Program or DNREC's Division of Water, as applicable.

5. The DSWA shall maintain a stormwater management system at the solid-waste facility to prevent erosion of the waste and cover, prevent the accumulation of standing water, and minimize stormwater water runoff into the waste. This system shall be kept free of leachate (including condensate from the gas collection system), debris, waste, and sediment buildup.

    a. The DSWA shall ensure that contaminated stormwater from operations on the landfill is directed to the leachate collection system.

    b. The DSWA shall inspect the stormwater management system at the solid-waste facility monthly and immediately after any rainfall capable of causing erosion or surface run-off or on the next operating day if rainfall occurs while the facility is not operating. The DSWA shall record the results of the inspections, maintain records of these inspections and of their findings, and the actions taken to correct observed deficiencies. Inspection records shall be maintained in accordance with Condition VI of this Permit. Inspections shall, at a minimum, include:

        (1) Berms and swales shall be inspected for erosion, sedimentation, and debris.
        (2) Silt fences shall be inspected for damage, accumulated debris, and to ensure that fencing is firmly anchored.
        (3) Culverts and pipes shall be inspected for siltation, blockage, and debris.
        (4) Control structures and outfalls shall be inspected for siltation, debris, and damage. If stormwater is flowing at the time of the inspection, the DSWA shall visually inspect that discharge for color, sheen, floating debris, and sediment laden stormwater. The DSWA shall record their observations from the visual inspection, describing any odor noted as well.

6. The DSWA shall inspect for leachate seeps at least once each operating day and shall take all practicable steps to prevent leachate from contaminating surface water, including stormwater ponds and conveyances located off the lined areas of the landfill. The DSWA shall maintain records of the inspections and of their findings and actions taken to prevent leachate from contaminating surface water in accordance with Condition VI of this Permit. If leachate is found to be contaminating surface water, the DSWA shall report this in

accordance with Condition VI.E of this Permit and shall initiate immediate corrective measures to stop the contamination and to manage the contaminated surface water as landfill wastewater. Until the DSWA has completed necessary corrective measures, they shall conduct daily visual inspections of impacted/potentially impacted surface waters. The DSWA shall also initiate additional environmental sampling in accordance with Condition V.A.4 of this permit.

7. The DSWA shall inspect each operating day for any instance(s) where there is a potential to discharge pollutants and contaminated surface water from the solid-waste facility. The DSWA shall initiate corrective actions to confirm, quantify, and remediate discharges/correct any findings from the inspection. Inspection records shall be maintained in accordance with Condition VI of this Permit. Reporting shall be in accordance with Condition V of this Permit.

8. The DSWA shall inspect liquid accumulated within secondary containment structures prior to releasing it to ensure it has not been contaminated. The DSWA shall visually inspect the accumulated liquid for color, sheen, and odor. If the visual inspection indicates that the liquid could be contaminated, the DSWA shall conduct additional testing of the liquid to determine if it is landfill wastewater, and the DSWA shall not release landfill wastewater to surface waters at the solid-waste facility. The DSWA shall maintain records of these inspections and of their findings and actions taken to manage the accumulated liquids in accordance with Condition VI of this Permit.

9. To ensure that liquid held in unused portions of Cell 6 has not been contaminated, each operating day the DSWA shall inspect adjacent landfill slopes for leachate seeps. As part of this inspection, the DSWA shall also inspect stormwater accumulating in the unused portions of Cell 6 for color, sheen, and odor. If the visual inspection indicates that the stormwater could be contaminated, the DSWA shall conduct additional testing of the liquid to determine if it is landfill wastewater, and the DSWA shall not release landfill wastewater to surface waters at the solid-waste facility. The DSWA shall maintain records of these inspections and of their findings and actions taken to manage the accumulated liquids in accordance with Condition VI of this Permit.

10. The DSWA shall monitor surface water in accordance with Condition IV of this Permit. Laboratory and/or field instruments used during any surface water monitoring activities must be maintained and utilized in accordance with manufactures' instructions.

R. Leachate Management

1. The DSWA shall operate and maintain the leachate collection, transmission, storage, and recirculation system, including all alarm systems, in accordance with the Department approved Operation Plan and this Permit.

2. The DSWA shall clean-up all leachate spills immediately or within a time frame approved by the Department on a case-by-case basis. Spills shall be reported to the Department in accordance with Condition V of the Permit.

3. The DSWA shall monitor all leachate collection system flowmeters, pumps, controls, recording devices, and storage tanks each operating day to ensure proper functioning and recording of flows. The DSWA shall inspect for leakage from valves, flowmeters, pipe connections, and storage tanks each operating day. Inspection records shall be maintained in accordance with Condition VI of this Permit.

4. The DSWA shall inspect secondary leachate containment systems each operating day and shall remove stormwater or other liquids, as needed, to maintain the holding capacity necessary to contain leachate from a tank rupture.

5. The DSWA shall maintain all necessary permits and approvals for leachate storage and disposal. Disposal must be done in a manner which does not cause adverse environmental impact.

6. The leachate collection system shall be capable of measuring the rate and quantity of leachate flow from each sub-cell or sump area on a daily basis and shall be capable of sampling the leachate from each sub-cell or sump area.

7. The DSWA shall measure and record the quantity of leachate pumped from each leachate sump on a weekly basis. The DSWA shall also record weekly the quantity of leachate recirculated in each cell and the quantity of leachate shipped

8. Leachate recirculation shall be allowed only with prior written approval of the Department in accordance with DRGSW. Leachate recirculation is prohibited on any landfill cell which does not contain an operable, permitted, active landfill gas collection system.

9. Leachate recirculation shall be allowed only with prior written approval of the Department and only if it can be reasonably demonstrated that it will not result in significant increase in odors, contamination of groundwater, or release of methane or other landfill gases to the environment.

10. The DSWA shall monitor leachate in accordance with Condition IV of this Permit.

11. Leachate System Cleaning and Assessment:

    a. The DSWA shall ensure the leachate management system collection pipes are cleaned at least once every two (2) with a self-propelled, high pressure jetting system. The DSWA shall be responsible for the identification, assessment, and reporting of all blockages encountered as well as identification of any areas found to be inaccessible during the cleanings.

    b. At least once every four (4) years, collection pipes, or representative sections of collections pips shall be inspected by camera to assess their condition. This shall include a written assessment of the condition of the leachate collection pipes to include an assessment of clogging of pipe perforations and the location, cause, and effect of blockages encountered. In the event that such an assessment supports claim that less frequent cleaning are needed, the DSWA may initiate a request for permit modification to reduce the cleaning frequency.

S. Leakage Detection System (Cells 3, 4, 5, and 6)

1. The DSWA shall monitor all leak detection system flowmeters, pumps, controls, and recording devices each operating day to ensure proper functioning and recording of flows. The DSWA shall inspect for leakage from valves, flowmeters, and connections at riser locations each operating day. Inspection records shall be maintained in accordance with Condition VI of this Permit.

2. The leak detection system shall be capable of measuring the rate and quantity of flow from each sub-cell or sump area on a daily basis and shall be capable of sampling the liquid from each sub-cell or sump area.

3. The action leakage rate (ALR) for the leak detection system for each sub-cell or sump area at the solid-waste facility shall be based upon a monitoring period no longer than seven days. ALR's are as follows:

    a. Cell 3: 20 gallons/acre/day
    b. Cell 4: 20 gallons/acre/day
    c. Cell 5: 28 gallons/acre/day
    d. Cell 6: 42 gallons/acre/day

4. If the ALR is exceeded the DSWA shall follow the requirements of the Department approved Operation Plan. Should the ALR be exceeded for more than three (3) consecutive weeks, the DSWA shall continue to implement the three (3) consecutive weeks of exceedances requirements in the approved Operation Plan.

5. Cleaning and Assessment of the system:

    a. The DSWA shall ensure that the leak detection system collection pipes are cleaned at least once every two (2) years with a self-propelled, high-pressure jetting system. The DSWA shall be responsible for the identification, assessment, and reporting of all blockages encountered as well as identification of any areas found to be inaccessible during the cleanings. The Department may, at its discretion, waive the cleaning event for any particular year if, after demonstration by the DSWA, it determines that cleaning is not required.

    b. At least once every four (4) years, collection pipes, or representative sections of collection pipes, in each cell shall be inspected by camera to assess their condition. This shall include a written assessment of the condition of the leachate collection pipes to include an assessment of clogging of pipe perforations and the location, cause, and effect of blockages encountered. In the event that such an assessment supports the DSWA claim that less frequent cleanings are needed, the DSWA may initiate a request for a permit modification to reduce the cleaning frequency.

