

Permit No.	Date	DIN
11-07	January 21, 2011	12780

RECEIVED

January 21, 2011

Solid Waste Section

Asheville Regional Office

Buncombe County, North Carolina

Buncombe County Solid Waste Management Facility Subtitle D Landfill Phase III (Cell 6) Permit Renewal

Part 5 - Operation Plan

Submitted: January 2011



Contents - Operation Plan

Subtitle D Landfill

Section 1	Purpose	
1.1	Operation Drawings.....	1-1
Section 2	Waste Acceptance and Disposal Requirements	
2.1	Waste Definitions.....	2-1
2.2	Acceptable Waste.....	2-3
2.3	Acceptable Waste Requiring Special Handling.....	2-4
2.4	Prohibited Wastes.....	2-5
2.5	Receiving Prohibited Waste.....	2-5
2.6	Waste Screening Program.....	2-6
Section 3	Cover Material Requirements	
3.1	Daily Cover.....	3-1
3.1.1	Wet Weather Operations.....	3-1
3.2	Intermediate Cover.....	3-1
3.3	Alternative Daily Cover.....	3-1
3.3.1	Posi-shell.....	3-1
3.3.1.1	Properties of Posi-shell.....	3-2
3.3.1.2	Cover System Description.....	3-2
3.3.1.3	Cover System Application Procedures.....	3-2
3.3.2	Soil/Mulch Mixture.....	3-4
3.3.2.1	Properties of Soil/Mulch Mixture.....	3-4
3.3.2.2	Cover System Application Procedures.....	3-4
3.3.3	Tarps.....	3-5
3.3.3.1	Properties of Tarps.....	3-5
3.3.3.2	Cover System Application Procedures.....	3-5
Section 4	Disease Vector Control	
Section 5	Explosive Gas Control	
Section 6	Air Criteria	
6.1	State Implementation Plan.....	6-1
6.2	Open Burning of Waste.....	6-1
6.3	Fire Protection Equipment.....	6-1
6.4	Notification of Fire.....	6-1
Section 7	Access and Safety Requirements	

7.1	Landfill Access and Security	7-1
7.2	Attendant	7-1
7.3	Access Road	7-1
7.4	Dust Control	7-1
7.5	Signs.....	7-1
7.6	Waste Removal Scavenging Policy	7-2
7.7	Barrel and Drum Disposal.....	7-2
Section 8	Erosion and Sediment Control Requirements	
8.1	Control of Sediment	8-1
8.2	On-Site Erosion Control.....	8-1
8.3	Vegetative Cover	8-2
Section 9	Drainage Control and Water Protection Requirements	
9.1	Surface Water Diverted from Operational Area	9-1
9.2	Surface Water Shall Not Be Impounded Over Waste.....	9-1
9.3	Waste Shall Not Be Disposed of in Water	9-1
9.4	Leachate Collection and Disposal	9-1
9.5	Leachate Discharge.....	9-2
Section 10	Liquid Restrictions	
10.1	Bulk or Non Containerized Liquid Waste	10-1
10.2	Containerized Liquid Waste	10-1
10.3	Paint Filter Test	10-1
Section 11	Recordkeeping Requirements	
11.1	Regulatory Requirements.....	11-1
11.2	Permit File.....	11-1
Section 12	Spreading and Compacting of Waste	
12.1	Solid Waste Working Area	12-1
12.2	Solid Waste Compaction	12-1
12.3	Controlling Wind Blown Material	12-1
Section 13	Leachate Management Plan	
13.1	Maintenance and Inspection of the Leachate Storage Pond and Collection System	13-1
13.1.1	System Design.....	13-1
13.1.2	Leachate Storage Pond.....	13-1
13.1.3	Leachate Collection System	13-2
13.2	Leachate Monitoring	13-2
13.2.1	Quantitative Monitoring	13-2
13.2.2	Qualitative Monitoring.....	13-2
13.3.3	Recordkeeping	13-3

13.3	Leachate Disposal Approval	13-3
13.4	Leachate Management Contingency Plan.....	13-3
13.4.1	Leachate Sump Pump Station.....	13-3
13.4.2	Leachate Storage	13-3
13.4.3	Leachate Breakout	13-4

Appendices

<i>Appendix 5A</i>	Waste Screening Plan
<i>Appendix 5B</i>	ACM Documentation
<i>Appendix 5C</i>	Methane Monitoring Plan
<i>Appendix 5D</i>	Water Quality Monitoring Plan
<i>Appendix 5E</i>	Operation Drawings

Section 1 – Purpose Operation Plan

The purpose of this Operations Plan is to provide the Buncombe County Subtitle D Landfill staff with a manual that will serve as a guide for safe and efficient operation of the Subtitle D landfill. This Operations Plan has been prepared in accordance with the North Carolina Solid Waste Rule 15A NCAC 13B .1626, Operational Requirements for MSWLF Facilities, and therefore addresses the following issues.

- Waste Acceptance and Disposal Requirements
- Cover Material Requirements
- Disease Vector Control
- Explosive Gases Control
- Air Criteria
- Access and Safety Requirements
- Erosion and Sediment Control
- Drainage Control and Water Protection Requirements
- Liquids Restrictions
- Recordkeeping Requirements
- Spreading and Compacting Requirements
- Leachate Management Plan

Additionally, Table 1 is provided to summarize all required documents or documentation (record keeping) which must be maintained by the County and retained at the facility. The operating record may be inserted into a 3-ring binder located at the scale house or main administration building. It is the intent that Table 1 is clearly and visually posted to ensure direction on record keeping.

