Civil & Environmental Engineering, Landscape Architecture and Land Surveying, PLLC

STORMWATER POLLUTION PREVENTION PLAN

DUNN MINE AND C&D FACILITY PARTITION STREET RENSSELAER, RENSSELAER COUNTY, NEW YORK

Prepared For:

S.A. DUNN & COMPANY, LLC 209 PARTITION STREET EXTENSION RENSSELAER, NEW YORK

Prepared By:

CIVIL & ENVIRONMENTAL ENGINEERING, LAND SURVEY, AND LANDSCAPE ARCHITECTS, PLLC 31 BELLOWS ROAD RAYNHAM, MASSACHUSETTS

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1.0 SWPPP INTRODUCTION AND APPLICABILITY

1.1 SWPPP INTRODUCTION AND APPLICABILITY

Civil & Environmental Engineering, Landscape Architecture and Land Surveying, PLLC (CEE) prepared this Stormwater Pollution Prevention Plan (SWPPP) on behalf of S.A. Dunn & Company, LLC (S.A. Dunn). This SWPPP addresses stormwater pollution prevention at the Dunn Mine and C&D Facility located at Partition Street Extension in Rensselaer, New York (the facility). The SWPPP is consistent with the 2015 United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) for industrial stormwater discharges, the New York State Department of Environmental Conservation (NYSDEC) SMSGP General Permit for Stormwater Discharges from Construction Activity (GP-0-17-004), and SMSGP General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002).

The facility currently operates under an approved Stormwater Pollution Prevention Plan (SWPPP) prepared by CEE and dated May 2018. This SWPPP document has been updated to incorporate construction of a mechanically stabilized earthen (MSE) berm on the northern and northeastern perimeter of the landfill and mine, to address current and future operations of the facility, as well as to:

- Identify potential sources of stormwater pollution at the facility;
- Describe stormwater control measures that are used to reduce or eliminate pollutants in stormwater discharges associated with facility operations; and
- Identify the procedures and necessary components the operator will use to assure compliance with the terms and conditions of GP-0-17-004.

In accordance with the MSGP, the facility operator is required to prepare and submit a Notice of Intent (NOI) and a site-specific SWPPP regarding its industrial stormwater discharge due to its designation within the following industrial sectors: "Sector L – Landfills, Land Application Sites, and Non-Compliant Landfills and "Sector J – Mineral Mining and Dressing". Where this SWPPP refers to procedures in other existing facility documents and/or permits, copies of the relevant portions of those documents must be kept with the SWPPP.

1.2 SWPPP CONTENTS

For coverage under GP-0-17-004, the SWPPP must contain all of the following elements:

- Pollution prevention team;
- General site description;
- Summary of potential pollutant sources;
- Spills and releases;
- General location map;
- Site map;
- Description of stormwater control measures and stabilization practices;
- Installation, implementation, and maintenance of the control measures;
- Schedules, procedures, and corrective actions;
- Documentation to support eligibility considerations, including endangered species and historic places;
- Monitoring and sampling data;
- Corrective action documentation;
- Copy of permit requirements;
- Inspection schedule;
- SWPPP availability;
- SWPPP modification; and,
- Applicable special SWPPP requirements.

The facility must retain copies of the SWPPP (including any modifications made during the term of this permit in accordance with Part III.E of GP-017-004 and Section 16.0 of this report), additional documentation requirements, all reports and certifications required by the MSGP, monitoring data, and records of all data used to complete the NOI for a period of at least five years from the date that coverage under this permit expires or is terminated as described in Section 16.10 of this report. The current SWPPP must be retained at the facility and must be immediately available to EPA; a State, Tribal or local agency approving stormwater management plans; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection or upon request.

General contractors with day-to-day operational control over SWPPP implementation must have a copy of the SWPPP available at a central location on site for the use of all operators and those identified as having responsibilities under the SWPPP whenever they are on the construction site. All contractors and subcontractors who perform earth disturbance on the site shall sign and date a copy of the certification statement before undertaking any construction activity at the project site as described in Section 16.0 of this report.

2.0 FACILITY DESCRIPTION AND CONTACT INFORMATION
2.1 FACILITY INFORMATION
Facility Information Name of Facility: <u>Dunn Mine and C&D Facility</u>
Street: 209 Partition Street Extension
City: Rensselaer State: NY ZIP Code: 12144
County or Similar Subdivision: Rensselaer
Permit Tracking Number: (if covered under a previous permit)
Latitude/Longitude (Use one of three possible formats, and specify method)
Latitude: Longitude:
$1. _ \circ _ ` _ ` _ ` N$ (degrees, minutes, seconds) $1. _ \circ _ ` _ ` _ ` W$ (degrees, minutes,
seconds)
2 °' N (degrees, minutes, decimal) 2 °' W (degrees, minutes,
3. <u>73.726</u> ° N (decimal) 3. <u>-42.647</u> ° W (decimal)
Method for determining latitude/longitude (check one):
USGS topographic map (specify scale:) Compared by the site CPS (Secify scale:) Compared by the site CPS
☐
Is the facility located in Indian Country? \Box Yes \boxtimes No
If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable."
Is this facility considered a Federal Facility? \Box Yes \boxtimes No
Estimated area of industrial activity at site exposed to stormwater: <u>80</u> (acres)
Discharge Information
Does this facility discharge stormwater into an MS4? 🗌 Yes 🛛 🛛 No
If yes, name of MS4 operator:
Name(s) of water(s) that receive stormwater from your facility: <u>Quackenderry Creek</u>
Are any of your discharges directed to any segment of an "impaired" water? \Box Yes \boxtimes No
If Yes, identify name of the impaired water (and segment, if applicable
Identify the pollutant(s) causing the impairment:
For pollutants identified, which do you have reason to believe will be present in your
discharge?
For pollutants identified, which have a completed TMDL?

Do you discharge into a receiving water designated as a Tier 2 (or Tier 2.5) water? \Box Yes \boxtimes No Are any of your stormwater discharges subject to effluent guidelines? \Box Yes \boxtimes No
If Yes, which guidelines apply?
Identify your applicable sector and subsector: <u>Sector L - Landfills</u> , Land Application Sites, and
Non-Compliant Landfills and Sector J – Mineral, Mining & Dressing
Applicable NAICS codes: LF, 442, 1446
2.2 CONTACT INFORMATION/RESPONSIBLE PARTIES
Facility Operator (s):
Name: S.A. Dunn & Company, LLC
Address: 209 Partition Street Ext.
City, State, Zip Code: Rensselaer, NY 12144
Telephone Number: (518) 650-6106
Email address: corey.judd@wasteconnections.com
Fax number: (518) 650-6109
Facility Owner (s):
Name: S.A. Dunn & Company, LLC
Address: 209 Partition Street Ext.
City, State, Zip Code: Rensselaer, NY 12144
Telephone Number: (518) 650-6106
Email address: corey.judd@wasteconnections.com
SWPPP Contact:
Name: Corey Judd, Regional Manager
Telephone Number: (518) 650-6106
Email address: corey.judd@wasteconnections.com
Fax number: (518) 650-6109

2.3 STORMWATER POLLUTION PREVENTION TEAM

Requirements (Part III A. 1)

- Identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities.
- Your stormwater pollution prevention team is responsible for assisting the facility manager in developing and revising the facility's SWPPP, implementing and maintaining control measures/best management practices (BMPs), and taking corrective actions where required. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of the MSGP (GP-0-17-004) and your SWPPP.

Staff Names	Individual Responsibilities		
Division Landfill Manager	Overall authority of the SWPPP program and approval of the		
	facility SWPPP, approval of reports required by the SWPPP, and		
	approval of amendments to the SWPPP.		
Facility Manager	Facilities Manager; Responsible for implementing the SWPPP,		
	recommending SWPPP improvements or amendments, record		
	keeping and training of personnel in preventative maintenance,		
	spill prevention and response, material handling and storage, and		
	coordinating post-closure O&M with facility personnel.		

3.0 GENERAL SITE DESCRIPTION

Requirements (Part III A. 2)

- Provide general description of the industrial activities occurring in each drainage area
- Provide a description of the path of stormwater, runoff from any adjacent property (if present) containing significant quantities of pollutants, and the name of the nearest receiving waters that may receive discharges from the facility.
- Provide a description of any stormwater discharged to an MS4, including the operator, receiving water to which the MS4 discharges, and MS4 contact information.
- Provide a description of the general path of stormwater flows between the facility and the nearest surface water body(ies) and/or location(s) where stormwater enters and MS4, if applicable.
- Provide a description of discharges that are currently covered by another SPDES permit (e.g., process wastewater, sanitary wastewater, non-contact cooling water, etc.).Provide the size of the property (in acres), an estimate of the percent imperviousness of the site and location of sensitive areas (impaired waters, listed threatened & endangered species of their critical habitat; historical properties, etc.).

3.1 SITE DESCRIPTION

The project site is located in the Hudson Valley uplands overlooking the Hudson River, directly east of the City of Albany. The site consists of approximately 90 acres located in the City of Rensselaer and Town of North Greenbush, New York. The topography in the vicinity of the project site ranges from approximately 130 to 300 feet above mean sea level (MSL) and generally decreases to the west towards the Hudson River.

The site is currently operated as an active sand and gravel mine in addition to a C&D landfill. The limit of these operations are shown in Figure 2. Mining and landfill operations occur simultaneously. The historical mining operations at the site have resulted in the excavation of two pits, approximately 100 feet in depth, known as the south and north pits. Mining operations specifically will continue within the existing mine limits. Existing soils in the mining area are very well drained and there has not been, nor is there anticipated to be, any required discharge of stormwater from the mining operation itself because the operation drains to the interior of the site and does not produce a discharge. Precipitation that falls within the active area of the landfill and flows through/contacts waste materials is collected and treated as leachate. As filling progresses above the perimeter berm, exterior slopes are temporarily stabilized with intermediate cover soils and vegetated and the surface runoff from these areas is collected within the site's stormwater management infrastructure. Interior slopes are also temporarily stabilized with intermediate cover and vegetation to the extent practicable in order to limit the contact of surface runoff with waste.

Currently, surface runoff from the north side of the C&D filling operations that is not in contact with waste is pumped to the north pit or pumped to the existing stormwater basin (Outfall 002). The mining and disposal activities are permitted by the NYSDEC. The landfill has been, and will continue to be, developed as phases or cells, as mining operations are completed. Phase 1, 2, 3, 4, 5, 6A, 6B, 6C, and 7A have been constructed and Phase 10A is currently under construction and anticipated to be completed in spring 2022. This SWPPP presents the erosion and sediment control plans for two site conditions: construction of the Phase 8B baseliner and MSE berm which includes the C&D filling through Phase 7A, and the full buildout conditions, which includes the C&D filling through Phase 7B (the last phase of waste disposal at the facility) and the complete construction of the MSE berm and final cap. Timing of construction of will be based on C&D acceptance rates with the next phase of development to be Phase 10B, followed by 10C, 9, 8A, 8B and 7B. Additional figures will be submitted as necessary to reflect changes in site conditions throughout the site development and construction of subsequent phases or as otherwise required. Upon reaching full buildout conditions, the landfill and support facilities will encompass the majority of the site area.

Activities supporting the landfill operations include hauling, loading and unloading of C&D waste, hauling of leachate by tanker truck, vehicle equipment and maintenance, and material storage and stockpiling. Stormwater associated with landfill operations is collected in the existing stormwater management system and discharged into existing vegetated areas located on the west side of the site as shown on Figure 2. Under full buildout conditions, precipitation within the limits of the landfill is expected to generate clean surface runoff as the final cap surface will be vegetated and will consist of stabilized soils. Ultimately, stormwater drains to a Class C tributary of the Hudson River before discharging into the Hudson River.

The facility does not currently discharge to an MS4 and does not have any discharges covered by another SPDES permit. The site is not located within areas of endangered species as described in Section 9.0.