T. Gas Extraction

1. The DSWA shall operate and maintain the gas extraction system and flares to control odors. Malodorous gaseous emissions from the solid-waste facility shall be controlled to the extent that there is no perceivable landfill odor beyond the property boundary. The DSWA shall maintain a permit for the operation of the extraction system and flares in accordance with Delaware's Regulations Governing the Control of Air Pollution.

2. The DSWA shall operate the dry waste salvage area and process dry waste in a manner that prevents odors.

3. The DSWA shall record all odor complaints they receive concerning the solid-waste facility and shall investigate complaints in a timely manner. The DSWA shall maintain records of the odor complaints as well as the DSWA findings and any actions taken to preclude landfill odors from moving beyond the property boundary.

4. Gas migration monitoring shall be performed at least quarterly and shall be done in accordance with the Department approved SSWMC Gas Migration Monitoring Plan. The concentration of landfill gas in facility structures (except gas recovery systems) and at the facility boundary shall not exceed 25% of the Lower Explosive Limit (LEL). Gas monitoring shall be performed:

a. In structures within 1,000 feet of the landfill, as noted on the monitoring plan.

b. Outside the landfill in the perimeter gas piezometers (PGP-1 through PGP-18) and at the landfill fence line, as noted on the monitoring plan.

5. Perimeter Gas Piezometers (PGP-1 through PGP-18) shall be maintained to ensure landfill gas monitoring will be performed in accordance with the Department approved SSWMC Gas Migration Monitoring Plan.

U. General maintenance

Good housekeeping practices shall be employed to protect human health and the environment and to keep solid waste from accumulating at the solid-waste facility. This includes operating the solid-waste facility in a manner to prevent the establishment of habitats for vectors/nuisance organisms such as flies, maggots, roaches, rodents, and similar vermin.

V. Odor Control

1. The DSWA shall operate the solid-waste facility in a manner that nuisance odors, detectable outside the boundaries of the property, are prevented.

2. Odor controls shall include those cited within the Department approved Operation Plan. The DSWA shall inspect for odors at the solid-waste facility each operating day. Inspection records shall be maintained in accordance with Condition VI of this Permit.

3. The DSWA shall record all odor complaints they receive concerning the solid-waste facility and shall investigate complaints in a timely manner. A record of all odor complaints and any actions taken shall be maintained in accordance with Condition VI of this Permit.

4. The DSWA shall report odor complaints in accordance with Condition V of this Permit.

W. Litter

1. Litter includes any solid waste that is beyond the limits of the landfill cells, small load receptacles, and designated piles withing the recycling area regardless of whether it is specifically associated with the solid-waste facility operations.

2. The DSWA shall not allow litter to migrate from the solid-waste facility. The DSWA shall collect any off-site litter attributable to the solid-waste facility operations.

3. The DSWA shall use effective operational controls to minimize wind-blown litter from the working faces, cleanout areas, the dry waste salvage area, and the small load collection station. Controls shall include daily inspections for litter, compaction of waste upon receipt, use of fences and other barriers, and routine litter collection.

4. The DSWA shall provide for routine maintenance and general cleanliness of the entire solid-waste facility in accordance with the Department approved Operation Plan and this Permit. The DSWA shall inspect for litter at the solid-waste facility, including the entrance road, each operating day and ensure that litter is collected quickly and properly disposed. Inspection records shall be maintained in accordance with Condition VI of this Permit.

5. The DSWA shall record all litter complaints they receive concerning the solid-waste facility and shall investigate complaints in a timely manner. A record of all litter complaints and any actions taken shall be maintained in accordance with Condition VI of this Permit.

X. Noise Control

1. The DSWA shall operate the solid-waste facility in a manner to prevent noise generated from the solid-waste facility from interfering with any person's enjoyment of life or property.

2. The DSWA shall implement noise mitigation, as necessary.

3. The DSWA shall document any complaint received pertaining to noise emanating from the solid-waste facility and any subsequent noise mitigation practices implemented. A record of all odor complaints and any action taken shall be maintained in accordance with Condition VI of this Permit.
5. The DSWA shall report odor complaints in accordance with Condition V of this Permit.

Y. Dust Control

1. The solid-waste facility shall be operated in a manner to prevent dust emissions from causing a condition of air pollution (injurious to human, plant, or animal life or unreasonably interfering with the enjoyment of life and property).

2. The DSWA shall implement dust control measures specified within the Department approved Operation Plan.

3. The DSWA shall inspect the solid-waste facility and its egress points daily for dusty conditions and to ensure off-site tracking of waste and soil is minimized and any subsequent actions implemented to mitigate dust and tracking. In the event that the daily inspection finds that soils or materials are being tracked onto public roads, at a minimum the DSWA shall provide for street cleaning that same day. Inspection records shall be maintained in accordance with Condition VI of this Permit.

4. The DSWA shall record all dust and tracking complaints they receive concerning the solid-waste facility and shall investigate complaints in a timely manner. A record of all dust and tracking complaints and any actions taken shall be maintained in accordance with Condition VI of this Permit.

Z. Operational Inspections

While the solid-waste facility is operating, the DSWA shall conduct operational inspections of the facility and shall maintain those records in accordance with Condition VI of this Permit. As a minimum, operational inspections shall consist of the following:

1. Operating staff shall inspect the facility each operating day to identify and correct problems with access, operating equipment, leachate management systems, leachate storage tanks, surface water management systems, gas collection systems, general housekeeping, odors, noise, vectors, and other activities associated with solid-waste facility operations.

2. Operating staff shall inspect the facility at least once each week to identify and correct problems with first aid kits, personal protective equipment, and spill kits.

AA. Health and Safety

1. The DSWA shall implement health and safety practices as described within the Department approved Operation Plan and this Permit for all employees and contractors that work at the solid-waste facility that align with Occupational Safety and Health Administration (OSHA) guidance.

2. The DSWA shall provide all employees and contractors with health and safety training appropriate for each individual's assigned duties and responsibilities. Condition III.Y of this Permit outlines minimum training requirements. The DSWA shall document all health and safety training provided to each

employee and retain the records in accordance with Condition VI of this Permit.

3. First aid equipment shall be maintained and readily available at the solid-waste facility within the following locations: Administration Office, Scale House, Maintenance Office

4. As a minimum, use of personal protective equipment (PPE) shall be in accordance with 29 CFR §1910.132.

5. Any confined space entry done by employees or contractors shall be done in accordance with 29 CFR §1910.146.

BB. Fire Management and Safety

1. Fire prevention and management shall be in accordance with the Department approved Operation Plan.

2. Fire management equipment and systems shall be maintained and shall be in a fully functional condition. Fire management equipment and systems shall be kept clear of obstructions at all times. Inspections of the fire management equipment and systems shall be in accordance with the Department approved Operation Plan, applicable fire codes, and manufactures instructions. Records of the inspections shall be maintained in accordance with Condition VI of this Permit.

3. The DSWA shall ensure that all employees and contractors have been trained on the solid-waste facility's fire management procedures and retain a record of the training in accordance with Condition VI of this Permit.

4. The DSWA shall notify the CAPS in the event of a fire at the solid-waste facility in accordance with Condition V of this Permit.

CC. Training

1. The DSWA shall provide all employees and contractors who work at the solid-waste facility with training appropriate for each individual's assigned duties and responsibilities.

2. In addition to trainings required by the Department approved Operation Plan, each employee and contractor shall have trainings covering the following topics:

   a. Operational and Contingency Procedures
   b. Waste Screening

c. Health and Safety Procedures
d. Fire Prevention and Protection
e. Emergency First Aid
f. CPR Training

Unless otherwise specified, training will be provided by a nationally recognized training provider (e.g., the American Red Cross as a training provider for First Aid). Initial training for waste screening shall be completed within 60 days of hiring. All other initial trainings shall be required to be completed within 180 days of hiring. Employees and contractors shall receive annual refreshers for all required trainings unless otherwise specified by a nationally recognized training program (e.g., CPR).

3. The DSWA shall retain a record of employee and contractor trainings in accordance with Condition VI of this Permit.

DD. Contingency

1. The DSWA shall maintain capability to react appropriately to emergencies. The DSWA shall react to spills, fires, accidents, and other emergencies so as to protect human health and safety and the environment.

2. Equipment specified for use during emergencies shall be properly maintained and readily available for use.

3. There shall be one Emergency Coordinator and at least one alternate Emergency Coordinator appointed at the solid-waste facility to ensure that at least one Emergency Coordinator will be available at all times. The Emergency Coordinator shall be responsible for directing all emergency response measures necessary to protect human health and the environment in the event of fire, severe weather, explosion, or release of hazardous wastes or materials.