1.1 Operation Drawings

In accordance with Rule .1625(b)(1), operation drawings have been prepared for the 2011 Permit Renewal Application and are included in Appendix 5E.

Table 1
Buncombe County Subtitle D Landfill
Operating Record Requirements

Required Recordkeeping	Rule	Reference in Ops Plan	Action
INCOMING WASTE			
Attempted disposal of any prohibited wastes	.1626(1)(a)	2.5	Report to NCDENR within 24 hrs
Attempted disposal of any waste from outside the permitted service area	.1626(1)(a)	2.5	Report to NCDENR within 24 hrs
Records of random waste inspections	.1626(10)(a)(i)	11.1	Complete form
Waste determination records	.1626(10)(a)(i)	11.1	--
Amounts by weight of solid waste received at the Subtitle D landfill	.1626(10)(a)(ii)	11.1	--
DISPOSAL OPERATIONS			
Open burning requests	.1626(5)(b)	6.2	--
Fire and explosion notification	.1626(5)(d)	6.4	Report to NCDENR verbally within 24 hrs and written by 15 days
LEACHATE MANAGEMENT MAINTENANCE AND MONITORING			
Inspect leachate pond	.1626(12)(a)	13.1.2	Annually
Jet clean leachate collection pipes	SB1492 130A-295.6.(h)(3) and Leachate Spill Corrective Action	13.1.3	Annual, note in Operating Record
Remote camera inspection	SB1492 130A-295.6.(h)(3) and Leachate Spill Corrective Action	13.1.3	Once every 5 years
Inspect pump station and audio and visual alarms	Leachate Spill Corrective Action	13.1.3	Weekly
Inspect landfill sideslopes and LCS	Leachate Spill Corrective Action	13.1.3	Weekly or following rainfall events equal to or exceeding ½ inch

Leachate generation records	.1626(12)(b)	13.2.1	Weekly
Leachate quality sampling	.1626(12)(c)	13.2.2	Semi-annual
METHANE MONITORING			
Methane monitoring reports	.1626(10)(a)(iii) .1626(4)(b)	11.1	Quarterly
Exceedance in methane levels - required action within 7 days following detection	.1626(10)(a)(iii) .1626(4)(c)(ii)	11.1	Include in Operating Record detected levels and description of steps to protect human health
Exceedance in methane levels - required action within 60 days following detection	.1626(10)(a)(iii) .1626(4)(c)(iii)	11.1	Include in Operating Record a remediation plan for gas releases and notify NCDENR that plan has been implemented
GROUNDWATER AND SURFACE WATER MONITORING			
Groundwater and surface water monitoring reports	.1626(10)(a)(iv)	App. C	Semi-annual
TRAINING			
Certificates of training	.1626(10)(a)(i)	11.1	--
Training procedures	.1626(10)(a)(i)	11.1	--
CLOSURE/POST-CLOSURE (NOT APPLICABLE)			
Any closure or post-closure monitoring, testing, or analytical data	.1626(10)(a)(v)	11.1	--
REQUIRED APPROVED DOCUMENTS TO BE INCLUDED IN THE OPERATING RECORD			
Current Operation Plan in accordance with Rule .1626(10)(c)			
Current Water Quality Monitoring Plan in accordance with Rule .1630			
Current Permit to Construct and Permit to Operate			
Current cost estimates and financial assurance documentation in accordance with Rules .1626(10)(a)(vi) and .1628			

Section 2 - Waste Acceptance and Disposal Requirements

Operation Plan

2.1 Waste Definitions

Agricultural Waste - waste material produced from raising of plants and animals, including animal manures, bedding plant stalks, hulls, and vegetative matter.

Asbestos Waste - any waste material that is determined to contain asbestos.

Blood Product - all bulk blood and blood products.

Commercial Solid Waste - all types of solid waste generated by retail stores, offices, restaurants, warehouses, and other non manufacturing activities, excluding residential waste.

Construction/Demolition Waste - solid waste resulting solely from construction, remodeling, repairs or demolition of buildings, structures, or pavement but does not include inert, land-clearing or yard waste.

Hazardous Waste - any solid waste that is defined as hazardous in 15A NCAC 13A 261.3 and that is not excluded from regulation as a hazardous waste from conditionally exempt small quantity generators as defined within 15A NCAC 13A 261.5.

Hot Load - when a waste hauling vehicle is transporting solid waste that is burning or smoldering, it is referred to as a hot load.

Household Waste - any solid waste derived from households including hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas.

Industrial Solid Waste - solid waste generated by manufacturing processes that is not a hazardous waste regulated under Subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Inert Debris - any solid waste which consists solely of material that is virtually inert, such as brick, concrete, rock, and uncontaminated soil.

Infectious Waste - any solid waste capable of producing an infectious disease. These types of waste include microbiological waste, pathological waste, blood products, and sharps.

Land Clearing Debris - solid waste which is generated solely from land clearing activities such as stumps, trees, limbs, brush, grass, and other naturally occurring vegetative material.

Liquid Hydrocarbons - As defined under Article 21A of Chapter 143 of the North Carolina General Statutes: except that any such oils or other liquid hydrocarbons that meet the criteria for hazardous waste under the Federal Resource Conservation and Recovery Act (P.L. 94-580) as amended.

Liquid Waste - any waste material that is determined to contain free liquid by Method 9095 (Paint Filter Test).

Microbiological Waste - includes cultures and stocks of etiologic agents. The term includes cultures of specimens from medical, pathological, pharmaceutical, research, commercial, and industrial laboratories.

Oils - As defined under Article 21A of Chapter 143 of the North Carolina General Statutes: except that any such oils that meet the criteria for hazardous waste under the Federal Resource Conservation and Recovery Act (P.L. 94-580) as amended.