4.0 SUMMARY OF POLLUTION POLLUTANT SOURCES

- Requirements (PART III A.3)
- Describe and identify each separate area of the facility where industrials materials or activities are exposed to stormwater.
 - Industrial materials include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by products, final products, or waste products.
 - Material handling activities include the storage, loading or unloading, transportation, or conveyance of any raw material, intermediate product, final product, or waste product.
- For each area identified, the description shall include a list of activities in the area, all pollutants associated with each activity, and the potential for pollutant presence in stormwater.

The following is a summary of the areas of the facility where potential pollution sources are exposed to stormwater:

Industrial Activity	Associated Pollutants				
Site Entrance and Scale	Litter, dust, gasoline, diesel fuel, hydraulic oil, engine				
House Area	coolant/antifreeze, leaking liquid from hauling trucks that has				
	come in contact with solid waste, leachate handling and storage				
C&D Landfill Facility	Leachate, solid waste and debris, dust, gasoline, diesel fuel,				
(Active Area)	hydraulic oil, engine coolant/antifreeze, sediment				
C&D Landfill Facility	Leachate outbreaks, sediment, dust				
(Intermediate Cover areas)					
Vehicle and Equipment	Gasoline, diesel fuel, motor and hydraulic oil, cleaning solvents,				
Maintenance Area	engine coolant/antifreeze				
Access Roads (paved and	Dust, sediment, gasoline, diesel fuel, hydraulic and motor oil,				
unpaved)	engine coolant/antifreeze, liquid from hauling trucks that has				
	come in contact with solid waste				
Material Storage and	Sediment, dust, gasoline, diesel fuel, hydraulic and engine oil,				
Stockpile Management	engine coolant/antifreeze, litter				
Area					
Employee Parking Area	Gasoline, diesel fuel, engine oil, engine coolant/antifreeze, litter				

The potential for the pollutants associated with the above industrial activities to contaminate surface runoff that may generate a stormwater discharge is discussed below.

Interior Site Areas

As discussed in Section 3.1, stormwater runoff from the active area of the landfill, as well as landfill equipment wash water, is collected and treated as leachate and would not result in a stormwater discharge. Likewise, stormwater runoff from the interior intermediate cover areas of the landfill and from the material storage and stockpile management area would drain internally within the site and would not result in a stormwater discharge. Therefore, there is little to no potential for the pollutants associated with these activities to contaminate a stormwater discharge.

Facility Entrance Area

Surface runoff from the site entrance and scale house area, the employee parking area, and nearby access roads flows through stormwater culverts before discharging into the existing bio-retention area. The bio-retention area is sized to capture and treat the Water Quality Volume (refer to Section 8.11). The bio-retention area is designed to remove pollutants from surface runoff, therefore the pollutants associated with the nearby activities are not likely to contaminate a potential stormwater discharge from this area.

The secondary containment structure for the leachate storage tank is equipped with a drain valve that is only opened to drain stormwater from the containment area, provided the stormwater is observed to be free from leachate contamination. As stated above, stormwater runoff from the facility entrance area is diverted through swales and culverts away from the leachate storage area. The leachate loadout area is graded to drain into an underground storage tank, and the contents of this tank are pumped out on an as-needed basis and disposed of in an approved facility. Therefore, there is little to no potential for the pollutants from these areas to contaminate stormwater discharge.

Vehicle and Equipment Maintenance Area

The vehicle and equipment maintenance building is a covered structure and is elevated relative to the ground surface surrounding it, therefore there is little to no potential for the pollutants associated with this area to contaminate surface runoff that may generate a stormwater discharge.

5.0 SPILLS AND RELEASES

Requirements (Part III A. 4)

- Identify areas where potential spills or releases can contribute to pollutants in stormwater discharges and their accompanying drainage points.
- Include a list of industrial activities exposed to stormwater (e.g., material storage; equipment/vehicle fueling, maintenance, and cleaning; cutting steel beams) and the pollutants or pollutant constituents (e.g., motor oil, fuel, battery acid, and cleaning solvents) associated with these activities.
- In your list of pollutants associated with your industrial activities, include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the 3 years prior to submission of a NOI.

The SWPPP has been prepared to reduce the potential of unauthorized pollutant discharge from the Site. However, should a spill or leak occur, a Spill Prevention, Control and Countermeasures (SPCC) Plan has been prepared to provide guidance with clean up and reporting procedures. Routine inspections and any spills are to be maintained to include the date and time of release, location, a brief description of the incident, the contact information for the responsible party that reports the spill, and the clean-up procedures. A summary of the potential pollutants include litter, wind-blown debris, dust, and hydrocarbons (gasoline, diesel fuel, hydraulic oil, engine coolant/antifreeze). Appropriate procedures to reduce these potential pollutants are described in Section 8.0.

5.1 SPILL RESPONSE AND PROCEDURES

In the event that spills have the potential for fire or other life-threatening situations, dial 911.

The following are general response procedures that should be followed by facility personnel in the event of a release that does not have the potential for fire or other life-threatening situations. In addition, all employees at the facility are trained to notify a supervisor in the event of a spill or release. The facility manager will then notify an off-site spill responder for a formal spill response, as needed.

Spill Response in non-life-threatening situations:

- 1. Turn off nearby ignition sources;
- 2. Stop spill source by closing valves or plug hole in container or equipment;
- 3. Contain/clean-up the spill using oil-dry or other appropriate absorbent materials;

- 4. Place spilled material into appropriate container; and,
- 5. Properly dispose of spilled material and used absorbent material.

Refer to the site-specific SPCC Plan located in Appendix A for further information regarding spill response procedures, as well as when training occurs on the procedures for stopping, containing, and cleaning up leaks, spills, and other releases.

5.2 DESCRIPTION OF PAST SPILLS/LEAKS

There have been no significant spills or leaks in the past three years recorded by facility personnel.

6.0 GENERAL LOCATION MAP

Requirements (Part III A. 5)

• Provide a general location map [e.g., U.S. Geological Survey (USGS) quadrangle map] with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges.

The general location map has been included as Figure 1. The map extends more than one mile beyond the property boundaries of the facility, shows the facility location, bodies of water, highways and streets, surface topography of the area, and prominent landmarks or features.

7.0 SITE MAP

Requirements (Part III A. 6)			
Requirement Provide a	s (Part III A. 6) site map or reference drawings identifying the following: Size of the property in acres, locations of haul and access roads, rail cars and tracks. Location and extent of significant structures and impervious surface, location of each <i>outfall</i> labeled with the <i>outfall</i> identification, including <i>outfalls</i> with <i>discharges</i> authorized under other <i>SPDES</i> permits, and the approximate outline of the drainage area to each <i>outfall</i> . Direction of stormwater flow using arrows to show which ways stormwater will flow. Locations of all receiving waters in the immediate vicinity of the facility, indicating if any of the waters are impaired and, if so, whether they waters have <i>TMDLs</i> established for them. <i>Location of MS4s</i> and where the stormwater <i>discharges</i> to them. Location of all stormwater flows have significant potential to cause erosion. Location and source of runoff from adjacent property containing significant quantities of <i>pollutants</i> and/or volume of concern to the facility. Locations of the following activities where such activities are exposed to precipitation or runon. Locations of potential <i>pollutant</i> sources identified under Part III.A.3 of GP-0-17-004. Location and description of non-stormwater <i>discharges</i> , including but not limited to those listed in Parts I.C.3 of GP-0-17-004. Locations where major spills or leaks identified under Part III.A.4 of GP-0-17-004 have occurred.		
0	Locations of all stormwater monitoring points and existing structural BMPs.		

The Site Map depicts various areas of the facility that contribute to the landfill and mining operations including the existing office and maintenance garage, existing leachate load out structure and above ground storage tank, paved and unpaved areas, stormwater conveyance structures and outfalls, and receiving waters.

The site map is provided as Figure 2. The map includes:

- The size of the property in acres;
- The location and extent of significant structures and impervious surfaces;
- Locations of existing structural control measures;
- Locations of receiving waters in the immediate vicinity of the facility;
- Locations of stormwater conveyances including ditches, pipes, and swales;
- Locations of potential pollutant sources;
- The identification of landfill cells at the site; and
- The limit of reclaimed mine area at the site (coincidental with the current extent of landfill area).

As part of the Site Map, specific structures or details pertaining to stormwater management are also indicated, including:

- Locations of stormwater monitoring points;
- Locations of stormwater outfalls with a unique identification code for each outfall;
- The boundary of tributary areas to each stormwater outfall;
- Approximate stormwater flow direction and areas contributing to outfall locations;
- Locations of the following activities where such activities are exposed to precipitation:
 - Liquid storage tanks;
 - Material processing and storage areas;
 - Equipment storage and maintenance areas; and,
 - Immediate access roads used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility.

8.0 STORMWATER CONTROLS

Requirements (Part III A. 7)

- Document the location and type of *BMPs* installed and implemented at the facility to achieve the non-numeric effluent limits in Part II.A and where applicable in Part VII, and the sector specific numeric effluent limitations in Part VII of GP-0-17-004.
- Describe how each *BMP* is being, or will be implemented for all the areas identified in Part III.A of GP-0-17-004 (summary of potential *pollutant* sources). BMPs include but are not limited to the following:
 - o Good housekeeping;
 - o Regular inspections;
 - o Equipment maintenance and repair;
 - o Minimize leaks and spills;
 - o Training and education;
 - o Elimination of non-stormwater discharges;
 - Minimize waste, garbage, and floatable debris exposure;
 - o Minimize dust generation;
 - o Structural and non-structural stabilization practices;
 - o Divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff; and
 - o Enclose or cover salt piles.

Stormwater channels and culverts are currently utilized at the facility to direct stormwater into the existing biorentention basin and southern stormwater management pond, as shown on the Site Map in Figure 2, to manage stormwater associated with landfill operations. The bioretention basin treats stormwater from the site entrance and adjacent areas and ultimately discharges to surrounding vegetated areas.

The southern stormwater management basin is equipped with an outlet structure and emergency spillway designed to reduce velocity and control discharge rates for the 24-hour, 1-year, 10-year, 25-year, and 100-year storm events. The outlet structure has been modified to retain approximately 1.6 acre-feet of stormwater to be utilized on site for dust suppression, as well as to safely contain and pass the design storms. The outlet structure runoff is directed into the bordering vegetated area and is properly stabilized as described in Section 8.10 of this report. The design calculations for the current permanent stormwater controls are included in Appendix F.

A northern stormwater management basin will be installed in the future during construction of Phase 7B and the proposed MSE berm. The north basin has been designed as an infiltration basin to completely store the runoff from a 100-year, 24-hour design storm with no surface water discharge from the basin. The stormwater collected in this pond will infiltrate the pond floor at a minimum rate of 0.5 inches per hour, based on the characteristics of the on-site sand. The basin

will be equipped with an overflow spillway lined with rip-rap to provide overflow capacity from the pond.

Stormwater runoff will be directed to the basin via a series of perimeter swales and culverts. At the completion of C&D disposal, sideslope diversion swales will be located on the final cover system to direct runoff towards the perimeter channel. The design calculations for the proposed future permanent stormwater controls are included in Appendix F.

During construction of C&D disposal areas and the MSE berm, stormwater runoff will be controlled in a similar manner to previous phase construction events, in accordance with the structural and non-structural measures identified in Section 8.10.

The landfill construction includes a leachate collection system to collect leachate and transfer it off-site for treatment. The leachate conveyance system consists of pumps in each landfill cell that pump collected leachate from the active area of the landfill through high-density polyethylene (HDPE) pipes into the leachate storage tank. Piping that is outside the limits of the lined waste containment cell consists of dual walled HDPE pipe. The leachate storage tank includes dual containment and is regularly emptied at the load-out structure by a licensed contractor and the leachate is transported off-site for proper disposal.

The current site topography, in the vicinity of the mining operation, naturally drains stormwater runoff to the interior, not exterior, of the site where well-drained soils dominate the landscape. Due to these conditions, there is no stormwater discharge associated with the current mining operation and the mining operations do not require coverage under GP-0-17-004. As landfill and mining operations change, the SWPPP shall be updated to reflect the operational modifications in accordance with Section 14.0 of this report.