4. The DSWA shall maintain a current and correct list of emergency contact telephone numbers to include nearby ambulance, hospital, police, fire services, and Emergency Coordinator(s). Emergency telephone numbers of nearby ambulance, hospital, police, fire services, and Emergency Coordinator(s) shall be prominently displayed within the following locations: Administrative Office, Scale House, Maintenance Office

5. The DSWA shall notify the Department in writing within five (5) business day of changes to Emergency Coordinator(s).

6. A reliable telephone or radio communication system shall be provided at the solid-waste facility.

7. Employees and contractors responding to emergencies at the solid-waste facility shall be appropriately trained, pursuant to Condition III.Z of this Permit. Aa record of the training in accordance with Condition VI of this Permit.

8. The DSWA shall maintain a current Spill Prevention, Control, and Counter-measures Plan.

EE. Landfilling Plan

The DSWA shall fill and grade the landfill in accordance with previously approved permitting applications, which limits the maximum elevation of the landfill to no higher than 220 feet in Cells 3 and 4 and 320 feet in Cells 5 and 6. Landfilling in Cell 5 includes overfilling onto Cells 3 and 4 to reach 320 feet. All elevations are based on the NAVD88 vertical datum.

FF. Daily Cover

1. The DSWA shall place daily cover over all disposed solid waste by the end of each working day.

2. Daily cover shall consist of a minimum of six (6) inches of compacted soil, or an alternative material approved by the Department.

3. Daily cover shall control odors, disease vector breeding, animal attraction, blowing litter, scavenging; as well as reduce the potential for fires. No solid waste shall remain exposed after the end of an operating day.

4. The DSWA shall strive to ensure that daily covers left in place under waste do not hinder leachate flow downwards towards the leachate collection system.

5. At least weekly, the DSWA shall inspect exposed daily covers that remain in place for more than two (2) days and shall record the results of these inspections. The DSWA shall maintain these daily covers, as necessary, to control odors, disease vector breeding, animal attraction, blowing litter, scavenging, and fires. The DSWA shall maintain adequate surface water management controls to prevent erosion of the daily cover. The DSWA shall maintain these daily covers to prevent wastes from being exposed. In the event waste is found to be exposed, the DSWA shall take appropriate actions to ensure all wastes are no longer exposed by the end of the operating day. Records of the inspections shall be maintained in accordance with Condition VI of this Permit.

6. Department approved alternate daily covers may be used only if they perform as well as standard daily cover and are used and maintained in a manner that does not present an increased threat to human health and the environment.

The DSWA shall store, use, and maintain alternate daily cover material in accordance with the written approval and this Permit. The DSWA shall not use an alternate daily cover without the written approval of the Department. The DSWA shall maintain written approval for all alternate daily covers used at the solid-waste facility in accordance with Condition VI of this Permit.

7. The solid-waste facility may use tarps as an alternate daily cover in accordance with the Department approved Operation Plan. When tarps are used, the DSWA shall deploy them in a manner that ensures that all solid wastes on that day's working face are covered and remain covered until the next operating day. The DSWA shall use soil or other approved alternate daily covers as necessary to supplement tarps if needed to ensure coverage of solid wastes. Tarps will be sufficiently weighted or anchored to prevent the movement of tarps and the exposure of waste during non-operating hours.

   In the event that the use of tarps for an alternate daily cover results in a violation of this Permit or DRGSW, the Department may require the DSWA to terminate the use of tarps for an alternate daily cover. The DSWA shall, upon notification, cease use of the daily tarps and begin using standard daily cover.

GG. Intermediate Cover

1. The DSWA shall apply intermediate cover to any area that receives daily cover and is not expected to receive either additional solid waste or a capping system within six months.

2. Intermediate cover shall consist of a minimum of twelve (12) inches of compacted soil, or an alternative material approved by the Department.

3. Intermediate cover shall control odors, disease vector breeding, animal attraction, blowing litter, scavenging and reduce the potential for fires. Intermediate cover shall prevent leachate from entering stormwater management systems or surface waters.

4. The DSWA shall strive to ensure that intermediate cover layer which remains in place under waste shall not hinder leachate flow downwards towards the leachate collection. If the intermediate cover has been placed to reduce infiltration of water into the landfill, the DSWA shall remove or otherwise modify it to allow leachate to move downwards towards the leachate collections system prior to placement of additional solid waste on the intermediate cover.

5. At least weekly, the DSWA shall inspect intermediate covers and shall record the results of these inspections. The DSWA shall maintain all intermediate covers, as necessary, to control odors, disease vector breeding, animal

attraction, blowing litter, scavenging and fires. The DSWA shall maintain adequate surface water management controls to prevent erosion of intermediate covers. The DSWA shall maintain these covers to prevent wastes from being exposed. Records of the inspections shall be maintained in accordance with Condition VI of this Permit.

6. Department approved alternate intermediate covers may be used only if they perform as well as standard intermediate cover and are used and maintained in a manner that does not present an increased threat to human health and the environment. The DSWA shall store, use, and maintain alternate intermediate cover material in accordance with the written approval and this Permit. The DSWA shall not use an alternate intermediate cover without the written approval of the CAPS. The DSWA shall maintain written approval for all alternate intermediate covers used at the solid-waste facility in accordance with Condition VI of this Permit.

7. The solid-waste facility may use tarps as an alternate intermediate cover in accordance with the Department approved Operation Plan. When tarps are used, the DSWA shall ensure they are properly anchored, comply with the requirements of DRGSW, and their use controls stormwater, odors, disease vector breeding, animal attraction, blowing litter, scavenging, and reduces the potential for fires, and prevents leachate from entering stormwater management systems or surface waters.

   In the event that the use of tarps for an alternate intermediate cover results in a violation of this Permit or DRGSW, the Department may require the DSWA to terminate the use of tarps for an alternate intermediate cover on all or part of the landfill cells. The DSWA shall, within 30 days of such notification, install standard intermediate cover in those areas.

HH. Yard Waste Diversion

1. Effective January 1, 2011, yard waste has been banned for disposal at the solid-waste facility.

2. The DSWA shall continue to educate the public and the waste haulers, as needed, of:

   a. The effective date of the ban
   b. The fact that yard waste can no longer be commingled with trash as a means of disposal
   c. The reasoning behind prohibiting the landfilling of yard waste
   d. The alternatives to manage yard waste as a result of the ban
   e. The consequences of failing to comply with the ban

3. The DSWA shall provide yard waste drop off for residents at all of its permitted solid waste facilities throughout Sussex County where homeowners would be permitted to drop off their yard waste.

4. "Yard Waste" means plant material resulting from lawn maintenance and other horticultural gardening and landscaping activities and includes yard clippings, leaves, prunings, brush, shrubs, garden materials, Christmas trees, and tree limbs up to 4 inches in diameter.

II. Cells 1 and 2 Long-Term Intermediate Cover Operation and Maintenance

1. Closure Status of Cells 1 and 2

   Until otherwise demonstrated in writing, the exposed geomembrane shall be regulated as an alternative intermediate cover in accordance with DRGSW. Since these cells will not be considered closed during the demonstration project, the solid-waste facility must continue to meet all regulatory requirements for non-closed cells (i.e., annual reports, annual closure and post-closure cost estimate updates, and financial assurance considerations).

2. Inspection of Long-Term Intermediate Cover

   Inspection of the long-term intermediate cover shall include a monthly walkover inspection of the exposed geomembrane cap. Inspections shall, as a minimum, identify problems and initiate maintenance in accordance with the Department approved Operation and Maintenance Manual for the Geomembrane Cap for Cells 1 and 2.

3. Repair Procedures

   Repairs done on the geomembrane material shall be in accordance with the manufacturer's recommendations. Written procedures for repair of the geomembrane shall be available to and followed by staff designated to make repairs on the exposed geomembrane.

4. Record of Repairs

   The DSWA shall record the location and size of all repairs made on the geomembrane. Repair location records shall be maintained to the scale and detail necessary to be able to actually locate each repair in the future.

5. Closure in the Event of Failure

   If the Department determines that the geomembrane has failed to comply with the requirements of DRGSW, allows the migration of off-site odors,

creates a health or safety risk, or its structures fail to properly manage stormwater, the DSWA shall close Cells 1 and 2 in accordance with DRGSW. Within 60 days of notification that closure is required, the DSWA shall submit a closure plan and schedule for Department review and approval. The Department may require other interim measures to protect human health and the environment during this period.