Pathological Waste - includes: human tissue, organs, body parts, secretions, and excretions, blood, and body fluids that are removed during surgery and autopsies; the carcasses and body parts of all animals that were exposed to pathogens in research, were used in the production of biological or in the in-vitro testing of pharmaceuticals, or that died of known or suspected infectious disease.

Polychlorinated Biphenyls (PCB) - defined as any of several compounds that are produced by replacing hydrogen atoms in biphenyl with chlorine. PCB's were most frequently used as an additive to oil or other liquid in situations where heat is involved. PCB's have been used in paints and lubricants, however the most common application was in electric transformers.

Radioactive Waste - any waste that contains radioactivity as defined by the North Carolina Radiation Protection Act, G.S. 104E-1 through 104E-23. Radioactivity is defined as the property possessed by some elements of spontaneously emitting alpha or beta rays and sometimes gamma rays by the disintegration of the nuclei of atoms.

Sharps - includes needles, syringes with attached needles, capillary tubes, slides and cover slips, and scalpel blades.

Spoiled Food - any food which has been removed from sale by the United States Department of Agriculture, North Carolina Department of Agriculture, Food and Drug Administration, or any other regulatory agency having jurisdiction in determining that food is unfit for consumption.

Treatment or Processing Waste - any waste that is a residual solid from a wastewater treatment or pretreatment facility.

Tires - rubber tires from vehicles.

White Goods - any inoperative and discarded refrigerators, freezers, ranges, washers, dryers, water heaters, and other large domestic commercial appliances.

Yard Trash - solid waste resulting from landscaping and yard maintenance such as brush, grass, tree limbs, and similar vegetative material.

2.2 Acceptable Waste

In accordance with 15A NCAC 13B .1626, a Municipal Solid Waste Landfill Facility (MSWLF) shall only accept those solid wastes which it is permitted to dispose of. In accordance with the North Carolina Solid Waste Management Rules, except where noted, the Buncombe County Sanitary Landfill is permitted to dispose of the following using normal operating procedures:

Agricultural Waste - This waste is acceptable with the exception of animal manures.

Bulk or Non-Containerized Liquid Waste - The waste is acceptable if the waste is a household waste other than septic waste and waste oil or the waste is leachate or gas condensate derived from the MSWLF unit.

Commercial Solid Waste

Containerized Liquid Waste - This waste is acceptable only if the liquid waste is in small containers similar in size to that normally found in household waste, and if the small containers are designed to hold liquids for use other than storage, and the waste is household waste.

Household Waste

Industrial Solid Waste

Animal Carcasses - Dog and cat carcasses will be accepted at the landfill, however, poultry and cattle carcasses will not be accepted. In accordance with .1626.(1)(c), all animal (dog and cat) carcasses delivered to the landfill shall be covered immediately.

2.3 Acceptable Waste Requiring Special Handling

Several components of the acceptable waste stream will require special handling procedures. The waste stream components requiring special handling include, but are not limited to the following:

Asbestos Waste - The County can accept asbestos waste, and is permitted to dispose of it in a designated portion of the C&D landfill, however, in order to maintain an accurate record of asbestos disposal quantities and locations, landfill staff will identify specific locations in each cell that will contain these wastes.

In accordance with .1626.(1)(d), the waste shall be covered immediately with a soil in a manner that will not cause airborne conditions and must be disposed of separate and apart from other solid wastes at the bottom of the working face or in an area not contiguous with other disposal areas. Separate areas shall be clearly designated so that asbestos is not exposed by future land disturbing activities.

Barrels and Drums - Barrels and drums may be disposed of if they are empty and perforated sufficiently to ensure that no liquid or hazardous waste is contained in them.

Construction/Demolition Waste - This waste is to be disposed in accordance with state and federal regulations in the approved location on site.

Hot Loads - Hot loads arriving at the site should be dumped immediately in the designated primary hot load area located near the working face. The designated area must be located only on areas containing compacted refuse covered by at least 6 inches of cover material. The location of the primary hot load area will change along with the landfill development so as to always be near the working face. Hot loads should be extinguished immediately after being dumped by applying water to the burning refuse and by covering the refuse with soil from the stockpile area. If problems are encountered, the local fire department should be called. Once extinguished, the hot load should be observed until it is certain that the fire is out. The remaining refuse should then be compacted and buried at the working face.

Land Clearing Debris/Yard Trash - This waste will be handled at the tub grinder and used as the mulch portion for the mulch/soil alternate daily cover mixture.

Sharps - Sharps shall be accepted for disposal in the lined portion of the lined landfill only if the sharps are within a puncture proof container or if the sharps have been incinerated.

Spoiled Food - Spoiled food shall be placed at the bottom of the working face and covered immediately.

Tires - Tires will be accepted, placed immediately in an on-site trailer and removed periodically.

Treatment or Processing Waste - per .1626 (1) (e)

White Goods - All chlorofluorocarbon will be removed and the remainder will be sold for scrap metal.

2.4 Prohibited Wastes

The following wastes are prohibited from disposal at the Buncombe County Subtitle D Landfill.

Containerized Liquid Waste - Containerized Liquid Waste may not be placed in the landfill unless the container is a small container similar in size to that normally found in household waste. In addition, Containerized Liquid Waste may not be placed in the landfill unless the container is a small container that is designed to hold liquids for use other than storage.

Hazardous Waste - per .1626 (1) (b) (i). Hazardous waste as defined in 15A NCAC 13A 261.3, that is not excluded from regulation as a hazardous waste from conditionally exempt small quantity generators as defined within 15A NCAC 13A 261.5 shall not be accepted at the Buncombe County Subtitle D Landfill.