8.1 GOOD HOUSEKEEPING

Requirements (Part III A. 7a)

• Describe all good housekeeping practices that are being implemented by the *owner or operator* including those described in Part II.A.2 to minimize *pollutant discharges* from all exposed areas that are potential sources of *pollutants*.

Good housekeeping procedures are employed at the facility to reduce the possibility of accidental spills and to minimize safety hazards to facility personnel. Key elements of the facility's good housekeeping program include the following:

- <u>Onsite Waste Collection and Disposal:</u> Waste generated onsite is typically stored in covered dumpsters or compactors, which is then transported to the active landfill or off-site and properly disposed. Absorbent material is used to clean up residual liquids originating from onsite waste collection containers.
- <u>Regular Sweeping</u>: *De minimis* chemicals and sediment from active areas of the facility will be removed regularly from paved roads, haul and access roads, and other potential surfaces. The sweepings will be removed and properly disposed.
- <u>Prompt Removal of *de minimis* Spillage:</u> *De minimis* spills may occur in the parking lot or on the facility haul and access roads, and would typically result from overfilling a truck at the fueling station or drips from a leaky truck or container. In a case where this happens, absorbent material shall be placed on the spill and then properly disposed.
- <u>Space:</u> Adequate space shall be maintained in all storage areas allowing easy access for inspections and spill response.
- <u>Parking Lot Maintenance</u>: Vehicle parking areas are inspected and maintained. Maintenance includes the use of absorbent material in conjunction with dry sweeping. This maintenance program minimizes the potential for petroleum drips, spills, and leaks to be discharged with storm water. Contaminated gravel and soil is removed and properly disposed.
- <u>Orderly Storage of Chemicals:</u> Chemicals are properly labeled and are stored in fireproof cabinets or within a designated hazardous waste storage area in 55-gallon drums. Chemicals are not stacked, thus preventing them from tipping over. Chemical storage is segregated to minimize any potential reactivity or incompatibility. Chemicals are stored indoors within the existing on-site maintenance garage, which prevents them from coming in contact with surface

runoff. The site operates in accordance with a Spill Prevention and Control and Countermeasures Plan included in Appendix, A which includes protocols for chemical storage and potential spills.

- <u>Regular Inspections:</u> Regular inspections are performed for areas of the facility where industrial materials or activities are exposed to stormwater as well as for the equipment used for site operations, as discussed further in Sections 8.2 and 8.3.
- <u>Routine Maintenance:</u> Facility equipment receives regular maintenance in order to prevent unnecessary leaks and releases of liquids, as discussed further in Section 8.3.

8.2 FACILITY INSPECTIONS

Requirements (Part III A. 7b)

• Describe procedures for scheduling, completing and recording results of inspections at frequencies meeting or exceeding those specified in this permit.

In addition to, or as part of, the comprehensive site inspection required under Part IV.A, both Sector J and L require that a qualified facility personnel must perform routine inspections at least once every seven days. Sector L includes an additional requirement that states that if a facility has received authorization to disturb greater than 5 acres of soil at one time, which would also result in the potential for stormwater discharge, the qualified person shall conduct at least two site inspections every seven calendar days. The two inspections shall be separated by minimum of two full calendar days. As noted previously, soil disturbances resulting from the mining activities are not likely to result in stormwater discharge as the operation drains to the interior of the site. The inspection frequency will be increased in accordance with Sector L if the Department has authorized landfill construction, which results in five or more acres of soil disturbance with the potential for stormwater discharge.

The inspection shall include all areas of the facility where industrial materials or activities are exposed to stormwater to:

- Identify conditions and maintenance needs of stormwater management devices (e.g., cleaning oil/water separators, catch basins) to avoid situations that may result in the practice becoming a source of pollutants;
- Detect leaks and ensure the good condition of drums, tanks and containers; and

• Evaluate the performance of the existing stormwater BMPs described in the SWPPP.

Qualified facility personnel shall inspect the following areas of the facility at least once every seven days:

- Chemical handling and storage areas;
- Vehicle & Equipment Maintenance areas;
- Fueling areas;
- Active land application areas;
- Areas used for storage of materials/wastes that are exposed to precipitation;
- Leachate collection and treatment systems;
- Locations where equipment and waste trucks enter and exit the site; and,
- Other potential sources of pollution.

The qualified facility personnel shall determine any deficiencies in the implementation and/or adequacy of the SWPPP and document them on the Corrective Action Form/Non-Compliance Event form included in Appendix C. Completed forms will be maintained in Appendix E. Deficiencies must be addressed, corrected, monitored and recorded in accordance with Part V as described in Section 14.0 of this report. An annual comprehensive site inspection must be conducted as described in Section 16.1 of this report.

A routine facility inspection report form is included in Appendix C.

8.3 **REGULAR MAINTENANCE AND REPAIR**

Requirements (Part III A. 7c)

- Describe effective preventative maintenance program of all industrial equipment and systems that are exposed to stormwater to prevent unnecessary exposure of pollutants. The program must include timely inspection, maintenance and repairs.
- Include procedures for catch basin cleaning, if applicable

Regular maintenance includes the regular inspection, testing, and repair of facility equipment. Maintenance on landfill equipment is performed on-site. Maintenance scheduling is based on hours-of-service for each equipment item. Large repair orders are contracted off-site. Drip pans or equivalent measures shall be placed under any leaking piece of stationary equipment until the leak is repaired. Drip pans shall also be inspected for leaks and potential overflow and collected liquids must be properly disposed of in accordance with RCRA regulations.

In cases where inspection findings detect potential operational problems, preventive maintenance is required to prevent both potential and non-operational spills. For example, the operator shall maintain containers used for outdoor chemical/significant materials storage to prevent leaking.

For landfill specific operations preventative maintenance programs, the operator shall maintain the elements of the leachate collection and treatment systems to prevent commingling of leachate with stormwater, and the integrity and effectiveness of any intermediate or final cover, including making repairs to the cover as necessary to minimize the effects of settlement, sinking, and erosion.

If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable, but not more than 2 weeks after completion of the routine facility inspection or the comprehensive site inspection, unless the Department grants permission for a later date in writing.

8.4 MINIMIZE EXPOSURE

Requirements (Part III A. 1)

- Minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur.
- Explain existing or planned material handling procedures, storage requirements, secondary containment, and equipment (e.g., diversion valves), that are intended to minimize spills or leaks at the facility.
- Where practicable, industrial materials and activities should be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff.
- Describe the procedures that will be followed for cleaning up spills or leaks. Measures for cleaning up spills or leaks must be consistent with applicable petroleum bulk storage, chemical bulk storage or hazardous waste management regulations at 6 NYCRR Parts 595-599, 612-614, and 370-373.

The potential for leaks, spills, and other releases is minimized by following BMPs listed in this section. Where practicable, industrial materials and activities should be protected from exposure to rain, snow, snowmelt, or runoff. All storm water from the landfill operation is directed through the existing stormwater management system. All storm water from the mining operation naturally drains to the interior, not exterior, of the site.

C&D exposure to stormwater on slopes that drain to the landfill perimeter is minimized through the use of cover materials. Any stormwater that flows through/contacts C&D is collected in the leachate system and stored in the above-ground leachate storage tank for subsequent disposal to an off-site wastewater treatment facility. The leachate conveyance system utilizes pump floats, electrical signals, valves, and closed-coupled cam lock fittings to minimize the potential for spills. The above-ground storage tank is constructed on a concrete base with secondary containment. Stormwater that falls within the secondary containment is drained to the bio-retention basin, through a valved 6 -inch drainage pipe. The valve is closed under normal operations and is opened to drain the area by a responsible official who has carefully inspected the area to verify that the tank is not leaking into the secondary containment area. A logbook is maintained on site noting for each discharge screening method, results of screening, date, time, volume, and supervising personnel.

8.5 TRAINING

Requirements (Part III A. 7e)

Describe your plan for training the employees who work in areas where industrial materials or activities are
exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions
of the MSGP, including all members of your SWPPT. Included in your description must be the frequency of
training (note: recommended at least one time per year), and the schedule you will follow.

Training programs are developed to inform personnel of the components and goals of this plan. The training covers practices for preventing spills and the procedures for responding properly and rapidly to spills. Stormwater Pollution Prevention Team members, as listed in Section 2.3, and personnel who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel) are trained initially prior to work assignments and annually thereafter to ensure they are familiar with the provisions of the plan.

Training meetings will be held annually and an employee training log including attendee signature and training date will be kept with the SWPPP. The meetings emphasize identification of materials not accepted at the facility, identification and remediation of leaky containers, dry cleanup methods, spill events or failures, proper sampling and reporting procedures, malfunctioning equipment, new policies or programs regarding spill prevention and response, revisions in the plan, and employee responsibilities and roles in the plan. Specific sections of the SWPPP plan (i.e. spill response, housekeeping, inspection, etc.) and other applicable plans (i.e. SPCC Plan) are reviewed at this time.

Training should also be provided by the facility for incoming drivers emphasizing material not accepted at the facility, identifying and preventing stormwater pollution from leaking vehicles, and any other potential causes of non-stormwater discharges.

A copy of the employee training log is attached in Appendix C.

8.6 OTHER CONTROLS

Other guidelines include:

- No solid materials, including building materials, shall be discharged to waters of the United States, except as authorized by a permit.
- Off-site vehicle tracking of sediments and the generation of dust shall be minimized though use of methods described in Section 8.9.

8.7 NON-STORMWATER DISCHARGE ELIMINATION AND CERTIFICATION

Requirements (Part III A. 7f)

• Non-stormwater discharges that are not listed in Part I.B.2 not authorized by a SPDES permit must be documented.

In the event of a non-stormwater discharge not authorized by this permit, discharge points will be sampled for the presence of non-stormwater discharges. A signed copy of the certification will be included with the SWPPP. A blank certification form is included in Appendix C.

The certification includes the date of any testing and/or evaluation; identification of potential significant sources of non-stormwater discharges at the site; a description of the results of any test and/or evaluation for the presence of non-stormwater discharges; a description of the evaluation criteria or testing method used; and, a list of the outfalls or on-site drainage points that were directly observed during the test.

There are no known non-stormwater discharges that apply to the post-construction operation of this facility.

8.8 WASTE, GARBAGE AND FLOATABLE DEBRIS

Requirements (Part III A. 7g)

• Describe *BMPs* selected to eliminate discharged of solid materials, including floating debris, to *surface waters of the State*, except as authorized by a permit issued under section 404 of the CWA.

Routine visual inspection of the facility will help ensure exposed areas of the site are free of any waste, garbage, and floatable debris. Onsite-generated waste is typically stored in covered dumpsters or compactors, which is then transported to the active landfill or off-site and properly disposed.

8.9 DUST GENERATION AND VEHICLE TRACKING OF INDUSTRIAL MATERIALS

Requirements (Part III A. 7h)

• Describe BMPs selected to minimize off-site vehicle tracking of raw, final, or waste materials or sediments, and the generation of dust.

Paved areas will be swept to minimize the generation of dust. In addition, dust may also be controlled by use of water truck. A trained professional shall determine the frequency of water application given current site and weather conditions and construction activities. In the event that a pollutant, such as motor oil or hydraulic fluid, is spilled or leaked, measures will be taken to properly clean and dispose of the material to ensure that it is not tracked offsite.

Alternative dust controls methods involving chemicals are prohibited unless approved by the NYSDEC Region 4 office.

8.10 STRUCTURAL AND NON-STRUCTURAL STABILIZATION PRACTICES

Requirements (Part III A. 7i)

• Describe BMPs selected to minimize onsite erosion and sedimentation, including both structural and nonstructural, and the resulting discharge of pollutants.

8.10.1 Structural Erosion and Sediment Control Practices

Silt Fence

Silt fence will be placed down-gradient of the construction area as needed based on existing site conditions at the time of construction, construction sequencing, and potential runoff events.