6. Incorporation into a Standard Capping System

   Prior to its incorporation into a standard capping system required by DRGSW, the geomembrane shall be evaluated to determine its quality and suitability for such use. Incorporation into a standard capping system shall proceed only after the approval of the Department.

7. Termination of the Demonstration Project

   The demonstration period shall expire no later than February 24, 2027. No later than August 25, 2025, the DSWA shall complete an evaluation of the quality of the membrane material and its performance during the demonstration period and provide that evaluation along with recommendations to the Department for its review. Unless an extension of the demonstration project is approved by the Department, the DSWA shall, no later than May 21, 2026, submit a plan and schedule to install a final cap in accordance with the requirements of DRGSW.

IV. MONITORING AND CHARACTERIZATION

A. General Requirements

1. All liquid samples shall be collected in a manner that minimizes sample turbidity.

2. All groundwater-quality samples shall be collected using a low-flowrate method to minimize sample turbidity.

3. Each groundwater monitoring well shall be sounded during each water-level measuring event and after the completion of sampling at each well. If the series of wells are to be synoptically measured at least 24-hours before the groundwater samples are collected, then each of those wells shall have their total depth sounded and recorded immediately after the static levels are recorded. If static levels are being measured within 24-hours of the time the samples are collected, then the well's soundings shall be collected immediately AFTER sample collection is completed. Sounding depths shall be recorded and compared with the sounding depth measurements recorded during the previous sampling event(s). These sounding comparisons are to assure the

DSWA and the Department that down-hole well integrity is intact. Wells that are used to measure only static water-levels shall be sounded for total depth immediately after the static water-level measurement has been collected. Sounded depths and static water-levels shall be recorded

4. All liquid samples will be measured for the following field parameters at the time of sample collection:

Dissolved Oxygen	Specific Conductance
pH	Temperature
Oxidation-Reduction Potential	Turbidity

Leachate and Leak Detection System samples do not need to record field measurements of Dissolved Oxygen or Turbidity. Leachate seep and leak detection system samples must measure and record all field parameters.

5. Field/Laboratory-analyzed parameter sets from the Department approved SSWMC Environmental Monitoring Program Exhibit B Tables
   - **Table A** Schedules For Monitoring Leachates at the SSWMC
   - **Table B** DNREC Supplemental Listing for Semi Annual Analysis of Leachates
   - **Table C** Schedules For Monitoring Liquids from the Secondary Detections Systems at the SSWMC
   - **Table D** SSWMC Schedules for Monitoring Surface Waters
   - **Table E** Analytical Requirements for Drainage Ditches And Surfacewater Bodies Contacted by Seeps
   - **Table F** SSWMC 2018-2021 (Rev 4) Schedules for Monitoring Groundwaters at the SSWMC --- Revised November 2, 2023
   - **Table G** DNREC Supplemental List for Annual Analysis of Groundwater from the SSWMC
   - **Table H** DNREC Supplemental List for Annual Analysis of Groundwaters from SC-28

6. Test methods used for the analysis of anything required by Condition IV of the Permit shall be those described in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods”, EPA Publication SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015). If SW-846 does not contain a test method for

a required parameter, that parameter shall be tested according to methods described in the most recent edition of EPA Publication, Methods of Chemical Analysis for Water and Wastes or Standard Methods for Examination of Water and Wastewater. All samples shall be collected and analyzed using approved Quality Assurance/Quality Control (QA/QC) procedures.

7. The Department may observe, and may request advance notice of, sampling conducted at the solid-waste facility and may request split samples for analysis. The Department reserves the right to initiate its own sampling event.

8. The DSWA shall submit the results monitoring from Condition IV of this Permit in accordance with Condition V of this Permit.

B. Groundwater Monitoring

1. The DSWA shall monitor groundwater monitoring locations in accordance with the Department approved SSWMC Environmental Monitoring Program and the requirements of this Permit.

2. Groundwater Level Measurements Schedule

Quarterly, in January, April, July, and October, the DSWA shall measure water levels within the shortest time practicable, prior to the collection of any samples, in the following groundwater wells:

SC-1	SC-9A	SC-20		DC-3	DC-20	M-1	M-9
SC-2	SC-12	SC-21		DC-4	DC-21	M-2	M-13
SC-3	SC-13	SC-23		DC-5	DC-22	M-3	
SC-4	SC-14	SC-25		DC-6	DC-23	M-4	
SC-5	SC-15	SC-26		DC-7		M-5	
SC-6	SC-16	SC-27		DC-8		M-6	
SC-7	SC-17A	SC-28		DC-9		M-7	
SC-8	SC-18A	SC-29		DC-13		M-8	

^^Table to be updated with any new location(s) associated with the Cell 6 Project

3. Groundwater Field Parameter Measurements Schedules

a. Quarterly, in January, April, July, and October, the DSWA shall record their visual observations and field parameter measurements from the following groundwater wells:

SC-2	SC-12	SC-18A	SC-25		DC-3	DC-20	
SC-3	SC-13	SC-20	SC-26		DC-6	DC-21	
SC-6	SC-14	SC-21	SC-27		DC-7	DC-22	
SC-7	SC-15	SC-22	SC-28		DC-8	DC-23	

SC-8	SC-16	SC-23	SC-29		DC-9	
SC-9A	SC-17A	SC-24			DC-13	

^^Table to be updated with any new location(s) associated with the Cell 6 Project

b. Semi-Annually, in April and October, the DSWA shall record their visual observations and field parameter measurements from the following groundwater wells:

SC-11		DC-11		M-2	M-6	M-8	M-11
				M-3	M-7	M-9	M-13

^^Table to be updated with any new location(s) associated with the Cell 6 Project

c. Annually, in April, the DSWA shall record their visual observations and field parameter measurements from the following groundwater wells:

SC-1	SC-4	SC-5	DC-4	DC-5	M-1	M-4	M-5

^^Table to be updated with any new location(s) associated with the Cell 6 Project

4. Groundwater Laboratory Analysis Schedules

a. Semi-Annually, in April and October, the DSWA shall sample the following groundwater wells in accordance with **Table F** and **Table G** cited in Condition IV.A.5 of this Permit.

SC-8	SC-15	SC-21	SC-26		DC-20	
SC-9A	SC-16	SC-22	SC-27		DC-21	
SC-12	SC-17A	SC-23	SC-28		DC-22	
SC-13	SC-18A	SC-24	SC-29		DC-23	
SC-14	SC-20	SC-25				

^^Table to be updated with any new location(s) associated with the Cell 6 Project

b. Annually, in April, the DSWA shall sample the following groundwater wells in accordance with **Table F** and **Table G** cited in Condition IV.A.5 of this Permit.

SC-2	SC-7	DC-3	DC-8	DC-13	M-2	M-7	M-11	
SC-3	SC-11	DC-6	DC-9		M-3	M-8	M-13	
SC-6		DC-7	DC-11		M-6	M-9		

^^Table to be updated with any new location(s) associated with the Cell 6 Project

C. Surface Water Monitoring

1. The DSWA shall monitor surface water monitoring locations in accordance with the Department approved SSWMC Environmental Monitoring Program and the requirements of this Permit.

2. Surface Water Staff Gauges Schedule

   a. The DSWA shall maintain and monitor the following surface water staff gauges at the solid-waste facility.

A-1 (Askeetum-1)	B2-R1 (Beaverdam-2)	SMB-3A (stormwater pond 3A)
A-2 (Askeetum-2)*	B3-R1 (Beaverdam-3)	SMB-3B (stormwater pond 3B)
A-3 (Askeetum-3)	[redacted]	SMB-3C (stormwater pond 3C)

*A-4 depth to water and surface water elevations are measured at the A-2 staff gauge, samples for analysis are collected at the A-4 location
^^Table to be updated with any new location(s) associated with the Cell 6 Project

   b. Quarterly, in January, April, July, and October, the DSWA shall measure water levels at surface water staff gauges. These measurements shall coincide with the measurement of groundwater levels in the groundwater monitoring wells at the solid-waste facility.

3. Stormwater Management Ponds Schedule

   a. The DSWA shall maintain and monitor the following stormwater management ponds at the solid-waste facility.