Inert Debris

Infectious Waste

Liquid Waste per .1626 (1) (b) (iii)

Microbiological Waste

Pathological Waste

Polychlorinated Biphenyls (PCB) per .1626 (1) (b) (ii)

Radioactive Waste

Sharps - Sharps not within a puncture proof container or sharps that have not been incinerated shall not be disposed in the Buncombe County Subtitle D Landfill.

2.5 Receiving Prohibited Waste

The Buncombe County Subtitle D Landfill shall only accept those solid wastes that it is permitted to receive. The County will notify the North Carolina Department of Environment and Nature Resources Division of Waste Management (NCDENR

DWM) within 24 hours of attempted disposal of any waste the C&D and Subtitle D landfills are not permitted to receive.

A report shall be prepared of any attempted delivery of waste of which the landfill is not permitted to receive, including waste from outside the permitted landfill service area. The report will be forwarded to:

Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

2.6 Waste Screening Program

The Rule .1626(1)(f) require all MSWLFs implement a program at the facility for detecting and preventing the disposal of hazardous and liquid waste. This program must include, at a minimum:

- Random inspection of incoming loads or other comparable procedures
- Records of inspection
- Training of facility personnel to recognize hazardous and liquid waste.
- Development of a contingency plan to properly manage any identified hazardous and liquid waste addressing identification, removal, storage, and final disposition of the waste.

A copy of the waste screening plan for the Buncombe County Subtitle D Landfill is included in Appendix 5A to this Operation Plan.

Section 3

Cover Material Requirements

3.1 Daily Cover

In accordance with 15A NCAC 13B .1626 (2), the operator of MSWLF units must cover disposed solid waste with six inches of earthen material (or alternative daily cover (ADC) approved by the Solid Waste Section (SWS)) at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging. The daily cover must:

- be capable of covering solid waste after it is placed without change in its properties and without regard to weather;
- be noncombustible; and,
- not include rock fragments that are greater than six inches in diameter.

3.1.1 Wet Weather Operations

During wet weather, the County may develop a wet weather working face. The wet weather working face will be kept as small as possible. At the end of disposal operations, the County will cover in accordance with Section 3.1.

3.2 Intermediate Cover

In accordance with 15A NCAC 13B .1626 (2), the owner or operator of all MSWLF units must place 12-inches of intermediate cover on all areas which will not have additional waste placed on them for 12 months or more, but where final termination of disposal operations has not occurred. The composition standards of intermediate cover shall be the same as for daily cover in addition to being capable of supporting the germination and propagation of vegetative cover.

3.3 Alternative Daily Cover

Three ADCs are described in this section; Posi-Shell, soil/mulch mixture, and tarps. Each ADC shall provide control for disease vectors, fires, odor, blowing litter, and scavenging. Through SWS required demonstration periods from February 5, 2008 to June 5, 2008 and from August 9, 2008 to November 7, 2008, each ADC has been determined to provide equal or better element control as soil.

3.3.1 Posi-Shell

The Posi-Shell Cover System will be used as an ADC on waste disposed at the Subtitle D landfill. Posi-Shell provides a thin cover that hardens over the covered waste surface.

Posi-shell will be used over disposed waste and may be left as cover for up to 30 days. Any areas that have been left for 30 days will be covered with either a lift of waste or

soil. Exposed Posi-shell areas will be visually inspected daily and reapplied when necessary.

County personnel will keep a daily log and field sketch detailing disposal areas and dates of posi-shell application. The daily log is provided following this section.

3.3.1.1 Properties of Posi-Shell

The properties of each component of Posi-Shell are available in the Manufacturer's Usage Guide.

3.3.1.2 Cover System Description

As described in the Manufacturer's Usage Guide, the application rate for short-term coverage (overnight cover for daily cover operations) is approximately 8 to 10 square feet per gallon. Assuming the working face is less than one acre (100 feet wide and 400 feet long), the desired load size would be approximately 4,000 gallons. Posi-shell manufacturers may change recipes and County may use newer or better products as they become available. Currently, at a minimum, the Posi-Shell material quantities for daily use should be the following:

- 3,200 gallons of liquid (water or leachate),
- 8 bags (15 lbs each) of Posi-Pak,
- 40 bags (50 lbs each) of PSM-200 setting agent,
- 80 bags (94 lb each) of optional Portland cement, and
- Optional waste latex paint (quantity per manufacturer's recommendations)

Posi-Pak is a specially designed plastic fiber with a proprietary finish that provides the reinforcement matrix for the finished cover. PSM-200 setting agent is a blend of clay, polymers, and adhesives that provides thickening, lubrication, and adhesion. Portland cement can be used as a binder component which will help neutralize odors and enhances the durability of the cover system.

3.3.1.3 Cover System Application Procedures

Application Procedure

Application of the Posi-shell will generally follow the manufacturer's recommendation and will employ the following minimum procedures:

- The Posi-shell will be applied in two different directions to avoid spray shadow or wind dispersion;
- The Posi-shell will be applied at the end of each working day;

- The Posi-shell surface will be visually inspected on a daily basis for exposed waste and/or inadequate coverage. Inadequate coverage is generally defined as a thickness of less than 1/8 of an inch.

Areas of exposed waste and/or inadequate coverage will receive an additional application prior to operations ending for that day.