Standard silt fence will consist of polypropylene filter fabric, 30-inches high and supported by posts driven at least 18-inches into the ground. Reinforced silt fence, to be installed down gradient of disturbed areas where the ground slope exceeds 3H:1V, will consist of woven wire fence and filter cloth, 20-inches high and supported by posts driven at least 16-inches into the ground. In order to ensure effective performance, proper installation of siltation fencing is required. A small trench (4 x 6 inch) will be dug at the desired fence location. The posts will be positioned on the downhill side (away from source of potential runoff) with the siltation fabric facing the anticipated flow. Six inches of the filter fabric will be placed into the trench to impede undermining by stormwater runoff. Finally, the trench will be backfilled and the soil compacted to prevent runoff from eroding the backfill.

Stormwater Basins / Conveyances / Treatment

Stormwater runoff will be directed to stormwater management basins through a variety of stormwater management structures, including swales and culverts. The existing basin has adequate capacity to store the 100-year, 24-hour design storm. Erosion of the sedimentation basin and the inlet/outlet will be prevented using erosion and stabilization controls as described below.

8.10.2 Non-Structural Erosion and Sediment Control Practices

Good Housekeeping

Non-structural controls are as effective as structural controls for sediment control. Non-structural controls to be used at the construction site include:

- Regular sweeping of paved surfaces; and,
- Prompt cleanup of any spilled or waste materials.

Exposure Minimization

Exposure will be minimized by providing both permanent and temporary soil stabilization over areas that have been constructed to completion, or areas that will not be revisited within a 14-day period.

Where practicable, industrial materials and activities will be protected from exposure to rain, snow, snowmelt, or run-off.

Preventative Maintenance

A preventative maintenance program includes the timely inspection and maintenance of stormwater management devices. Examples of preventative maintenance include:

- Removal of obstructions, if any, from inlets and outlets;
- Removal of accumulated sediment; and,
- Repairing and re-planting slope areas that experience erosion.

8.10.3 Temporary Stabilization and Sedimentation Practices

Sediment and erosion controls such as erosion matting, mulching and hydro-seeding will provide interim stabilization. Erosion matting material may include single net straw blankets or coconut blankets. Erosion control matting shall be installed on exterior slopes greater than 3H:1V that have the potential to contribute stormwater runoff to an off-site discharge.

Temporary swales will be constructed to prevent runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet or to intercept sediment-laden water and divert it to a sediment-trapping device. Stabilization of the swale shall be completed within 7 days of installation in accordance with the appropriate standard and specifications for vegetative stabilization or stabilization with mulch as determined by the time of year. Swales shall have an outlet that functions to dissipate runoff velocity prior to discharge and minimize the amount of erosion down-gradient of the outlet. The location of the swale may be adjusted to meet field conditions in order to utilize outlet conditions. Swales constructed to divert runoff from disturbed areas shall remain in place until the disturbed areas are permanently stabilized.

Stone check dams will be constructed as a temporary or emergency measure to limit erosion by reducing velocities in open channels that are degrading or that are subject to erosion, or to act as sediment trapping devices for sediment-laden stormwater runoff that may originate from disturbed areas. Check dams shall be constructed as needed based on the potential for erosion and for runoff from disturbed areas to result in a stormwater discharge. The check dam shall be inspected after each recordable runoff event and all corrective actions completed immediately. Accumulated sediment should be removed from behind the dam as needed to allow the channel to drain and prevent large flows from carrying sediment over the dam. The drainage area contributing to each check dam shall not exceed two acres and the height of each check dam shall not exceed two feet.

Inlet protection will be installed as additional temporary sediment trapping measures, and will consist of hay bales placed within the perimeter swale at the inlet to the concrete drop structures. The hay bales will be embedded into the ground and supported with stakes. Stormwater will collect behind the haybales, allowing suspended sediment to settle out before the stormwater discharges over the bales into the drop structures. The inlet protection will be inspected after recordable runoff events and accumulated sediment will be removed as needed. Upon stabilization of the up gradient ground surfaces, the inlet protection will be removed so as not to block or impede stormwater flow or drainage.

The proposed temporary practices noted above shall be installed in accordance with the New York Standards and Specifications for Erosion and Sediment Control (NYSSRSC) and as depicted in the details shown on Figures 5 through 8.

8.10.4 Permanent Stabilization Practices

Grass lined waterways, or swales, shall be used where added vegetative protection is needed to control erosion resulting from concentrated runoff. Each swale shall have a stable outlet. The outlet may be another waterway, a stabilized open channel, etc. The outlet must discharge in such a manner as to not cause erosion. Outlets shall be constructed and stabilized prior to the operation of the waterway. Waterways shall be stabilized in accordance with the appropriate vegetative stabilization standard and specifications.

Lined waterways, or swales, shall be constructed for the disposal of concentrated runoff without damage from erosion or flooding, where grassed lined waterways would be inadequate due to high velocities. In instances where concentrated runoff is such that a lining is required to control erosion, where steep grades, wetness, prolonged base flows, seepage, or piping would cause erosion; the location is heavily traveled by humans or animals; soils are highly erosive; and/or, adjacent property concerns warrant the extra cost to contain runoff in a limited space, the lining shall be maintained to prevent undermining and deterioration. Existing vegetation shall be maintained to prevent scouring of the lining.

Rock outlet protection shall be installed to reduce the depth, velocity, and energy of water to decrease erosion to receiving downstream waterways. Outlet protection shall be installed at all culvert outlets, new channels constructed as outlets for culverts, and sediment basin culverts. The outlet protection shall be inspected after high flow events for evidence of scouring beneath the riprap and for dislodged stones. Repairs shall be completed immediately.

Permanent stabilization practices will also include the use of a hydro-seeding over vegetative support soil where additional exposure threatens stormwater quality. Seeding will be carried out with a seed mixture as specified in the NYSSRSC or an approved equal. All siltation barriers will remain in place until all exposed areas are re-vegetated.

The proposed permanent stabilization practices shall be installed in accordance with the NYSSRSC.

8.10.5 Planting Schedule for Exposed Areas

- 1. All exposed areas will receive 6" of soil capable of supporting vegetation or compost material.
- 2. Seed will be an approved mixture as specified in the NYSSRSC or an approved equal. Please refer to Drawing 5 located in the Appendix (SWPPP Temporary Stabilization, Erosion, and Sediment Control Details) for details including seed mixtures, application rates, and appropriate seeding time.

8.11 MANAGEMENT OF RUNOFF

Requirements (Part III A.7j)

 Describe the traditional stormwater management practices (permanent structural BMPs other than those that control the generation or source(s) of pollutants) that currently exist or that are planned for the facility. These types of BMPs are typically used to divert, infiltrate, reuse, or otherwise reduce pollutants in stormwater discharges from the site. Examples of BMPs that could be used include but are not limited to: stormwater detention structures (including wet ponds); green infrastructure practices; stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices).

In general, runoff will be managed through the stormwater controls and structural and non-structural practices as described above in Section 8.10, as well as in the bioretention and retention basin previously discussed. The proposed stormwater controls were analyzed, as described below, to verify that the controls are adequately sized to manage the stormwater runoff from the landfill.

8.11.1 Method of Analysis

A hydrologic analysis has been performed for the Site comparing pre-development (permitted conditions) and post-development (proposed conditions) conditions using a software program developed by HydroCAD. This program analyzes site hydrology by the graphic peak discharge method documented in Technical Release No. 20 and Technical Release No. 55 published by the United States Department of Agriculture (USDA) Soil Conservation Service.

The following variables were developed for the contributing watersheds (drainage areas) in order to complete the analysis:

- **Rainfall Depth:** A hydrologic analysis was performed for the 24-hour 2-year, 10-year, 25-year, and 100-year, Type II storm events (2.80, 4.25, 4.90, and 5.90 inches respectively) for each drainage area. The rainfall depths for the study area were obtained from available charts published in Technical Paper No. 40.
- **Runoff Curve Number (RCN):** The RCN is a hydrologic characteristic that contributes to the peak rate of runoff and volume from a given storm event. It is dependent upon soil conditions and land use. Generally, higher curve numbers are associated with less pervious soils and, hence, greater amounts of runoff. Final cover conditions were assigned a RCN of 80, consistent with the previously permitted RCN assigned to the landfill under post-closure conditions. Hydrologic Soil Groups (HSG) A, B, and C were used in determining RCNs based on the USDA Natural Resources Conservation Service Web Soil Survey, which is located in Appendix F.
- **Time of Concentration:** The time of concentration is defined as the time it takes runoff to travel from the hydraulically most distant part of the watershed to the downstream point of interest. This parameter is dependent on the characteristics of the ground surface and condition of the travel path. Times of concentration were calculated for the various sub catchments using the HydroCAD program, with a minimum time of concentration of six (6.0) minutes used in accordance with the protocol outlined in Technical Release No. 55.

8.11.2 Drainage Areas

In order to perform the analysis, the contributing drainage areas for the permitted and proposed final cover conditions for the Site were determined. The delineation of the drainage areas were determined using the permitted and proposed final cover grading plans, as shown on the drainage area maps (located in Appendix F). Brief descriptions of the analyses for the pre-development and post-development conditions are as follows:

- **Pre-Development Conditions:** Two HydroCAD analyses were previously performed for the permitted final cover conditions in order to determine the peak discharges from the south and north ponds during the storm events included in the analysis. The analyses were included in the engineering report for the footprint modification permit application prepared by CEE, dated March 2016. The previously permitted HydroCAD analysis is included Appendix F, and the drainage areas and reach locations for this analysis are shown on the pre-development stormwater analysis figure.
- **Post-Development Conditions:** The HydroCAD analysis for the proposed conditions includes an analysis of the proposed North Pond to determine the peak discharges from the pond during the storm events included in the analysis. The South Pond is not included in the post-development analysis as the contributing drainage area to the South Pond remains unchanged as a result of the MSE berm construction, therefore the peak stormwater discharges are not expected to increase.

8.11.3 Results of Analysis

The stormwater analyses described above were performed for the 2-year, 10-year, 25-year, and 100-year storm events in order to determine that there will be no increase in stormwater discharge once the proposed MSE berm construction is complete and the final cover stormwater control structures are in place. Detailed calculations are attached in Appendix F. The points of compliance for pre- and post-development conditions is the outlet of the North Pond (Design Point 1) and Outfall 002 from the South Pond (Design Point 2). Summaries of the peak stormwater runoff for the North and South Pond are provided below.

TABLE 8.1 NORTH POND STORMWATER ANALYSIS						
	Pre-Development			Post-Development		
Storm Event	Infilt	ration	Surface	Infiltration		Surface
Litonic	cfs	ac-ft	(cfs)	cfs	ac-ft	(cfs)
2-year	1.20	1.14	0.00	1.38	1.31	0.00
10-year	2.21	2.13	0.00	2.44	2.38	0.00
25-year	2.65	2.58	0.00	2.93	2.85	0.00
100-year	3.32	3.25	0.00	3.79	3.72	0.00

cfs = cubic feet per secondac-ft = acre-feet

As shown in Table 8.1, the stormwater inflow to the North Pond remains to be contained within the pond. Therefore, surface stormwater discharges for post-development conditions do not exceed those for pre-development conditions. Supporting calculations are provided in Appendix C.

The post-development north pond analysis is based upon the final conditions of the north pond, conditions that will be achieved prior to full buildout and closure of the facility. Currently, the north pond does not receive significant inflow from stormwater run-off. The contributing drainage area to the north pond will gradually increase as C&D filling progresses and stabilized slopes are established above the elevation of the perimeter berm in the northern portion of the facility.
TABLE 8.2 SOUTH POND STORMWATER ANALYSIS							
C t a mus	Pre-Deve	elopment	Post-Development				
Event	Surface I	Discharge	Surface Discharge				
	cfs	ac-ft	cfs	ac-ft			
2-year	1.29	1.16	1.29	1.16			
10-year	2.32	2.22	2.32	2.22			
25-year	2.64	2.56	2.64	2.56			
100-year	3.10	3.01	3.10	3.01			

cfs = cubic feet per second

ac-ft = acre-feet

As shown in Table 8.2, the surface stormwater discharges from the South Pond for postdevelopment conditions do not exceed those for pre-development conditions. Supporting calculations are provided in Appendix C.