Stormwater Pond 3A	Borrow Pond (A-4)
Stormwater Pond 3B	[redacted]
Stormwater Pond 3C	

^^Table to be updated with any new location(s) associated with the Cell 6 Project

   b. Quarterly, in January, April, July, and October the DSWA shall record field parameters and sample the stormwater management ponds in accordance with **Table D** cited in Condition IV.A.5 of this Permit. The DSWA shall also visually monitor water being discharged from the stormwater ponds at the time of the sampling.

      i. Visual monitoring shall document water elevation as well as the results of a visual inspection for obvious indicators of stormwater pollution. In the event there is no stormwater being discharged at the time of the sampling event, the DSWA shall document that and shall repeat the visual monitoring as soon as practicable after the next rain event(s) until discharge is observed, inspected, and documented.

      ii. The sampling of surface water shall consist of grab samples taken from the discharge of the outlet structure. The DSWA shall measure the depth of liquid in the outlet structure's discharge, should water be flowing at the time of the monitoring event. The

sample shall be collected from as close as practical to the discharge structure's inlet if no water is flowing at the time of the monitoring event. The DSWA shall estimate the flow rate at the pond outlets each time a sample is collected.

4. Surface Water Contaminated with Leachate

   a. In the event leachate is found to be contaminating surface water, the DSWA shall sample the impacted surface water (e.g., perimeter drainage ditch, swales, etc.) and the downstream stormwater pond at both the inlet and, if discharging, the outfall.

   b. The DSWA shall record their visual observations and sample in accordance with **Table E** cited in Condition IV.A.5 of this Permit.

D. Leachate Monitoring

1. Monthly, the DSWA shall record field parameters and sample leachate in accordance with **Table A** cited in Condition IV.A.5 of this Permit from the following locations:

Cell 1 (C1-PS)	Cell 3 Subcell (3.1 PCS)	Cell 5 Subcell (North PCS)
Cell 2 (C2-NPS)	Cell 3 Subcell (3.2 PCS)	Cell 5 Subcell (South PCS)
Cell 2 (C2-SPS)	Cell 3 Subcell (3.3 PCS)	[redacted]
Cell 3-4-5 Tank Farm	Cell 4 Subcell (East PCS)	
[redacted]	Cell 4 Subcell (West PCS)	

^^Table to be updated with any new location(s) associated with the Cell 6 Project

2. Quarterly, in January, April, July, and October the DSWA shall record field parameters and sample leachate in accordance with **Table A** cited in Condition IV.A.5 of this Permit from the following locations:

Cell 1 (C1-PS)	Cell 3 Subcell (3.1 PCS)	Cell 5 Subcell (North PCS)
Cell 2 (C2-NPS)	Cell 3 Subcell (3.2 PCS)	Cell 5 Subcell (South PCS)
Cell 2 (C2-SPS)	Cell 3 Subcell (3.3 PCS)	[redacted]
Cell 3-4-5 Tank Farm	Cell 4 Subcell (East PCS)	
[redacted]	Cell 4 Subcell (West PCS)	

^^Table to be updated with any new location(s) associated with the Cell 6 Project

3. Semi-Annually, in April and October, the DSWA shall record field parameters and sample leachate in accordance with **Table A** and **Table B** cited in Condition IV.A.5 of this Permit from the following locations:

Cell 1 (C1-PS)	Cell 3 Subcell (3.1 PCS)	Cell 5 Subcell (North PCS)
Cell 2 (C2-NPS)	Cell 3 Subcell (3.2 PCS)	Cell 5 Subcell (South PCS)

Cell 2 (C2-SPS)	Cell 3 Subcell (3.3 PCS)	[redacted]
Cell 3-4-5 Tank Farm	Cell 4 Subcell (East PCS)	
[redacted]	Cell 4 Subcell (West PCS)	

^^Table to be updated with any new location(s) associated with the Cell 6 Project

E. Leakage Detection System Monitoring

Quarterly, in January, April, July, and October, the DSWA shall record field parameters and sample leachate from the leakage detection system in accordance with **Table C** cited in Condition IV.A.5 of this Permit from the following locations:

Cell 3 Subcell (3.1 SDS)	Cell 4 Subcell (East SDS)	Cell 5 Subcell (North SDS)
Cell 3 Subcell (3.2 SDS)	Cell 4 Subcell (West SDS)	Cell 5 Subcell (South SDS)
Cell 3 Subcell (3.3 SDS)	[redacted]	

^^Table to be updated with any new location(s) associated with the Cell 6 Project

F. Feedstock/Waste Characterization **[RESERVED]**

G. End Product Characterization **[RESERVED]**

V. REPORTING

A. Financial Assurance

1. No later than December 31st of each year, the DSWA shall demonstrate adequate financial assurance with a valid financial assurance mechanism for closure and post-closure care of the solid-waste facility in accordance with the requirements of DRGSW.

2. The DSWA shall submit a proof of financial assurance and an updated and reasonably accurate cost estimate for the closure and post-closure care of the solid-waste facility. Cost estimates shall be adjusted for inflation except for new cost estimates not previously made. The DSWA shall provide a detailed listing of all projected costs used to estimate the closure and post-closure costs of the solid-waste facility.
3. The DSWA shall provide the Department documentation demonstrating that the Department is afforded any negotiated rates or contracts between the DSWA and solid-waste disposal and/or management vendors.

B. Annual Operations Report

No later than April 30th of each year, the DSWA shall submit an Annual Operations Report. The DSWA shall provide this report in a format acceptable to

the Department. The Annual Operations Report shall summarize the solid-waste facility operations for the previous calendar year and include:

1. A cover letter and digital version of the entire report.

2. The weight and types of wastes landfilled, and the weight of asbestos received for off-site disposal.

3. The weights (or volumes) and types of daily and intermediate landfill cover materials.

4. Type and weight (or volume) of materials salvaged (e.g., yard waste).

5. Tabulation and summary of all rejected loads for the reporting year.

6. The estimated remaining landfill capacity in both tonnage and years and showing the calculations used.

7. A list of transporters that hauled waste to or from the solid-waste facility in a commercial capacity required to obtain a Delaware Transporter Permit in accordance with DRGSW §7.0.

8. Destination of the solid waste, by type and weight, taken from the solid-waste facility and delivered to its final destination.

9. Summary of fires, spills, and uncontrolled releases that occurred at the solid-waste facility.

10. Descriptions of all construction or corrective work conducted at the solid-waste facility in accordance with plans approved by the Department or to achieve compliance with DRGSW.

11. A discussion of landfilling activities during the past year relevant to operation of the leak detection system, the leachate collection system, and the gas collection system including the date of first waste placement in each subcell or sump area. This shall also include modification to the leachate collection, leak detection, or gas collection systems. And cleanings and inspections (with assessment) of the leachate collection and leak detection system.

12. Status of the exposed geomembrane (Cells 1 and 2 Long-Term Intermediate Cover). This shall describe construction, intrusions, damages, repairs, performance, compliance, and problems experienced. The DSWA shall also evaluate and report the geomembrane properties.

13. A summary of all complaints received by the solid-waste facility during the reporting year.

14. A summary of all instances requiring notification and emergency reporting to the Department pursuant to the conditions of this Permit during the reporting year.

15. Descriptions of any intentional or accidental deviations from the Operation Plan.

16. A single Electronic Data Deliverable (EDD), or multiple EDDs, that utilize the current DNREC EDD format and reference values. The current format and reference values can be found at **https://earthsoft.com/products/edp/edp-format-for-dnrec/**. The EDD(s) will contain the following:

    a. The weight and type of wastes landfilled
    b. The weight of asbestos received for off-site disposal
    c. The weight and type of salvaged wastes

C. Annual Monitoring Report

No later than April 30th of each year, the DSWA shall submit an Annual Monitoring Report. The DSWA shall provide this report in a format acceptable to the Department. The Monitoring Report shall summarize monitoring at the solid-waste facility for the previous calendar year and include:

1. A cover letter and digital version of the entire report.

2. Gas monitoring data from the previous calendar year to include:

    a. Gas migration monitoring done in accordance with Condition IV.P of this Permit

    b. A summary of the facility's compliance with the permit issued pursuant to Delaware's Regulations Governing the Control of Air Pollution

3. Tabulation of all data listed below from the previous calendar year and all preceding years. All data should be submitted on paper and electronic media in a format that is acceptable to the Department. Data submitted shall include:

    a. Leachate flow and quality including field parameters
    b. Leak detection system flow and quality including field parameters
    c. Groundwater elevation and quality data including field parameters
    d. Surface water elevation and quality data including field parameters

e. Rainfall data from the site weather station

4. Graphical presentation (quality versus time plots) of leachate, groundwater, surface water, and leak detection system liquid quality parameters pH, TDS, COD, TOC, chloride, sulfate, ammonia-nitrogen, and iron.

5. Graphical presentations (flow rate or volume versus time plots) of leachate collected, leachate recirculated, and leak detection system flows. Rainfall data shall also be plotted on each graph.