Maximum Daily Area Coverage

Based on the May 2007 Airspace Analysis Report:

- Annual 2007 waste disposal rate (MSW only) = 125,000 tons
- Operating days per year = 284 days
- Approximate daily waste disposal rate = 440 tons
- In-place density = 0.50 tons of MSW per cubic yard
- Daily cubic yards disposed = daily waste disposal rate / in-place density = 880 yd³ or 23,800 ft³

The working face will be restricted to the smallest area feasible. The working lift is typically 4 feet high. Based on a working lift thickness of 4 feet, the working face area is 5,400 square feet (daily cubic yards disposed / working lift thickness), which is equal to the daily coverage area.

Daily Depth and Quantity to be Applied

N/A

Average Monthly Volume of Daily Cover

N/A

List of Equipment

Equipment required for the Posi-Shell consists of a standard hydroseeding unit and a towing unit.

Material and Equipment Storage

The material components of Posi-Shell will be housed in the machine shop to minimize the risk of hydration. The spraying equipment will be parked in a County designated area which will not impede daily operations.

Wet Weather Operation

The application of Posi-shell during heavy rain events will be minimized. If Posi-shell is applied during periods of heavy rain, the surface will be visually inspected following the rain event for exposed waste or inadequate coverage.

Contingency Plans

If, for any reason, the County cannot use Posi-Shell as ADC material, soil, a soil/mulch mixture, or tarps will be used.

Screening Criteria

N/A

3.3.2 Soil/Mulch Mixture

A mulch (30% maximum by volume) and soil mixture is used as another ADC material. Mulch will be hauled from the on-site mulching operations and soil will be provided from the County's on-site borrow area. The soil/mulch mixture will be free of petroleum contaminated soils. The materials will be mixed at the borrow area or the working face.

Soil/mulch mixture shall not be used more than five (5) consecutive days. If soil/mulch mixture is used on four consecutive days, soil cover will be used on the following day.

3.3.2.1 Properties of Soil/Mulch Mixture

At the Buncombe County facility, waste segregation occurs at the scale house to prevent the mulch processing of any unacceptable material, additionally the mulch processing operator segregates waste by placing unacceptable material into a dumpster located near the mulching area. Unacceptable material includes construction and demolition debris, potentially contaminated debris, etc. Since waste segregation occurs prior to the waste processing into mulch, the resulting mulch is considered inert.

3.3.2.2 Cover System Application Procedures

Application Procedure

Application of the soil/mulch mixture will employ the following minimum procedures:

- The mixture will be prepared by combining three (3) loads of mulch and seven (7) loads of soil;
- Mix soil and mulch load and visually verify that the mixture is adequately commingled, ensure that there are no large clumps (3 inches in diameter or larger) of either soil or mulch in the mixture;
- Load and haul soil/mulch mixture to active working face using an articulating truck; and
- Use dozer to cover working face with six inches of soil/mulch mixture.

The surface will be visually inspected on a daily basis for exposed waste and/or

inadequate coverage. Areas of exposed waste and/or inadequate coverage will receive additional cover.

Maximum Daily Area Coverage

See Section 3.3.1.3.

Daily Depth and Quantity to be Applied

As stated above, **6 inches** of the soil/mulch mixture will be applied to the daily coverage area of 5,400 square feet. Therefore; the required daily quantity of soil/mulch mixture placed is approximately **100 yd³** (Assuming no other daily cover is used).

Average Monthly Volume of Daily Cover

As stated above, approximately 100 yd³ per day of soil/mulch mixture will be used. Assuming 24 working days per month, the average monthly volume of daily cover required for normal operating conditions is **2,400 yd³**.

List of Equipment

An articulating truck and dozer will be used for the application process.

Material and Equipment Storage

Any soil/mulch mixture requiring storage will be stored at the borrow area. Mulch stock pile sizes shall not exceed 30 feet in width and 15 feet in height to avoid spontaneous combustion and to maintain a manageable pile size in the event of a fire. Landfill equipment used for ADC procedures will be stored at County designated areas.

Wet Weather Operation

The soil/mulch mixture wet weather operation will be similar to the operation the County currently follows when using soil as daily cover during wet weather.

Contingency Plans

If, for any reason, the County cannot obtain mulch for the on-site processing area for use as ADC material, soil, Posi-shell, or tarps will be used.

Screening Criteria

Each soil/mulch mixture load will be visually inspected prior to transport to the working face to determine if the material is adequately mixed. The load will not be placed if the mixture is not commingled adequately or if foreign material is observed.

3.3.3 Tarps

Tarps will be used as another ADC. The tarps will be placed either manually or by using an automatic tarping machine which uses a spreader bar to lay and roll up the

tarps.

Tarps shall not be used more than five (5) consecutive days. If tarps are used on four consecutive days, soil cover will be used on the following day.

3.3.3.1 Properties of Tarps

N/A

3.3.3.2 Cover System Application Procedures

Application Procedure for Manual Placement

Application of the tarp will employ the following minimum procedures:

- Visually inspect working face to ensure that no sharp objects are protruding from the compacted waste which may tear the tarp;
- If necessary, run compacter over any protruding objections;
- Manually roll out tarp and place over working face, the side cables within the tarp and the metal bars on the short ends shall be heavy enough to weigh down the tarp; and
- Place additional tarps as needed to adequately cover working face.

The tarps will be visually inspected following placement to ensure that uplift will not occur. Additional metals bars will be placed if necessary. Soil will be placed over any areas of exposed waste and/or inadequate coverage.

Application Procedure for Equipment Placement

Application of the tarp will employ the following minimum manufacturer's recommended procedures:

- Visually inspect working face to ensure that no sharp objects are protruding from the compacted waste which may tear the tarp;
- If necessary, run compacter over any protruding objections;
- Using an automatic tarping machine, install tarp directly on working face, the side cables within the tarp and the metal bars on the short ends shall be heavy enough to weigh down the tarp; and
- Lay additional tarps as needed to adequately cover working face.