8.11.4 Sizing Criteria

The bioretention area at the site has been sized in accordance with the unified sizing criteria presented in Chapter 4 of the NYS Stormwater Management Design Manual, 2015.

TABLE 8.3 WATER QUALITY VOLUME (WQv)					
Stormwater BMP	WQv (ft ³)		Af (ft ²)		
	Required	Provided	Required	Provided	
Bioretention Area	5,209	5,225	3,708	5,225	

Af = surface area of filter bed

With a minimum storage of 1 foot above the filter bed, the bioretention area is sized to contain the required water quality volume and to drain this volume within two days. Refer to Appendix F for a detailed calculation.

8.12 POST CONSTRUCTION OPERATIONS AND MAINTENANCE

Stormwater management systems need to undergo regular inspection and maintenance in order to function properly and at design capacity. Maintenance needs may include removal of silt, litter and other debris from all structures and stormwater management basins; grass cutting and vegetation removal; and replacement of vegetative cover.

The following section outlines the procedures and schedule to be followed to perform routine inspection and maintenance activities of the stormwater management system components upon construction. In general, the frequency of inspection of each component should be at least twice a year (spring and fall) and after a major storm event. Major storm events are considered those that result in more than 4.25 inches of rain falling within a single 24-hour period (a 10-year storm event).

Drainage Structures

At least twice a year and after a major storm event, drainage structures such as catch basins should be visually inspected to determine the depth of accumulated sediment and the presence of trash. If trash is observed, it should be removed and disposed of properly. Accumulated sediment should be removed when sediment is observed to be within three (3) inches of the invert of the outlet pipe. A measuring stick should be used to determine the depth of sediment.

Structure sumps should be cleaned using a vacuum truck or an equivalent means. The contents removed by the vacuum truck should be hauled off-site to an approved or otherwise authorized solid waste disposal facility. If contents are removed by a contractor, they should provide documentation of the location used for disposal. Sediments or sediment-laden water should not be disposed of on-site. The drainage structures should be cleaned in the fall, prior to the start of the winter season, to remove leaves and other debris.

End Sections

End Sections are found at the end of pipes and they typically include rock protection, such as riprap aprons. The purpose of riprap aprons placed at the end of pipes is to reduce the velocity, depth and energy of the water, such that the flow will not erode downstream areas.

The end section(s) of pipes, including stone aprons, should be visually inspected for trash and sediment at least twice a year and after major storm events. If trash is observed, it should be removed and disposed of properly. If excessive sediment deposition is observed on the stone apron, measures should be taken to remove the sediment. Excessive sedimentation occurs when the stones on the bottom of the apron are no longer visible due to sediment deposition. It is recommended that accumulated sediments be removed with a hand shovel and disposed of off-site at an approved or otherwise authorized solid waste disposal facility.

Storm Sewers

Storm sewer pipes should be inspected at least twice a year and after major storm events to determine if any debris, obstructions or floatables are present. If the flow in the storm sewer appears confined (i.e., catch basins are full of water or slow draining, or the flow from the end section is low), then a constriction may be present. If a constriction is probable or if debris or obstructions are present, they should be removed.

Debris Removal

All debris shall be removed from the stormwater management basins. Debris should be removed monthly and after major storm events. Debris can clog inflow/outflow pipes and hinder emergency spillway performance. All debris shall be disposed of off-site at an approved or otherwise authorized solid waste disposal facility.

Sediment Monitoring and Removal

Sediments will primarily accumulate in the bottom of the stormwater management basins; however, accumulation could also occur within stormwater swales, diversion berms, and downchute structures. Following stabilization, accumulated sediments must be removed from these components when sediment is greater than 3-inches deep on an as-needed basis. Failure to remove the accumulated sediments will result in excess sediment loading, which will reduce the effectiveness of the components. Accumulated sediments should be removed by the use of excavators, backhoes or loaders, placed in a dump truck, and hauled off-site for disposal to an approved or otherwise authorized solid waste disposal facility. If removal of sediment causes damage to vegetated areas, disturbed areas should be seeded and mulched.

Basin Slopes

The slopes of the basins should be visually inspected to determine the percent of vegetative cover. At least 80% vegetative cover is needed to ensure the slopes are stabilized to prevent erosion and excess sedimentation build-up in the basins. If less than 80% vegetative cover is observed on the basin slopes in certain areas, these areas should be re-graded, seeded and mulched, as needed.

If any woody vegetation (i.e., small trees or shrubs), are observed during the inspections, they should be removed by mowing or cutting. It is recommended that the basin slopes be mowed at least twice a year to prevent woody vegetation from becoming established. Note that there are design plantings on the slope of the bioretention basin that includes woody vegetation. Select cutting of the bioretention basin slopes is required to retain the design plantings but prevent establishment of non-design woody vegetation.

The basin slopes should also be inspected for erosion, animal damage, and undercutting of the banks of the slope. If rills or gullies greater than 4-inches in depth and 6-inches in width are observed, they should be repaired by re-grading the area and applying seed and mulch. If the basin slopes appear to be undercutting or slumping, the slopes should be re-graded to design specifications, and then seeded and mulched.

Animal damage, including burrowing, should be repaired and filled as necessary. If persistent animal damage is noted, it is recommended that a licensed pest control company be contacted to remove the nuisance animal.

Basin Outlet Structure

The outlet control structure and outlet pipes should be visually inspected for debris and floatables at least twice a year and after major storm events. Debris and floatables should be removed as needed and disposed of properly.

Visual inspection of the condition of concrete, masonry and crack sealing of the outlet control structures should be conducted on an annual basis. If concrete, masonry or crack sealing are observed to be in poor condition, repairs should be made as needed. Poor condition may include cracks, chips, holes, water damage, or other noticeable structural deficiencies.

The outlet control structure contains a low flow orifice that allows stormwater to be released from the basin at a controlled rate. The low flow orifice should be visually inspected for obstructions at least twice a year and after a major storm event. If obstructions or debris is observed, it should be removed and disposed of properly.

Emergency Spillway

An emergency spillway is used to convey excess water away from the basin through a controlled section. The emergency spillway should be inspected at least twice a year and after major storm events for obstructions, debris, and floatables. If obstructions are observed, they should be removed as needed and properly disposed of. Any erosion or loss of vegetation will be documented and repaired as part of the inspection of the basin slopes (Section 8.6).

Bioretention Area

A bioretention treatment practice is used to treat the runoff from the area around the facility scales, as shown on Figure 2.

A healthy stand of grass is to be maintained between the surrounding roadway and the bioretention practice to provide pre-treatment of the water reaching the bio- retention practice. The surface of the bioretention area shall be inspected to check for accumulation of sediments, and accumulated sediments shall be removed from the surface of the bioretention practice as needed to maintain positive drainage and minimal ponding after storm events. The flow from the underdrain shall be inspected to confirm that it has not become plugged or blocked.

9.0 DOCUMENTATION REGARDING ENDANGERED SPECIES

Requirements (Part III C. 8)

- Include any documentation you have that supports your determination of eligibility in accordance with Part I.C.5 including:
 - Information on whether listed endangered or threatened species, or critical habitat, are found in the Action Area;
 - o Results of endangered species screening determinations; and
 - A description of measures necessary to protect listed endangered or threatened species, or critical habitat.

It was determined that no federally listed threatened or endangered species or their designated critical habitats are likely to be present in the "action area".

Requirements (Part III A. 8)

- The SWPPP shall include:
 - A summary of existing stormwater discharge sampling data taken at the facility
 - Chain of Custody Records for samples collected and transported to an approved laboratory
 - o Laboratory reports of results of sample analysis
 - o Quarterly Visual Monitoring Reports
 - o Copies of Discharge Monitoring Reports (DMRs)
 - o Copies of Annual Certification Reports (ACR)
 - o A summary of all stormwater sampling data collected during the term of this permit

A summary of stormwater discharge sampling data, chain of custody records and laboratory reports will be maintained in the SWPPP, along with copies of the Discharge Monitoring Reports, Annual Certification Reports, and any monitoring waivers that have been claimed.

The monitoring requirements prepared in accordance with Part IV, as described in Section 16.0, including quarterly visually monitoring, annual dry-weather flow monitoring, benchmark monitoring of discharges associated with specific industrial activities, and secondary containment areas for storage and transfer areas (Part III.F.3) shall be maintained in the SWPPP. All applicable monitoring reports shall be submitted by the appropriate submission deadline as listed in IV.F, Table IV.1 as shown in Section 16.9 and maintained in the SWPPP where applicable.

11.0 COPY OF PERMIT REQUIREMENTS

Requirements (Part III A. 9)

- The *owner or operator* must maintain a copy of the permit, NOI Authorization Letter, and all NOIs (including modifications) with the SWPPP.
- The must be maintained in the SWPPP

The NOI for the current permit is included in Appendix G. The permit is included in Appendix H. Copies of past NOI and Notice of Modification (NOM) forms associated with the previous permit GP 0-12-001 are maintained on-site in separate binder for the required time frame.

12.0 INSPECTION SCHEDULE

Requirements (Part III CA10)

• The SWPPP shall contain the schedule for conducting inspections and all documentation resulting from inspection.

Routine inspections of the landfill shall occur at least once every seven days as described in Section 8.2 of this report. A comprehensive site compliance inspection shall occur at least once a year as described in Section 16.1 of this report. A quarterly visual monitoring inspection shall occur at least once in each of the three-month periods of a year as described in Section 16.3 of this report.

All required inspection documentation and reporting will be completed and maintained in Appendix E as required in accordance with Part IVA-B as described in Section 16.0.

13.0 SIGNATURE AND SWPPP AVAILABILITY

Requirements (Part III B and C)

- The SWPPP shall be signed in accordance with Appendix H. and retained on-site at the facility covered by this permit in accordance with Parts III.A.9 and IV.C. For inactive facilities, the plan may be kept at the nearest office of the owner or operator.
- The owner or operator must keep a copy of the SWPPP on-site or locally available (when the site is unstaffed) to the Department for review at the time of an on-site inspection.
- The owner or operator must furnish a copy of the SWPPP to:
 - The *Department*, local agency approving stormwater management plans, or the *owner* of a *municipal separate storm sewer system* receiving *discharge* from the site upon request
 - In the interest of the public's right to know, the owner or operator must make a copy of the SWPPP available to the public within 14 days of receipt of a written request. The owner or operator shall identify on the NOI the location (URL # or physical location) and contact information to allow public access to the SWPPP. (Note: A facility may withhold justifiable portions of the SWPPP from public review that contain trade secrets, confidential commercial information or critical infrastructure information in accordance with 6 NYCRR 616.7 and 750-1.22.).

The SWPPP shall be maintained on-site and available to applicable parties and agencies in accordance with Part III.D as described above.

All Notice of Intent (NOI), Notice of Modification (NOM) and Notice of Termination (NOT) forms, SWPPPs, reports, certifications or information submitted to the Department (and/or the operator of a large or medium MS4), or records that this permit requires to be maintained by the owner or operator, shall be signed as described below:

All NOI, NOM, and NOT forms shall be signed by a responsible corporate officer. A responsible corporate officer is defined as one of the following:

- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or,
- A manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary

systems are established or actions taken to gather complete and accurate information for permit application requirements, and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

All reports required by the permit and other information requested by the Department shall be signed by a responsible corporate officer described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- The authorization is made in writing by a responsible corporate officer described above and submitted to the Department; or,
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, owner or operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

If an authorization under Part VI.H (Signatory Requirements) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a notification letter satisfying the requirements above must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

13.1 SWPPP CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Requirements (Part III E)

• This SWPPP is required to be modified and updated, as necessary, in response to corrective actions

The owner or operator shall amend the SWPPP when:

- There is a change in design, construction, operation, or maintenance at the facility which may have an effect on the potential for the discharge of pollutants from the facility which has not otherwise been addressed in the SWPPP; or
- It is found to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part III.A.3., or is otherwise not achieving the goals or requirements of the permit.