6. Potentiometric maps for each aquifer for each quarter for the past year.

7. A discussion of any problems encountered during field work, any deviations from the sampling procedures and of any problems with QA/QC procedures. Copies of field notes, laboratory data sheets, and chain-of-custody forms shall be maintained by the DSWA and made available to the DNREC within a reasonable time upon request.

8. A discussion of the ground and surface water monitoring results, including whether the results indicate a contaminant release from the solid-waste facility to groundwater or surface water.

9. A discussion of the leak detection system monitoring results, including whether the results indicate that the liner is performing within design specifications.

10. A discussion of the leachate collection system monitoring results, including whether the results indicate that the system is performing within design specifications.

11. Recommendations for future monitoring and for maintenance or modifications needed in the monitoring network, groundwater control collection system, gas collection system, and/or the leachate collection system.

D. Quarterly Environmental Monitoring Report Package

The DSWA shall submit the quarterly monitoring report package within 60 days of the sampling event. The package shall be provided via electronic media in a format acceptable to both the DSWA and the Department and shall comprise the following:

1. A single electronic file such as a Portable Document Format (.pdf) file shall contain the following items:

a. A cover letter that includes a statement confirming that the accompanying data submittal, has been provided with no changes to previously submitted data or in the event that administrative corrections must be made to previously submitted data, the DSWA must document the details of such changes in the cover letter.

b. A narrative summarizing the results of the groundwater, surface water, leachate, and leak detection system monitoring done at the solid-waste facility during the quarter reported. The DSWA shall also summarize the results of the gas migration monitoring conducted during the quarter reported.

c. Drawings showing potentiometric surface elevations and drawings showing sampling locations for all groundwater, surface water, stormwater, leachate, and gas migration monitoring required by this permit.

d. Field data sheets, laboratory reports, and chain of custody forms for the quarter reported as well as a discussion of any problems encountered during fieldwork, any deviations from the sampling procedures and of any problems with QA/QC procedures.

e. Graphical presentations (quality verse time plots) of leachate, groundwater, surface water, and leak detection system liquid quality parameters pH, TDS, COD, TOC, chloride, sulfate, ammonia-nitrogen and iron.

f. Graphical presentations (flow rate or volume versus time plots) of leachate collected, leachate recirculated, and leak detection flows. Rainfall data shall also be plotted on each graph.

g. Potentiometric maps for each aquifer for the quarter reported.

h. Gas migration monitoring results for the quarter reported.

i. Meteorological data from the on-site weather station for the quarter reported.

2. A single Electronic Data Deliverable (EDD), or multiple EDDs, that utilize the current DNREC EDD format and reference values. The current format and reference values can be found at **https://earthsoft.com/products/edp/edp-format-for-dnrec/**. The EDD(s) will contain the following:

   a. Monitoring data for the quarter reported.

b. Any previously submitted EDD(s) requiring administrative corrections. Administrative corrections to a previously submitted EDD must be submitted as a standalone EDD.

c. The information required to build any monitoring location(s) added during the quarter reported or to update information for an existing monitoring location. Required information typically includes populating the Location, DrillActivity, Lithology, Well, and WellConstruction tabs of the DNREC EDD format, as applicable. The information required to build new locations or update existing locations must be submitted as a standalone EDD by the DSWA.

d. Monitoring data shall include groundwater, surface water, stormwater, gas migration, and leachate monitoring results as well as the following:

(1) Leachate flow and quality, including field measurements
(2) Leak detection system flow and quality, including field measurements
(3) Groundwater elevation and quality data, including field measurements
(4) Surface water elevation, flow rate, and quality data, including field measurements

E. Surface Water Contaminated with Leachate Reporting Requirements

This reporting requirement pertains to any event where leachate is found to be contaminating surface water at the solid-waste facility.

1. The DSWA must notify the Department in accordance with Condition V.G of this Permit. And must provide initial measurements, the chain-of-custody, and a map which depicts the sampling locations within five (5) business days of the event.

2. The DSWA must provide the Department with the final analytical results within seven (7) days of the receipt of analytical results. This submission must include a narrative describing the sampling results, the certified laboratory report, field book notes, field sheets, chain-of-custody, and a map depicting sampled locations.

3. The DSWA must also submit a single Electronic Data Deliverable (EDD), or multiple EDDs, that utilize the current DNREC EDD format and reference values within 21 days of the event. The current format and reference values can be found at **https://earthsoft.com/products/edp/edp-format-for-dnrec/**. This EDD will contain the following:

a. Location information for the point in which surface water was impacted (e.g., perimeter drainage ditch, swales, etc.). Location information for the

downstream surface water pond inlet and outlet only needs to be submitted once.

b. Analytical data related to the event.

F. Additional Reporting

4. Within five (5) days of any modification to a lease agreement on file with the CAPS or of notification of lease termination of a lease agreement on file with the CAPS, the DSWA shall notify the CAPS in writing. The DSWA shall also provide the CAPS a copy of the modified lease agreement or termination notice.

5. The DSWA shall maintain a current and correct emergency contacts and emergency services list at the solid-waste facility and shall notify the Department within five (5) business days of any changes therein.

6. If the DSWA is unable to comply with any of the reporting requirements within the permit, the DSWA must provide written notice and justification to the Department two (2) weeks prior to the reporting deadline.

7. Upon discovery, the DSWA shall report to the Department any intentional or accidental deviation from any approved plan and this permit.

G. Notification and Emergency Reporting.

1. The DSWA shall notify the Department immediately (within 24 hours of discovery) in the event of the following events. If any of these events occur during business hours, the DSWA should report to the CAPS by telephone to (302) 739-9403. At all other times report the emergency to the Division of Waste and Hazardous Substances' TOLL-FREE 24-HOUR LINE 1-800-662-8802. When reporting to the 24-HOUR LINE, the DSWA shall disclose that the reporting is required in accordance with Solid-Waste Permit SW-25/04 issued by the Division of Waste and Hazardous Substances' Compliance and Permitting Section.

a. Fire (including receipt of hot loads) or explosion involving the landfill or its control systems at the solid-waste facility.
b. Receipt of prohibited waste at the solid-waste facility.
c. Leachate spill exceeding ten (10) gallons.
d. Gas levels of 25% LEL or greater detected at the facility boundary or within any structures.
e. Damage to the landfill liner system or installed cap components.
f. Any spill or uncontrolled release that may endanger human health or the environment.

g. Any significant erosion or the waste or cover and/or a release of waste from the landfill.
h. Any anomalous observations during monitoring or characterization events. This includes, but may not be limited to, any damage to the monitoring well or well casings, well obstructions, well integrity concerns, and well depth.
i. Structural damage to any surface water control system.
j. Any time surface water appears to be contaminated by solid waste or leachate.

2. The DSWA shall submit a written notification to the CAPS no later than five (5) business days following any event requiring "Notification and Emergency Reporting". The notification shall include the following:

a. Date and time of occurrence/discovery.
b. Date and time reported to the Department.
c. Materials and quantities involved.
d. Agencies notified.
e. Narrative describing how the incident occurred and the actions taken by the DSWA and other response personnel.
f. Report of injuries/damage.
g. Proposal for follow-up or remedial actions including schedule.

H. Assessment of Corrective Measures

The following procedure must be initiated if the action leakage rate or the monitoring data indicate that a contaminant release to groundwater or surface water has occurred.

1. The DSWA shall notify the Department within seven (7) business days after verified analytical data has confirmed that a release has taken place. Confirmation samples shall be collected from the appropriate monitoring points within fourteen (14) days of receipt of written approval by the Department. These samples shall be analyzed under a priority schedule for the indicator parameters and any other parameters deemed appropriate by the Department. The DSWA shall notify the Department of the results of the confirmation sampling within seven (7) days of receipt of the results.

2. If confirmation sampling does not indicate that a release has taken place, another round of sampling shall take place to determine whether the results of the analysis from the first or second sampling events were anomalous. This re-sampling event shall take place within two (2) weeks of the DSWA sending written notification to the Department of their intent to re-sample. The samples shall be analyzed under a priority schedule. The DSWA shall notify the Department of the results of the re-sampling within seven (7) day of receipt of the results.

3. If the re-sampling indicates that no release has taken place, no further action shall be taken by the Department, and monitoring of the sampling location(s) shall be returned to its/their normal monitoring schedule. If the confirmation or re-sampling round of sampling does indicate that a release has taken place, the DSWA shall perform an assessment of corrective measure within ninety (90) days of confirmation of the release. This assessment shall include:

    a. Identification of the nature and extent of the release (which may require construction and sampling of additional wells, geophysical surveys or other measures).
    b. Re-assessment of contaminant fate and potential contaminant receptors (wells and/or receiving streams).
    c. Evaluation of feasible corrective measures to:

        (1) Prevent exposure to potentially harmful levels of contaminants (exceeding performance standards).
        (2) Reduce, minimize, or prevent further contaminant releases.
        (3) Reduce, minimize, or prevent off-site migration of contaminants.