The tarps will be visually inspected following placement to ensure that uplift will not occur. Additional metals bars will be placed if necessary. Soil will be placed over any areas of exposed waste and/or inadequate coverage.

Maximum Daily Area Coverage

See Section 3.3.1.3.

Daily Depth and Quantity to be Applied

N/A

Average Monthly Volume of Daily Cover

N/A

List of Equipment

An automatic tarping machine and/or dozer will be used for the tarp installation.

Material and Equipment Storage

The automatic tarping machine and tarp will be stored in a County designated area that will not conflict with daily haul and disposal operations.

Wet Weather Operation

The tarping wet weather operation will be similar to the operation the County currently follows when using soil as daily cover during wet weather.

Contingency Plans

If, for any reason, the County cannot use tarps as ADC, soil, Posi-shell, or a soil/mulch mixture will be used.

Screening Criteria

N/A

Section 4 - Disease Vector Control Operation Plan

In accordance with 15A NCAC 13B .1626 (3), owners or operators of all MSWLF units must prevent or control on-site population of disease vectors using techniques appropriate for the protection of human health and the environment. Disease vectors are defined as any rodent, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.

Effective vector control measures shall be applied when necessary. Control of vectors will be maintained by application of cover material over the compacted solid waste. This will protect against migration of vectors into and from the landfill. Stagnant ponding water should be prevented to control mosquito breeding. Filling in low spots should be performed regularly, and if necessary, County mosquito control or a licensed exterminator shall be employed to control vectors.

Section 5 - Explosive Gas Control Operation Plan

In accordance with 15A NCAC 13B .1626 (4) ,the owners or operators of all MSWLF units must ensure that:

- the concentration of methane gas generated by the facility shall not exceed 25 percent of the lower explosive limit for methane in facility structures (excluding gas control or recovery system components); and,
- the concentration of methane gas does not exceed the lower explosive limit for methane at the facility property boundary.

Owners or operators of all MSWLF units must implement a routine methane monitoring program to ensure that the above standards are met. A Methane Monitoring Plan prepared in accordance with this rule is located in Appendix 5C of this Operations Plan.

Section 6 - Air Criteria Operation Plan

6.1 State Implementation Plan

In accordance with 15A NCAC 13B .1626 (5), the owner or operator of all MSWLFs must ensure that units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the U.S. EPA Administrator pursuant to Section 110 of the Clean Air Act, as amended.

All of the SIP requirements are listed in the current Title V Operating Permit for the Subtitle D landfill. The County is in compliance with the Title V Operating Permit thusly are not in violation of any SIP requirements.

6.2 Open Burning of Waste

In accordance with 15A NCAC 13B .1626 (5) (b), open burning of solid waste, except for the infrequent burning of land clearing debris generated on site or debris from emergency clean-up operations, is prohibited at all MSWLF units. Any such infrequent burning must be approved by the Division of Solid Waste Management.

6.3 Fire Protection Equipment

In accordance with 15A NCAC 13B .1626 (5) (c), equipment shall be provided to control accidental fires or arrangements shall be made with the local fire protection agency to immediately provide fire fighting services when needed. Fires that break out close to the surface of the fill area should be dug out and smothered with cover material. Deep fires should be smothered out by placing moist soil on the surface and by constructing soil barriers around the fire. Where the smothering technique fails, the burning material must be excavated and smothered or quenched with water once the burning material is brought to the surface. Water is usually not effective unless it can be directly applied to the burning material.

6.4 Notification of Fire

In accordance with 15A NCAC 13B .1626 (5) (d), fires that occur at the MSWLF require verbal notice to the Division of Solid Waste Management within 24 hours and written notification shall be submitted within 15 days. Verbal and written notification shall be submitted to:

Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
(919) 508-8400

Section 7 - Access and Safety Requirements Operation Plan

7.1 Landfill Access and Security

In accordance with 15A NCAC 13B .1626 (6) (a), the Buncombe County Subtitle D Landfill must be adequately secured by means of gates, chains, berms, fences and other security measures approved by the Division of Solid Waste Management to prevent unauthorized entry.

All vehicles disposing of waste at the facility will enter and leave through the access control gate. All waste entering the landfill must be weighed in at the scalehouse where a full-time Scale Operator verifies compliance with operation requirements. Unauthorized vehicle access to the site is prevented around the remaining portion of the landfill property by woods, wetlands, and storm water ditches.

7.2 Attendant

In accordance with 15A NCAC 13B .1626 (6) (b), an attendant shall be on duty at the site at all times while the facility is open for public use to ensure compliance with operational requirements.

A full-time Scale Operator will be located in the scale house during operating hours. The Scale Operator will verify compliance with operation requirements. In addition, a Facility Supervisor will be present on-site at all times during operation.

7.3 Access Road

In accordance with 15A NCAC 13B .1626 (6) (c), the access road to the site shall be of all weather construction and maintained in good condition. Potholes, ruts, and debris on the roads will receive immediate attention in order to avoid damage to vehicles. Access roads will be regraded as necessary to maintain positive slope for adequate drainage.

7.4 Dust Control

In accordance with 15A NCAC 13B .1626 (6) (d), dust control measures shall be implemented when necessary. Minimum dust control will include a water truck for wetting of dusty roads. Petroleum products shall not be used for dust control.

7.5 Signs

In accordance with 15A NCAC 13B .1626 (6) (e), a sign providing information on disposal procedures, operation hours, tipping fee, permit number, and other pertinent information shall be clearly posted at the site entrance.