The SWPPP shall be modified, and additional monitoring and analysis shall be completed as follows:

- Maps or description of industrial activities If the SWPPP has been found to be inaccurate or incomplete, modifications must be completed to correct the deficiency(ies) identified.
- Stormwater controls The modification must identify the corrective actions needed and include a schedule for the implementation with a final date no later than 12 weeks unless special permission is obtained in writing from the Department.
- Additional inspections monitoring and/or analysis If the results of inspections, monitoring and/or analysis reveal a violation of this permit, a failure to maintain eligibility for coverage under this permit or a failure to comply with the benchmarks or other action levels in this permit, additional inspections, monitoring and/or laboratory analysis of stormwater samples may be required.
- If existing BMPs need to be modified or if additional BMPs are necessary, implementation must be completed before the next anticipated storm event, if practicable, but not more than 12 weeks after completion of the comprehensive site evaluation or other inspection, <u>unless permission for a later date is granted in writing by the Department</u>.

• Modifications required by the Department - The Department may notify the owner or operator at any time that the plan does not meet one or more of the minimum requirements of this permit. The notification shall identify those provisions of the permit that are not being met, as well as the required modifications. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the owner or operator shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made.

15.0 SPECIAL SWPPP REQUIREMENTS

Requirements (Part III D)

- Describe additional requirements for stormwater discharges associated with industrial activity that discharge into or through MS4s.
- Describe additional requirements for stormwater discharges associated with industrial activity from facilities subject to EPCRA Section 313 reporting requirements for Water Priority Chemicals.
- Describe additional requirements for facilities with secondary containment at storage and transfer areas.
- Describe additional requirements for stormwater discharges associated with industrial activity to impaired waterbodies.

The facility does not discharge into or through an MS4, is not subject to EPCRA Section 313 reporting requirements, and does not discharge to an impaired waterbody.

16.0 MONITORING, REPORTING, AND RETENTION OF RECORDS

Requirements (Part IVA-B.1)

- Describe the procedures for conducting the eight individual and separate categories of monitoring requirements that may apply to the facility with discharges authorized under this permit:
 - o Comprehensive Site Inspection
 - o Quarterly visual monitoring
 - o Annual dry weather flow monitoring
 - o Benchmark monitoring
 - o Coal pile runoff
 - Compliance monitoring for discharges subject to effluent limitations
 - o Monitoring of discharges from secondary containment at storage and transfer areas
 - Monitoring of discharges to impaired waterbodies

16.1 COMPREHENSIVE SITE INSPECTION

The owner or operator shall conduct a comprehensive site inspection at least once a year. The inspections will be done by qualified personnel who may be either facility employees or outside consultants hired by the facility. The inspector shall be familiar with the industrial activity, the BMPs, the SWPPP, and must possess the skills to assess conditions at the facility that could impact stormwater quality and assess the effectiveness of the BMPs that have been chosen to control the quality of the stormwater discharges. If more frequent inspections are conducted, the SWPPP will be modified as described in Section 14.0 to specify the frequency of inspections.

Inspections shall include all areas where industrial materials or activities are exposed to stormwater, and areas where spills and leaks have occurred within the past three years. At a minimum, the inspection will identify or include:

- Industrial materials, residue or trash on the ground that could contaminate or be washed away in stormwater;
- Leaks or spills from industrial equipment, drums, barrels, tanks or similar containers;
- Examination of all outfall locations to determine the presence of unauthorized non-stormwater discharges or allowable non-stormwater discharges that are not certified in accordance with Part III.A.7.(f)(1);
- Off-site tracking of industrial materials or sediment where vehicles enter or exit the site or tracking of material outside of the area where it originates;

- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;
- Evidence of, or the potential for, pollutants entering or discharging from the drainage system;
- Inspection of areas found to be the source of pollutants observed during visual and analytical monitoring done during the year;
- Stormwater BMPs identified in the SWPPP must be observed to ensure that they are operating correctly; and,
- If discharge locations or points are accessible, they must be inspected to see whether BMPs are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations must be inspected.

Compliance Inspection & Evaluation Report

A compliance inspection & evaluation report must be made and retained as part of the SWPPP for at least five (5) years from the date permit coverage expires or is terminated. At minimum, the report must include:

- The scope of the inspection;
- The name(s) of personnel making the inspection;
- The date(s) of the inspection;
- Weather information at time of inspection;
- Major observations relating to the implementation of the SWPPP, including:
 - The location(s) of discharges of pollutants from the site;
 - The location(s) of previously unidentified discharges of pollutants from the site;
 - Evidence of, or potential for, pollutants entering the drainage system;
 - Source of any discharges and actions taken to address newly identified authorized non-stormwater discharges or elimination of non-authorized discharges;
 - The location(s) of BMPs that need to be maintained;
 - The location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;

- The location(s) where additional BMPs are needed that did not exist at the time of inspection;
- Any incidents of noncompliance;
- Observations regarding the physical condition of and around all outfalls, including any flow dissipation devices; and evidence of pollutants in discharges and/or the receiving water; and,
- Required corrective actions to be implemented in accordance with Part V; and,
- When a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility complies with the SWPPP and this permit.

The report shall be signed in accordance with Part V.H as described in Section 14.0 and retained with the SWPPP in Appendix E.

When a comprehensive site compliance inspection schedule overlaps with routine inspections as described in Section 8.2, the annual comprehensive site compliance inspection may be used as one of the routine inspections.

A sample compliance inspection and evaluation report form is included in Appendix C.

16.2 ROUTINE INSPECTIONS

In addition to the comprehensive site inspection, a qualified person must perform routine inspections, which include all areas of the facility where industrial materials or activities are exposed to precipitation or stormwater runoff. The inspection frequency for facilities in Sector L is every seven days unless authorization has been granted to conduct activities that would result in a soil disturbance with the potential for stormwater discharge of 5 or more acres, in which case, the qualified person shall conduct at least two site inspections every 7 calendar days, with the two inspection being separated by a minimum of 2 full calendar days. The inspection frequency for Section J is once every seven calendar days. The nature of the mining activities and the sequencing of the landfill activities would not result in a stormwater discharge from an area of 5 or more acres; therefore, typical inspections in landfill construction areas will occur at a frequency of once every seven days. If site activities result in a soil disturbance with the potential for stormwater discharge of five or more acres, the inspection frequency will be increased in accordance with Sector L.

The routine inspection will include an evaluation of the performance of stormwater BMPs; any deficiencies in the implementation or adequacy will be documented and corrective actions implement in accordance with Part V. The routine inspections will be documented and maintained in the SWPPP.

16.3 QUARTERLY VISUAL MONITORING

Quarterly visual inspections and monitoring must be made at least once in each of the following three-month periods:

- January 1 through March 31;
- April 1 through June 30;
- July 1 through September 30; and,
- October 1 through December 31.

All samples must be collected from discharges resulting from a qualifying storm event, in accordance with Part IV.D.1 as described in Section 16.6. The owner or operator must perform and document a quarterly visual examination of a stormwater discharge associated with industrial activity from each outfall unless:

- A valid waiver is claimed in accordance with Part IV.G; or,
- There is no discharge from a qualifying storm event during a monitoring period. If no qualifying storm event resulted in runoff from the facility during a quarterly monitoring period, the owner or operator is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred that resulted in stormwater runoff during that quarter. If a visual examination was performed and the storm event was later determined not to be a measurable (greater than 0.1-inch rainfall) storm event, the visual examination should be included in the SWPPP records.

No analytical tests are required to be performed on the samples for the purpose of meeting the visual monitoring requirements. The visual examination must be conducted in a well-lit area and should document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and any other obvious indicators of stormwater pollution. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term for consistency.

Corrective and Follow Up Actions

If the visual examination indicates the presence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators), the owner or operator must, at minimum, complete and document the following actions:

- Evaluate the facility for potential sources of stormwater contamination;
- Remedy the problems identified Any sources of contamination that are identified must be addressed by implementation of non-structural and/or structural BMPs to prevent recurrence;
- Revise the facility's SWPPP in accordance with Parts III.E as described in Section 14.0; and,
- Perform an additional visual inspection during the first qualifying storm event following implementation of the corrective action. If the first qualifying storm event does not occur until the next quarterly monitoring period, this follow up action may be used as the next quarterly visual inspection.

Storm Event Data must be recorded and documented in accordance with Storm Event Data Form provided by the Department. The form must be kept with the SWPPP.

Quarterly Visual Monitoring Report

The visual inspection must be documented and maintained on-site with the SWPPP in accordance with Parts III.C.10 & IV.C as described in Section 10.0 and Section 16.8 respectively. The report must include:

- Outfall location;
- Inspection date and time;
- Personnel conducting the inspection;
- Nature of the discharge (i.e., runoff or snow melt);
- Visual quality of the stormwater discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution);
- Probable sources of any observed stormwater contamination; and,
- Actions taken or proposed to be taken to eliminate these sources.

The report shall be signed in accordance with Appendix H as described in Section 13.0 and retained with the SWPPP in Appendix E.

A sample quarterly visual monitoring report form is included in Appendix C.

16.4 ANNUAL DRY WEATHER FLOW MONITORING

The owner or operator must perform and document at least one dry weather flow inspection each year after at least three (3) consecutive days of no precipitation and update the non-stormwater discharge certifications. The dry weather flow inspection shall be conducted to determine the presence of non-stormwater discharges to the stormwater drainage system. The dry weather inspection shall be documented in an inspection report that must include the following:

- Outfall locations;
- The inspection date and time;
- Inspection personnel;
- Description of discharges identified; and,
- The source of any discharges and actions taken to address any newly identified allowable non-stormwater discharges or elimination of non-authorized discharges.

Corrective and Follow Up Actions

If a non-stormwater discharge is discovered, the owner or operator must, at minimum, complete and document the following actions:

- Identify its source to determine whether it is an authorized discharge (e.g, a discharge covered by another SPDES permit or an authorized non-stormwater discharge addressed under Part I.B.2);
- If it is determined that the discharge is not covered under this permit or another SPDES permit, the owner or operator shall notify the Regional Water Engineer and take immediate action to eliminate the discharge; and,
- Document actions in SWPPP and update the discharge certification.

The owner or operator shall modify the SWPPP to address any newly identified allowable non-stormwater discharges identified in Part I.B.2 that were not previously certified in accordance with Part III.C.7.f.(1) as described in Section 8.6. The dry weather flow inspections reports must be documented and retained on-site with the SWPPP in Appendix E, in accordance

with Part III.C.12 and Part IV.E as described in Section 8.6 and Section 16.8 respectively.

16.5 BENCHMARK MONITORING

Benchmark monitoring at the facility will be conducted semi-annually during the calendar year. Samples shall be tested in accordance with the facility's Sector J and Sector L designation for the pollutants of concern listed in Tables VII-J-2 and VIII-L-2 shown below:

Table VIII-J-2*				
Sector J - Benchmark Monitoring Requirements				
Pollutants of Concern	Benchmark Monitoring Cut-off			
Sand and Gravel Mining (SIC 1442, 1446)				
Total Nitrogen (TN)**	6 mg/L			
Total Phosphorus (TP)	2 mg/L			
Total Suspended Solids (TSS)	100 mg/L			
Total Recoverable Iron	1 mg/L			
Total Recoverable Zinc	110 ug/L			
* New York State Department of Environmental Conservation GP-0-17-004				
** Total Nitrogen is calculated as the sum of ammonia, nitrate-nitrite and organic				

Table VIII-L-2*				
Sector L - B	Senchmark Monitoring Requirements			
Pollutants of Concern	Benchmark Monitoring Cut-off			
Landfills, Land Application Sites and Non-Compliant Landfills (Industrial Activity				
Total Suspended Solids	100 mg/L			
Total Nitrogen (TN)**	6 mg/L			
Total Phosphorus (TP)	2 mg/L			
Total Recoverable Iron	1 mg/L			
Landfills, Land Application S	Sites and Non-Compliant Landfills, Except			
Municipal Solid Waste Land	fill Areas Closed in Accordance With 40 CFR			
Total Suspended Solids	100 mg/L			
Total Recoverable Iron	1 mg/L			
* New York State Department of Environmental Conservation GP-0-17-004				
** Total Nitrogen is calculated as the sum of ammonia, nitrate-nitrite and organic				

These benchmark monitoring cut-off concentrations apply to stormwater discharges associated with industrial activity other than contaminated stormwater discharges from landfills subject to the numeric effluent limitations set forth in Table VIII-L-1.