VI. RECORDKEEPING

A. General Recording and Maintenance

The following information must be recorded and maintained by the DSWA until Closure is complete or the end of the Post-Closure Care Period, whichever is longer. This information must be available for inspection in Delaware, with reasonable notice, by representatives of the Department:

1. All documents cited in Condition I.D of this Permit.

2. Monitoring, testing, and analytical data required by previous permits, this permit, and DRGSW.

3. Copies of field notes, laboratory data sheets, and chain-of-custody forms for each sample analyzed.

4. The quantity and types of waste(s) placed into the landfill during its active life on at least a quarterly basis. The quantity of dry waste processed into ADC, the quantity of off-spec ADC landfilled, and the quantity of ADC utilized at the landfill.

5. Locations of monofilled wastes.

6. Records of all inspections required by this Permit.

7. Records of all periodic inspections of the solid-waste facility required during its operating life. These can include but are not limited to inspections of the leachate and gas systems, the exposed geomembrane (Cells 1 and 2), leachate seeps, landfill gas migration, and the salvaging stockpile areas.

8. Reports required by this permit.

9. Deeds, leases, covenants, and any land use agreements in effect. The deed notation, or some other instrument that is normally examined during the title search, will in perpetuity notify any potential purchaser of the property that the land has been used as a solid-waste disposal facility, and the use of the land is restricted under DRGSW.

10. Records of all complaints received from the public concerning odors, dust, and litter at the solid-waste facility during its operating life.

11. Repairs made on any control system, including drawings showing the location of the repair.

12. Records of any corrective actions required at the solid-waste facility.

13. Surveys showing the lines and grades of the landfill.

B. On-Site Records

The following information must be recorded in a timely manner and the records retained by the DSWA for at least three (3) years. The information shall be kept on-site or made available to the Department within a reasonable period of time after being requested.

1. A record of the type and weight of waste received by the solid-waste facility each day.

2. A record of the transporters (company name, address, and telephone number) hauling wastes from the solid-waste facility. Records shall include only those transporters required to obtain a Delaware Solid Waste Transporter Permit in accordance with DRGSW.

3. A record of the type and weight of solid waste delivered from the solid-waste facility to its final destination each day.

4. A record of fires, spills, explosions, and uncontrolled releases that occurred at the solid-waste facility, and of hot loads received.

5. Records of operational inspections.

6. Training records that document all required training for all solid-waste facility staff.

7. Records of odor complaints received by the DSWA concerning the solid-waste facility.

8. Drawings showing the locations and extent of all intermediate covers and of daily covers left in-place.

9. Current environmental permits held by the facility.

10. The landfill's remaining permitted capacity.

C. Department Approvals for Alternate Covers

Department approvals for alternate covers (daily and intermediate), unless otherwise approved within this Permit, shall be incorporated into the Department approved Operation Plan at least two (2) days prior to the cover material first arriving at the solid-waste facility. Incorporation shall be accomplished by inserting approvals into Appendix C of the Department approved Operation Plan. Approvals which have been replaced or which have expired are invalid and shall be removed from the appendix no later than close of business on the date of expiration, or receipt of the revised approval.

VII. CLOSURE AND INTERIM CLOSURE

A. Closure in Accordance with DRGSW.

The DSWA shall close the solid-waste facility or portions of the solid-waste facility in accordance with DRGSW and this Permit. Minimum closure expectations include, but are not limited to, the following:

1. Should the DSWA cease the activities cited within this Permit, all solid wastes at the solid-waste facility shall be properly disposed or recycled.

2. By the cessation date provided by the DSWA, the DSWA shall remove and/or dispose of all associated and/or ancillary solid wastes and all collected litter from the solid-waste facility. Hazardous-waste determinations for all remaining solid waste shall be in accordance with DRGHW. Management of those waste shall be in accordance with applicable portions of DRGSW and DRGHW.

3. Upon closure of the landfill or any portion of the landfill, a capping system shall be installed that will control emissions of gas, promote vegetative cover, and minimize infiltration and percolation of water into, and prevent erosion of,

the waste throughout the remaining active life of the facility and/or the post-closure care period.

4. In order to enhance controls for odors and reduce leachate generation, the DSWA may close the landfill in phases as part of a Cap-As-You-Go (CAYG) Program on portions of Cells 3, 4, 5, and 6 as long as the work does not interfere with landfill operations or control systems and the Department has approved the design and construction quality control measures. In order for the DSWA to use CAYG portions as a final cap system at the time of landfill closure, DSWA will need to demonstrate that these portions of the landfill were installed in accordance with DRGSW and were protected from damage between installation and time of landfill closure. This must include the DSWA's documentation in the final report required by DRGSW certifying the proper construction and the protection of the CAYG portions of the solid-waste facility.

B. Notification

The DSWA shall immediately notify the Department in writing of the estimated date that landfill operations are planned to cease. At least 180 days prior to the date when waste will no longer be accepted for disposal at the solid-waste facility or any portion of the solid-waste facility, the DSWA shall submit to the Department the following:

1. Written notification of the intent to close the landfill or any portion of the landfill including the request to modify the permit to allow closure.

2. An updated closure plan.

3. The closure schedule.

4. A description of the post-closure use of the solid-waste facility.

C. General Closure Activities

1. Closure activities shall not commence until the Department has:

   a. Deemed the closure request administratively complete. And given public notice regarding the requested permit modification to close the solid-waste facility or any portion of the solid-waste facility.

   b. Modified the solid waste facility permit to allow closure or partial closure in accordance with the closure plan, DRGSW, and this Permit.

2. Closure Activities and Timeline

    a. The DSWA shall complete closure of the landfill or any portion of the landfill in accordance with the approved schedule; however, closure must be completed within 180 days of the final waste disposal or as specified by the Department.

    b. All components of the cap, including the gas control system, shall be constructed in accordance with a Construction Quality Assurance Plan, Closure Plan, and Closure Schedule approved by the Department. A Certification Final Report shall be completed by a third party CQA Consultant and submitted for Department review within 120 days after the landfill or any portion of the landfill has completed closure activities. The final report shall certify whether or not closure was completed in accordance with the requirements of documents previously approved by the Department, DRGSW, and this Permit. The final report shall be certified correct by the construction quality assurance engineer who must be a Professional Engineer registered in Delaware. The final report shall include, at a minimum, those items specified within Condition II of this Permit.

    c. After closure of the landfill or any portion of the landfill has been completed, the Department may require that the DSWA conduct monitoring and/or maintenance activities at the site to prevent or detect and mitigate any adverse environmental or health impacts.

3. Final Slopes

    a. The grades of the final slope shall be constructed in accordance with the following minimum standards:

        i. The final grades of the top slope, after allowing for settlement and subsidence, shall be designed to promote run-off.

        ii. The final grades of the side slopes shall be a maximum three horizontal to one vertical (3H:1V).

    b. The top and side slopes shall be maintained to prevent erosion of a cap system(s) and to ensure complete vegetative cover.

D. Protection of Capping Systems

1. The DSWA shall maintain the integrity and effectiveness of the CAYG Portions, including making repairs as necessary to correct the effects of

settling, subsidence, erosion, or other events. The DSWA shall prevent run-on and run-off from eroding or otherwise damaging the CAYG Portions.

2. The DSWA shall provide for, and maintain a permanent, long-lived vegetative cover on the CAYG Portions of the landfill. The DSWA shall reseed the cover if insufficient vegetation exists to stabilize the surface.

3. Except as allowed below, the DSWA shall not remove or alter any portion of CAYG Portions without the written approval of the Department. The DSWA may make the following repairs to CAYG portions as long as the repairs do not damage landfill control systems or reduce the effectiveness of the cap:

    a. Major repairs to the geomembrane or geonet require Department approval; however, the DSWA may initiate minor repairs to these materials after first providing notification to the Department. For the purpose of this permit, minor repairs are considered repairs to damaged areas of geomembrane or geonet measuring less than two (2) feet in any direction. All repairs must be done in accordance with the original manufacturer's guidelines. Within thirty (30) days of completion of the repair (major or minor), the DSWA shall provide a formal report certifying the method and quality of the work completed, qualifications of staff performing the repair, and whether or not the integrity of the cap has been compromised. The report shall be signed and sealed by a Professional Engineer registered in Delaware.

    b. Without written approval, the DSWA may disturb the top six (6) inches of the cap (the topsoil) for maintenance, regrading, or seeding as long as sediment and erosion controls are properly employed, only clean topsoil is used, and the thickness of the cap is not diminished upon completion of the work. For the purpose of this permit, clean topsoil means the natural, unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants, and which can perform as the vegetative layer on the landfill cap. Clean topsoil contains no trash, debris, or solid waste and cannot be from a state or federal cleanup site. Analytical testing of clean topsoil is not typically required unless its origins are unknown or there is reason to suspect contaminants may be present which may pose an increased risk to human health or the environment.