In accordance with 15A NCAC 13B .1626 (6) (f), signs shall be clearly posted stating that no hazardous or liquid waste can be received.

In accordance with 15A NCAC 13B .1626 (6) (g), traffic signs or markers shall be provided as necessary to promote an orderly traffic pattern to and from the discharge area and to maintain efficient operating conditions.

7.6 Waste Removal Scavenging Policy

In accordance with 15A NCAC 13B .1626 (6) (h), the removal of solid waste from the landfill will be prohibited unless the County approves and the removal is not on the working face.

7.7 Barrel and Drum Disposal

In accordance with 15A NCAC 13B .1626 (6) (i), barrels and drums shall not be disposed of unless they are empty and perforated sufficiently to ensure that no liquid or hazardous waste is contained therein.

Section 8 - Erosion and Sediment Control Requirements

Operation Plan

8.1 Control of Sediment

In accordance with 15A NCAC 13B .1626 (7) (a), adequate sediment control measures shall be utilized to capture and control sediment in order to prevent sediment from impacting wetlands and off-site properties.

Surface water runoff passing through the landfill site shall be diverted to the sediment ponds by the use of ditches, berms, and pipes as shown on the Operation Drawings. Stormwater sedimentation ponds shall be constructed in accordance with the approved Sediment and Erosion Control Plan for control of on site stormwater run off and sediment transport from landfill operation.

The sedimentation ponds have been designed in such a manner that releases will not overload downstream drainage features or damage adjacent property. Sediment accumulated in the ponds shall be removed as specified in the approved Erosion Control permit. Silt gages shall be installed in all ponds as shown on the Detail Sheets in the Engineering Plan. Ditches require frequent inspection for sediment buildup. At a minimum, the sediment buildup should be assessed after all significant rain events.

8.2 On-Site Erosion Control

In accordance with 15A NCAC 13B .1626 (7) (b), adequate erosion control measures, shall be utilized to prevent excessive on-site erosion of slopes and roadways.

Erosion control measures shall include:

- A. Disturbing as little area as practical at any one time for landfilling operations.
- B. Seeding/ mulching of all disturbed areas commencing as soon as practically possible. Employing erosion netting or sod on steep slopes and other erosion prone areas.
- C. Use of earthen berms, hay bales, silt fences, riprap or equivalent devices down-gradient of disturbed areas, stockpiles, around drainage pipes inlets and outlets and at intervals along grassed waterways, until such time as permanent vegetation is established.
- D. Placement of riprap at the inlets and outlets of storm water piping.

8.3 Vegetative Cover

In accordance with 15A NCAC 13B .1626 (7) (c), vegetative ground cover sufficient to restrain erosion must be established within 30 working days or 120 calendar days upon completion of any phase of landfill development.

Riprap, haybales, or other acceptable temporary methods of erosion control may be required until permanent cover is established. Areas where final grade has been reached can be stabilized by mulching until a vegetative cover is established. Soil mulching can be achieved using wood chips, straw, hay, asphalt emulsion, jute matting, and synthetic fibers. Mulches allow for greater water retention; reduce the amount of runoff; retain seeds, fertilizer, and lime in place; and, improve soil moisture and temperature conditions.

Temporary seeding shall be applied in accordance with the NC Erosion and Sediment Control Planning and Design Manual, June 2006.

Section 9 - Drainage Control and Water Protection Requirements Operation Plan

9.1 Surface Water Diverted From Operational Area

In accordance with 15A NCAC 13B .1626 (8) (a), surface water shall be diverted from the operational area. Excessive surface water at the working face creates difficulties for maneuvering equipment and prevents the operator from achieving maximum compaction of the waste. To divert surface runoff away from the working face, temporary diversion berms shall be installed on the current lift, up-gradient from the working face and in other locations as dictated by the direction of grade. The area between the temporary berm and the working face should be limited to one acre to prevent excessive ponding. The soil cover in the areas beyond the diversion berms shall be uniformly graded and compacted to prevent the formation of erosion channels. In the event that channels do form, the cover shall be promptly repaired. During the formation of the initial lift of each disposal unit additional measures shall be employed to divert surface water. For portions of the disposal unit that have not yet received waste, surface water can be better diverted by temporarily plugging the leachate collection line at the location where the temporary berm intersects the line. Since the surface water that will pond at the plugged location is uncontaminated, it can be pumped from the disposal unit to the storm water management system. Temporary diversion berms and plugs that are no longer needed shall be promptly removed and the area regraded to promote uniform runoff of surface water.

9.2 Surface Water Shall Not Be Impounded Over Waste

In accordance with 15A NCAC 13B .1626 (8) (b), surface water shall not be impounded over or in waste. Completed areas shall be adequately sloped at a minimum of 4% to allow surface water runoff in a controlled manner.

9.3 Waste Shall Not Be Disposed Of In Water

In accordance with 15A NCAC 13B .1626 (8) (c), solid waste shall not be disposed of in water. Based on design, the minimum four foot separation from the seasonal high groundwater table to the bottom of the liner system will be maintained at all times.

9.4 Leachate Collection and Disposal

In accordance with 15A NCAC 13B .1626 (8) (d), leachate shall be contained on-site or properly treated prior to discharge. An NPDES permit is required for surface discharge prior to discharge of leachate to surface waters.

Leachate generated will be collected and disposed in accordance with the leachate management plan provided in Section 13.

9.5 Leachate Discharge

In accordance with 15A NCAC 13B .1626 (8) (e) (i), MSWLF units shall not cause a discharge of pollutants into waters of the United States, including wetlands, that violate any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402.