Annual benchmark monitoring of a stormwater discharge associated with industrial activity shall be performed and documented from each outfall unless:

- A valid waiver is claimed in accordance with Part IV.G; or,
- There is no discharge from a qualifying storm event during a monitoring period. If no qualifying storm event resulted in runoff from the facility during a calendar year, the owner or operator is excused from benchmark monitoring for that monitoring period, provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred that resulted in stormwater runoff during that year. If a benchmark sample was collected during a storm event that was later determined not to be a measurable (greater than 0.1-inch rainfall) storm event, the results should be included in the SWPPP records, but the owner or operator is not required to report results on the annual DMR as described in Section 16.8.

All samples must be analyzed in accordance with Part IV.B.2.b.(2) and (3) as described in Section 16.6.

Corrective and Follow Up Actions

If results of analysis from a benchmark sample exceed a cut-off concentration for one or more parameters, the owner or operator must:

- Evaluate the facility for potential sources of stormwater contamination and/or causes of the exceedance;
- Remedy the problems identified Any sources of contamination that are identified must be addressed by implementation of non-structural and/or structural BMPs to prevent recurrence;
 - Implementation must be completed before the next anticipated storm event, if practicable, but not more than 12 weeks after discovery; and,

- If implementation will take longer than 12 weeks, the owner or operator must submit a proposed schedule for completion of the project and obtain written approval form the Regional Water Engineer;
- Revise the facility's SWPPP in accordance with Part III.E as described in Section 14.0;
- If corrective actions at a facility do not result in achieving benchmark monitoring cut-off concentrations, the facility must continue efforts to implement additional BMPs; and,
- If it is determined that the exceedances of the benchmark are attributable solely to the presence of that pollutant in the natural background the owner or operator may request relief from the additional sampling above by completing the Corrective Action Sampling Waiver Form provided by the Department.

Storm Event Data must be recorded in accordance with Part IV.d.3 as described in Section 16.6.

Monitoring results must be reported in accordance with Part IV.C as described in Section 16.8 and retained in accordance with Part III.C.10 and Part IV.E as described in Section 10.0 and Section 16.8.

The report shall be signed in accordance with Part V.H as described in Section 13.0 and retained with the SWPPP.

16.6 SAMPLE COLLECTION AND ANALYSIS

Requirements (Part IVD)

• Describe the procedures for collection and analysis of stormwater samples.

Sampling requirements must be assessed on an outfall by outfall basis and samples must be collected as follows:

• A minimum of one grab sample must be taken from the stormwater discharge associated with industrial activity resulting from a storm event with at least 0.1 inch of precipitation (defined as a "measurable" event), providing the interval from the preceding measurable storm is at least 72 hours. The grab sample must be taken during the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of the discharge. If the sampled discharge comingles with non-stormwater water, the owner or operator must attempt to sample the stormwater discharge before it mixes.

Monitoring and analysis must be conducted according to test procedures approved under 40 CFR Part 136, or equivalent. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory that has been issued a certificate of approval (ELAP certified).

Along with the monitoring results, the owner or operator must provide storm event documentation using the Storm Event Data Form. Data to be collected include the following:

- The date and duration (in hours) of the storm event(s) sampled;
- Rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; and,
- The duration between the storm event sampled and the end of the previous measurable (greater than 0.1-inch rainfall) storm event.

A sample storm event data form is included in Appendix C.

16.7 MONITORING WAIVERS

Requirements (Part IV.G)

• Describe the procedures for applicable waivers that may be applied to monitoring required under this permit.

Adverse Climatic Conditions Waiver

When adverse weather conditions prevent the collection of samples, a sample may be taken during a qualifying storm event in the next monitoring period. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel such as local flooding, snow, high winds and electrical storms. This waiver may not be claimed to indicate that samples were not collected due to inconvenient timing of storms or other failures to collect stormwater samples.

If the Adverse Climactic Conditions Waiver is claimed, a certification of conditions leading to the claim must be signed and submitted with the ACR and associated DMR(s) in accordance with Appendix H as described in Section 13.0 and maintained with the SWPPP.

16.8 REPORTING RESULTS AND ANNUAL CERTIFICATION REPORTING

Requirements (Part VI.A)

• Describe the procedures for submission of applicable reports, including but not limited to annual certification reports, discharge monitoring reports, monitoring waivers, and any additional reporting required under this permit.

Annual Certification Report (ACR)

The ACR is the primary mechanism for reporting to the Department. Every facility covered by this general permit must complete and submit an ACR form in accordance with the submission deadlines in Part VI.1 as described in Section 16.9.

A blank copy of the Annual Certification Report has been included in Appendix D. Beginning December 21, 2020, the ACR shall be submitted electronically using the Department's online ACR located on their website.

Discharge Monitoring Report (DMR)

The owner or operator with Benchmark and/or Effluent Limitation Guideline monitoring requirements as described in Section 16.5 shall submit results of analysis for each parameter at each outfall associated with industrial activity using EPA's electronic DMR reporting system. All DMRs must be received by the Department 28 days after the end of the monitoring period.

Using forms provided by the Department, the following information must be reported when there is an exceedance of a numeric effluent limit or exceedance of a benchmark cutoff concentration of the impairing POC for discharges to impaired bodies:

- 1. Description of the exceedance and its cause;
- 2. Corrective actions taken to address he exceedance;
- 3. Preventative (long term) corrective actions taken including an SWPPP modification to prevent a future exceedance; and,
- 4. Corrective actions taken for all outfalls claiming the representative outfall waiver.

Monitoring Waivers

Any sampling waivers as described in Section 16.7 must be described using the form provided by the Department. Information should describe the sampling waiver being claimed, the monitoring period(s) for which the monitoring waiver is being claimed, the affected outfall(s) and specific and all additional information specified for the specific waivers being claimed.

Additional Reporting

Any spill of a hazardous substance must be reported in accordance with 6 NYCRR 597.4. Any spill of petroleum must be reported in accordance with 6 NYCRR 613.6 or 17 NYCRR 32.2. Notification must be reported to the NYSDEC Spills hotline (1-800-457-7362) within two hours after discovery.

The ACRs, DMRs, documentation to support claims of monitoring waivers, Reports of Non-Compliance must be submitted to:

MSGP Permit Coordinator NYSDEC, Bureau of Water Compliance 625 Broadway Albany, New York 12233-350

16.9 MONITORING REPORT SUBMISSION DEADLINES

Requirements (Part IVD)

• Provide the submission deadlines for all applicable monitoring reports.

All monitoring reports for the SWPPP shall be submitted as required in Table IV-2 below:

Table VI.1*				
	Monitoring/Report Submission Deadlines			
Monitoring type	Submission Deadline			
Visual Monitoring	Retain documentation on-site with SWPPP.			
Comprehensive Site Compliance Inspection	Retain documentation on-site with SWPPP.			
Dry Weather Flow Inspection	Retain documentation on-site with SWPPP.			
Annual Certification Report	Report must be received in the Department's Central Office no later than January 28 of the year following the reporting period.			
Benchmark Monitoring, Coal Pile Runoff, Numeric Effluent Limitation Monitoring	 <u>Period 1</u> – DMR must be received electronically using EPA's electronic reporting system no later than July 28 following the end of reporting Period 1 (January 1 to June 30). <u>Period 2</u> – DMR must be received electronically using EPA's electronic reporting system no later than January 28 following the end of reporting Period 2 (July 1 to December 31) 			
Monitoring for Bulk Storage and Loading/Unloading	Retain documentation on-site with SWPPP.			
Discharge from Secondary Containment	Retain logbook of discharges, including the screening method, results of screening; date, time and volume of each discharge; and the personnel supervising each discharge.			
Monitoring for Discharges to Impaired Waterbodies	Results must be received on a <i>Discharge Monitoring Report</i> form in the <i>Department</i> 's Central Office no later than 28 days following the reporting period.			
Non-Compliance Event Form for Exceedances of Numeric Effluent Limits	Results of exceedance (s) and corrective action (s) taken must be reported on the Non-Compliance Event Form provided by the Department with the submission of the DMR which reports the exceedance.			

Corrective Action				
Documentation for facilities	Detain decomponiation on site with SW/DDD			
that do not discharge to an	Retain documentation on-site with SwPPP.			
impaired waterbody				
Corrective Action Form for				
facilities that have an	Results of the exceedance(s) and corrective action(s) taken must be			
exceedance of a Benchmark	reported on the Corrective Action Form provided by the Department with			
cut-off concentration to an	the submission of the DMR, which reports the exceedance.			
impaired waterbody				
* New York State Department	nt of Environmental Conservation GP-0-17-004			

16.10 RETENTION OF MONITORING RECORDS

SWPPP Requirements

The SWPPP developed in accordance with Part III of GP-0-17-004 shall be maintained on-site until at least five years after coverage under this permit terminates. The *owner or operator* shall retain all records of monitoring information, copies of all reports required by this permit, and records of all data used to complete the NOI and/or NOM forms to be covered by this permit, until at least 5 years from the date that the Department receives a complete NOT submitted in accordance with Part I.E. Completed forms for GP-0-17-004 will be included in Appendix E of this report.

Monitoring Activities and Results Requirements

The owner or operator shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least five years from the date of the sample, measurement, report or application.

When records are stored electronically, the records must be preserved in a manner that reasonably assures their integrity and are acceptable to the Department. Such records must also be in a format that is accessible to the Department.

Records of monitoring information shall include:

- Records of all data used to complete the application for the permit; and,
- Copies of all reports required by this permit.

Data to include with the records of monitoring information:

- The date, exact place, and time of sampling or measurements;
- The individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical techniques or methods used;
- The results of such analyses; and,
- Quality assurance/quality control documentation.