4. The DSWA may also fill in erosion rills, gullies, and burrows of any depth (over undamaged geomembrane/geonet only) with clean soil/top soil and then seed to establish vegetation. For the purpose of this permit, clean soil means the natural, unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants, and which can perform as the vegetative layer on the landfill cap. Clean soil

contains no trash, debris, or solid waste and cannot be from a state or federal cleanup site. Standing water shall not be allowed on any CAYG Portions of the landfill.

5. The DSWA shall remove any sapling trees or other vegetation that may damage any of the CAYG Portions at the solid-waste facility.

6. Opening burning shall not be allowed on any CAYG Portions at the solid-waste facility.

7. Unless approved in advance by the Department, no activity shall be conducted on any CAYG Portions of the landfill which will disturb the integrity of the cap system.

8. The DSWA shall weekly inspect CAYG Portions and complete an inspection/maintenance form for the inspection. Deficiencies shall be identified and corrected as soon as practicable.

VIII. POST-CLOSURE

A. Post-closure Care

Post-closure care and monitoring shall be in accordance with DRGSW and this Permit. Post-closure care shall be in accordance with the Post-Closure Care Permit and the post-closure care plan approved by the Department.

B. Post-closure Land-Use

The DSWA shall implement the post-closure land use plan approved by the Department.

C. Deed Notice

The DSWA shall record an environmental covenant, per 7 **Del.C.** Ch. 79, Subchapter II, with the deed to the solid-waste facility property that will, in perpetuity, notify a potential purchaser of the property the land has been used as a solid waste disposal site and the use of the land is restricted under DRGSW. The DSWA shall implement the post-closure land use plan approved by the Department.

CAPS internal coding here

Permit Modification Synopsis

SW-00/01
October 6, 2000: The permit was modified to incorporate the Delaware Solid Waste Authority Permanent HHW (and Conditionally Exempt Small Quantity Generator) Facility Operations, Maintenance and Safety Manual, Revised August 4, 2000 (the HHW Operations, Maintenance and Safety Manual). The modification also prohibits HHW storage on-site overnight.

May 1, 2001: Permit SW-00/01 was modified to reflect the changes proposed in the Settlement Agreement executed by the Secretary of DNREC on February 22, 2001 (as a result of DSWA appeals to the Environmental Appeals Board 2000-06 and 2000-08).

July 11, 2001: The permit was modified to incorporate the DSWA's January 31, 2001 and June 29, 2001 revisions to the Operations Plan (leachate recirculation and C&D waste salvaging). The modification also incorporated the DSWA's May 2001 revision to the Monitoring Program for the Southern Solid Waste Management Center. The modifications are considered minor in accordance with Section 4.A.7 of DRGSW.

November 18, 2002: The permit was modified to incorporate the DSWA's November 14, 2002 revision to the Operations Plan which added a provision for salvaging of Mobile Home Units. The modification is considered minor in accordance with Section 4.A.7 of DRGSW.

May 4, 2004: The permit was modified to include DSWA's April 12, 2004 revision to the Operations Plan (Section IV.A). This modification was initiated by the Solid & Hazardous Waste Management Section to establish a formal recordkeeping requirement for written approvals obtained by the DSWA for alternate cover materials (Section VII.C). The modifications (Sections IV.P and Q) also establish performance standards for alternate cover materials. The modification is considered minor in accordance with Section 4.A.7 of DRGSW.

June 14, 2006: Permit SW-00/01 was modified to reference the revised Operations Plan (Section IV.A.), which the DSWA updated to include the new Special Waste Policy and additional procedures for managing mobile home units. References to Conditionally Exempt Small Quality Generator waste was removed from the permit since DSWA no longer accepts such waste as part of the household hazardous waste (HHW) collection program (sections IV.X, VI.B, C, D, and VII.B). The permit was modified to extend the emergency reporting deadline (the written report only) from 1 business day to 5 business days. The permit was modified to be consistent with other DSWA permits regarding salvaging operations (Section IV.O). The permit was modified to reference the HHW Operating and Site Safety Plan as revised September 2002 (Section IV.X.1). This was a minor modification in accordance with Section 4.A.7 of DRGSW.

August 1, 2006: The Solid & Hazardous Waste Management Section modified permit SW-00/01 to include the revised date of the Operations Plan. The Delaware Solid Waste Authority changed the revised date on the title page of the Operations Plan to June 14, 2006 and that date has now referenced in Section IV.A of permit SW-00/01. The Section also updated the reference to Analytical Procedures in Section V.F. of the permit. This was a minor permit modification in accordance with Section 4.A.7 of DRGSW.

March 19, 2010: In response to the DSWA's application to construct and operate a landfill (cell 5), the Solid & Hazardous Waste Management Section modified permit SW-00/01 to include the construction of cell 5 and to extend the date of permit expiration until March 19, 2020 to allow for the operation of cell 5. This was a major permit modification in accordance with Section 4.1.7 of DRGSW.

November 22, 2013: The Solid & Hazardous Waste Management Section modified permit SW-00/01 to install new reporting requirements in Section VI. The new requirements provide more direction to the permittee for reporting via electronic media. The modification also corrects the date cited for the Plan of Operations in Section IV.A of the permit. The modification incorporates the revised Operations Manual used by DSWA for maintenance and inspection of the long-term intermediate cover on cell 1 & 2 and cited in Section III.B or the permit. This was a minor permit modification as defined by Section 4.A.7 of ~~the~~ DRGSW.

February 24, 2017: The SHWMS modified Permit SW-00/01 to incorporate the requirements of SSWMC's Beneficial Use Determination (BUD #28), which the SHWMS has decided not to renew as an independent permit. This modification also clarifies aspects of the current monitoring program, removes and/or updates outdated information within the permit and the Plan of Operation, and makes typographical and general formatting changes for ease of use.

General formatting includes the reorganization of current permit conditions to mimic other permits issued by the SHWMS. This modification is considered major in accordance with Section 4.1.7 of DRGSW.

October 20, 2017: The SHWMS modified Permit SW-00/01 to update the reference to the Household Hazardous Waste (HHW) event operations plan. This modification is considered minor in accordance with Section 4.1.7 of DRGSW.

March 3, 2020: The CAPS (formerly SHWMS) administratively extended Permit SW-00/01 until September 30, 2020 to complete the permit renewal process.

September 18, 2020: The CAPS (formerly SHWMS) administratively extended Permit SW-00/01 until December 31, 2020 to complete the permit renewal process.

December 28, 2020: The CAPS (formerly SHWMS) administratively extended Permit SW-00/01 until June 30, 2021 to complete the permit renewal process.

June 23, 2021: The CAPS (formerly SHWMS) administratively extended Permit SW-00/01 until December 31, 2021 to complete the permit renewal process.

December 20, 2021: The CAPS (formerly SHWMS) administratively extended Permit SW-00/01 until December 31, 2022 to complete the permit renewal process.

December 16, 2022: The CAPS (formerly SHWMS) updated the permit to reference the recently updated Plan of Operations and administratively extended Permit SW-00/01 until December 31, 2023 to complete the permit renewal process.

December 8, 2023: The CAPS (formerly SHWMS) updated the permit to reference an administrative extension to Permit SW-00/01 until December 31, 2024 to complete the permit renewal process. In addition the DSWA Administrative Office address was updated to reflect the Authority's new headquarters.

January 2, 2024: The CAPS modified Permit SW-00/01 to update references associated with the Plan of Operations that was updated in December 2023. The CAPS also removed or reserved those permit conditions that reference the Household Hazardous Waste (HHW) events. All reserved permit conditions are expected to be removed and all internal/external references to permit conditions are expected to be updated as part of the next **major** permit modification. This modification is considered minor in accordance with Section 4.1.7 of DRGSW.

December 19, 2024: Permit SW-14/02 administratively extended until June 30, 2025, to complete the renewal process. The CAPS also crossed off groundwater wells that were abandoned in 2024. These groundwater wells will be removed from the permit upon receipts of an updated monitoring plan. This modification is considered minor in accordance with Section 4.1.7 of DRGSW.