FIGURES





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		EXISTING PROPERTY LINE EXISTING ADJACENT PROPERTY LINE EXISTING TOWN LINE PERMITTED LANDFILL PERIMETER LIMIT EXISTING LANDFILL PHASE LIMIT EXISTING MAJOR CONTOUR EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR EXISTING FENCE EXISTING FENCE EXISTING PAVED ROAD EXISTING UNPAVED ROAD EXISTING TREE LINE EXISTING TREE LINE EXISTING WATER MAIN PROPOSED LANDFILL PHASE LIMIT FLOW DIRECTION APPROXIMATE DRAINAGE AREA LIMIT APPROXIMATE IMPERVIOUS AREA LIMIT AREA OF STABILIZED SOIL (SEE NOTE		O DATE DESCRIPTION					G
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1.	BEFORE UNDERTAKING ANY CONSTRUCTION ACTIVITY, ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH SITE WORK T INVOLVES PHYSICAL GROUND DISTURBANCE ON THE PROJECT SITE SHALL SIGN AND DATE A COPY OF THE CERTIFICA STATEMENT, WHICH IS LOCATED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), PREPARED FOR THIS PROJECT.
2.	ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL CONFORM TO THE "NEW YORK STATE STANDARDS AND SPECIFICATI FOR EROSION AND SEDIMENT CONTROL" (A.K.A. "NYS BLUE BOOK"), MOST RECENT EDITION AND ANY ADDENDA THERETO.
3.	THE SEDIMENT CONTROL MEASURES DETAILED IN THESE PLANS SHALL BE IN PLACE PRIOR TO THE START EACH CONSTRUCTION PHASE. AT A MINIMUM THESE MEASURES CONSIST OF SILT FENCE AND STABILIZED CONSTRUC ENTRANCE(S), ONCE CONSTRUCTED, ALL MEASURES SHALL BE PROPERLY MAINTAINED THROUGHOUT THE CONSTRUCTION PER AND THEN REMOVED FROM THE SITE ONCE THE SITE IS STABILIZED.
4.	AFTER THE START OF CONSTRUCTION, SITE SWPPP INSPECTIONS SHALL BE CONDUCTED AT LEAST EVERY 7 CALENDAR DAYS.
5.	BASED ON THE WEEKLY SITE SWPPP INSPECTIONS, THE EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SW MAY BE REVISED AS SITE CONDITIONS WARRANT. THE CONTRACTOR SHALL IMPLEMENT THESE CHANGES AS SOON PRACTICABLE.
6.	THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR UNTIL FINAL SURFACE TREATMENT HAS BEEN INSTALLED AND VEGETATED AREAS HAVE ESTABLISHED 80% COVERAGE. AFTER VEGETATED AREAS HAVE BEEN STABILIZED WITH AT LEAST 80% VEGETATIVE COVER, THE PROPERTY OWNER SHALL ASS RESPONSIBILITY FOR MAINTAINING THE EROSION AND SEDIMENT CONTROL SYSTEM(S) THEREAFTER.
7.	CONSTRUCTION ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE CONSTRUCTION PHASING SCHEDULE SUPPLIED BY CONTRACTOR OR AS SHOWN ON THE PLANS.
8.	OUTSIDE THE GROWING SEASON, OTHER METHODS OF SOIL STABILIZATION (SUCH AS THE USE OF JUTE MESH AND EXCELS MATTING) SHALL BE USED UNTIL SUCH TIME AS VEGETATIVE COVER CAN BE ESTABLISHED.
9.	EXISTING VEGETATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE. SITE WORK ACTIVITIES SHALL BE PLAN TO MINIMIZE THE AREA AND DURATION OF SOIL DISTURBANCE. REMOVAL OF WOODY VEGETATION SHALL BE KEPT TO MINIMUM EXTENT PRACTICABLE.
10.	TRENCH DEWATERING SHALL BE CONDUCTED USING A PORTABLE PUMP AND HOSE, AS NECESSARY. WATER SHALL BE PUM TO A DEWATERING STRUCTURE OR GEOTEXTILE FILTER BAG LOCATED IN A WELL VEGETATED UPLAND AREA. WHEN COMPLE
	ALL DEPOSITED SEDIMENTS SHALL BE PROPERLY MANAGED IN UPLAND AREAS OR DISPOSED OF OFF-SITE.
11.	ALL DEPOSITED SEDIMENTS SHALL BE PROPERLY MANAGED IN UPLAND AREAS OR DISPOSED OF OFF-SITE. INLET PROTECTION MEASURES SHALL BE INSTALLED AROUND STORM DRAIN INLETS TO PREVENT SEDIMENT LADEN WATER F ENTERING STORM SEWER SYSTEMS.
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- INSTALLED TO SLOW THE VELOCITY OF THE FLOWS. FOLLOWING THE WORK, THE DITCHES AND/OR SWALES SHALL BE RECONSTRUCTED TO PRE-CONSTRUCTION CONTOURS AND STABILIZED IN ACCORDANCE WITH THE PLAN DETAILS.
- 2. TRENCH BREAKERS SHALL BE INSTALLED IN TRENCHES ADJACENT TO WETLANDS AND ROAD CROSSINGS, AS REQUIRED, TO PREVENT SUBSURFACE EROSION AND DEWATERING OF WETLANDS AND WATERBODIES.
- 3. IF NECESSARY, PERMANENT SLOPE BREAKERS SHALL BE CONSTRUCTED WITH A 2-8% OUTSLOPE TO DIVERT SURFACE FLOW TO WELL VEGETATED STABLE AREAS.

MULCHING & SEEDING NOTES:

- 1. TEMPORARY STABILIZATION MEASURES SHALL START AS SOON AS PRACTICAL ON PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT NOT MORE THAN 14 DAYS AFTER WORK HAS CEASED. ACCEPTABLE TEMPORARY STABILIZATION MEASURES INCLUDE, BUT MAY NOT BE LIMITED TO MULCH, STRAW, HAY, EROSION CONTROL FABRIC OR SOME FUNCTIONAL EQUIVALENT MEASURE. MULCH, STRAW OR HAY SHALL BE APPLIED AT A RATE SUCH THAT 90% COVERAGE OF THE PREVIOUSLY DISTURBED AREA IS ATTAINED.
- 2. TEMPORARY EROSION CONTROL PROTECTION BY MULCHING SHALL BE CARRIED OUT WITHIN 14 DAYS OF THE FILL GRADE BEING FINALIZED TO AVOID POSSIBLE CONTAMINATION OF PONDS, STREAMS, OR OTHER WATERCOURSES. PLACEMENT OF JUTE MESH OVER THE MULCH IS RECOMMENDED TO PROVIDE POSITIVE "TACKING" OF THE MULCH AND INCREASED PROTECTION AGAINST EROSION.
- 3. PERMANENT SEEDING AND MULCH SHALL BE APPLIED AS SOON AS THE DISTURBED AREAS HAVE ACHIEVED FINAL GRADE. IF SEEDING DATES ARE SPECIFIED IN THE LANDSCAPE NOTES AND THE FILL IS TRIMMED "OUT OF SEEDING SEASON", MULCH SHALL BE APPLIED TO THE SLOPE AS SPECIFIED IN THE SEEDING ITEM AND SEED SHALL BE APPLIED TO THE TOP OF THE MULCH IN THE NEXT SEEDING SEASON. WHEN THE FINAL GRADE CANNOT BE OBTAINED IN 14-DAYS, MULCH SHALL BE APPLIED FOR PURPOSES OF TEMPORARY EROSION CONTROL.
- 4. EROSION CONTROL MATTING SHALL SERVE AS A TEMPORARY EROSION CONTROL MEASURE ON ALL SLOPES GREATER THAN 3H:1V AND AS INDICATED ON THE PLAN. THE MATTING MATERIAL SHALL BE THE PRODUCT DEFINED IN THE PROJECT SPECIFICATIONS OR AN APPROVED EQUIVALENT.
- 5. UPLAND AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH RECOMMENDATIONS FROM THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" (MOST RECENT EDITION), AND ANY ADDENDA THERETO.

	TEMPORARY STABILIZATION APPLICATION RATES*					
MULCH MATERIAL	QUALITY STANDARDS	MULCHING RATE (PER 1,000 SQ. FEET)	MULCHING RATE (PER ACRE)			
WOOD CHIPS OR SHAVINGS	AIR-DRIED. FREE OF OBJECTIONABLE, COURSE MATERIAL	500-900 LBS.	10-20 TONS			
WOOD FIBER CELLULOSE	MADE FROM NATURAL WOOD	50 LBS.	2000 LBS.			
GRAVEL, CRUSHED STONE OR SLAG	WASHED, #2 STONE	9 CY	405 CY			
HAY OR STRAW	AIR–DRIED. FREE OF UNDESIRABLE SEEDS	90–100 LBS., 2–3 BALES	2 TONS, 100–120 BALES			
COMPOST	UP TO 3 INCH PIECES, MODERATE TO HIGHLY STABLE	3-9 CY	135–405 CY			

* APPLICATION RATES WERE OBTAINED FROM THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" (MOST RECENT EDITION).

REDTOP OR PERENNIAL RYEGRASS

COMMON NAME

COMMON NAME

EMPIRE BIRDSFOOT TREFOIL OR

COMMON WHITE CLOVER* TALL FESCUE

STRAW (CEREAL GRAIN)***

* ADD INOCULANT IMMEDIATELY PRIOR TO SEEDING.

- STAPLE 12" ON

CENTER

11/2"

11/2"

INSTALLATION NOTES:

(YXXXXXXX

TYPICAL STAPLES NO. 11 GAUGE WIRE

WOOD FIBER (HYDROMULCH)****

** SEEDING AND MULCHING RATES WERE OBTAINED FROM THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" (MOST RECENT EDITION). *** ANCHOR STRAW WITH WOOD FIBER MULCH (HYDROMULCH). **** WOOD FIBER MULCH MUST BE APPLIED THROUGH A HYDROSEEDER IMMEDIATELY AFTER MULCHING.

DROP STRUCTURE INLET PROTECTION NOT TO SCALE







-SUPPORT POSTS

(SEE NOTE 4)

-SUPPORT POSTS

(SEE NOTE 4)

NOTES:

- NOT TO SCALE
- EROSION CONTROL MATTING
- 2. THE MATERIAL USED FOR THE EROSION CONTROL MATTING SHALL BE THE PRODUCT DEFINED IN THE PROJECT SPECIFICATIONS OR AN APPROVED EQUIVALENT.
- <u>GENERAL NOTES</u>: 1. EROSION CONTROL MATTING IS TO BE PLACED ON SLOPES 3H:1V OR GREATER AND AS SHOWN ON PLANS.
- 6. MORE FASTENERS MAY BE REQUIRED DUE TO MATTING COMPOSITION, SOIL TYPE, SURFACE UNIFORMITY AND SLOPE STEEPNESS. METHOD OF INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- 5. WHEN MATTING MUST BE SPLICED DOWN THE SWALE, PLACE UPPER MATTING END OVER LOWER END WITH SIX (6) INCH MINIMUM OVERLAP AND STAPLE BOTH TOGETHER.
- 4. THE EDGES OF MATTING MUST BE STAPLED WITH APPROXIMATELY FOUR (4) INCH OVERLAP WHERE TWO (2) OR MORE STRIP WIDTHS ARE REQUIRED.
- 3. ROLL THE MATTING DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
- TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
- 2. BEGIN AT THE TOP OF MATTING INSTALLATION AREA BY ANCHORING MATTING IN A SIX (6) INCH DEEP

6"x6" TRENCH AT

MATTING TERMINAL ENDS

- 1. SOIL SUBBASE SHALL BE PREPARED PRIOR TO INSTALLATION BY SMOOTHING THE SURFACE, REMOVING DEBRIS AND LARGE STONE, AND APPLYING FERTILIZER AND SEED.

RECOMMENDED SEED MIXTURE FOR REVEGETATION OF DISTURBED AREAS

SEEDING RATE

(LBS. / ACRE)

8 LBS./ACRE

20LBS./ACRE

2 LBS./ACRE (REDTOP)

5 LBS./ACRE (RYEGRASS)

MULCHING RATE

(TON/ACRE & LBS./ACRE)**

2 TON/ACRE

500-750 LBS./ACRE

' (MIN)

OVERLAP -

4" (MIN) OVERLAÉ

RECOMMENDED MULCH MIXTURE FOR SEEDED AREAS

SEEDING RATE

(LBS. / 1,000 SQ. FOOT)

0.2 LBS./SQ. FOOT

0.45 LBS./SQ. FOOT

0.05 LBS./SQ. FOOT

0.10 LBS./SQ. FOOT

MULCHING RATE

(LBS. / 1,000 SQ. FOOT)

0.09 LBS./SQ. FOOT

0.01-0.02 LBS./SQ. FOOT

5"LOAM

& SEED

UNDISTURBED GROUND -

- STAPLE 12"

ON CENTER

XXXX

STAGGERED

STAPLES 4"

ON CENTER




-442\-CADD\Dwg\sw16-swppp\182442-SW16-SWPPP-7.dwg{FIG 7} LS:(1/12/2022 - ewillson) + LP: 1/12/.



4

NOTES:

ADJUST TO REQUIRED GRADE WITH A MINIMUM OF ONE COURSE AND A MAXIMUM OF FIVE COURSES

12.2'

 $\begin{pmatrix} 2\\ 8 \end{pmatrix}$

3