In accordance with 15A NCAC 13B .1626 (8) (e) (ii), MSWLF units shall not cause a discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirement of an area-wide or State wide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, as amended.

Leachate generated is contained on-site. The management system is discussed in Section 13.

Section 10 - Liquid Restrictions

Operation Plan

Liquid waste is defined as any waste material that is determined to contain "free liquid" as defined by Method 9095 (Paint Filter Liquids Test). A description of how to conduct a paint filter test is included in Section 10.3.

10.1 Bulk or Non-Containerized Liquid Waste

In accordance with 15A NCAC 13B .1626 (9) (a), bulk or non-containerized liquid waste may not be placed in a MSWLF unit unless:

- The waste is liquid household waste other than septic waste and waste oil.
- The waste is leachate or gas condensate from gas recovery derived from the MSWLF unit, whether it is a new or existing MSWLF unit or lateral expansion, is designed with a composite liner and leachate collection system per North Carolina Solid Waste Management Rules (Rule .1624).

10.2 Containerized Liquid Waste

In accordance with 15A NCAC 13B .1626 (9) (b), containers holding liquid wastes may not be placed in MSWLF units unless:

- The container is small and similar in size to that normally found in household waste containing liquid waste,
- The container is designed to hold liquids for use other than storage; and,
- The waste is household waste.

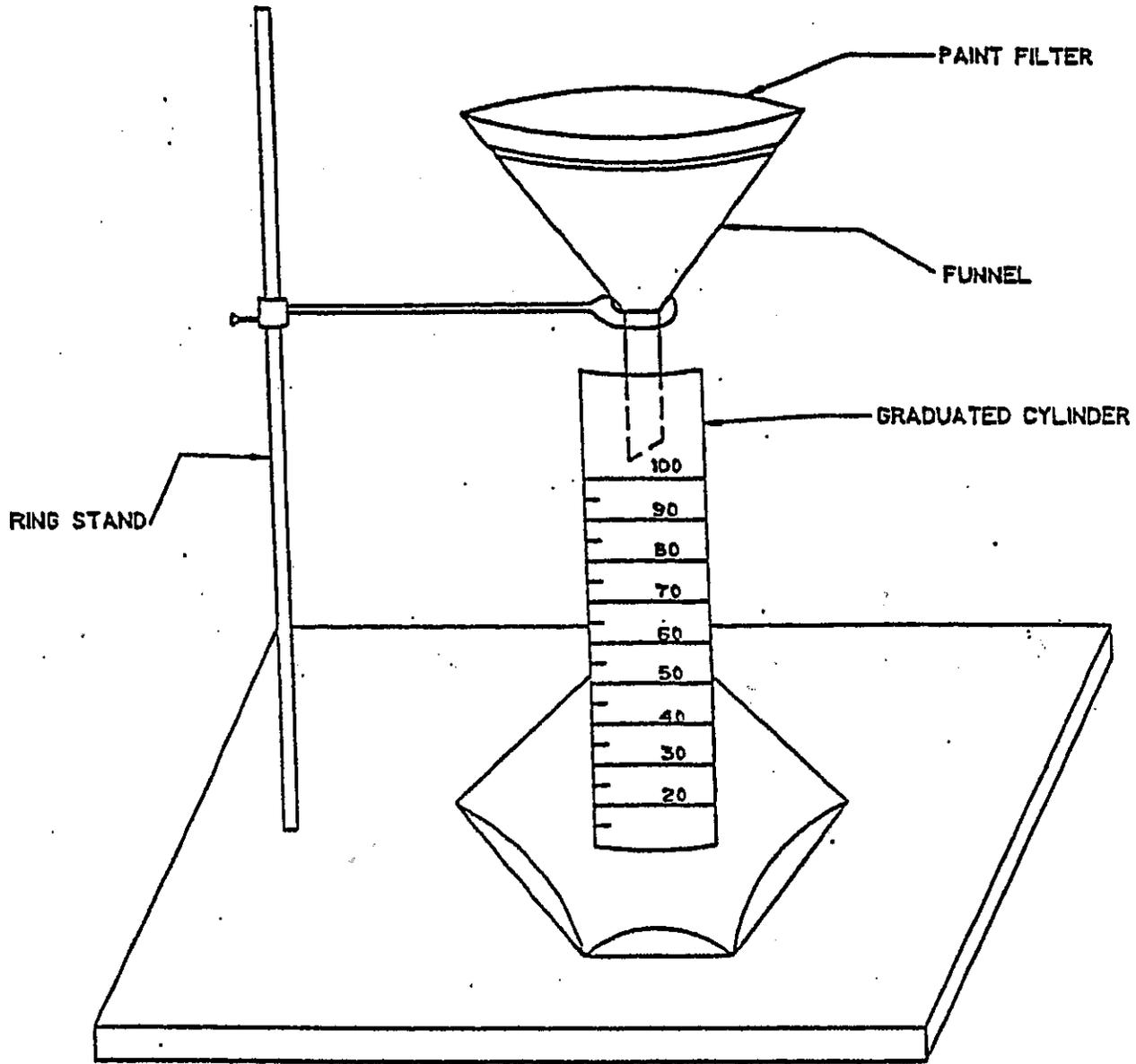
10.3 Paint Filter Test

According to 40 CFR 264.314 and 265.314, the placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Regional Administrator, or the Regional Administrator determines that:

- The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste.
- Placement in such landfill will not present a risk of contamination of any underground source of drinking water.

To demonstrate the absence or presence of free liquids in either a containerized or bulk waste, the following test must be used: Method 9095 (Paint Filter Test). This method is used to determine compliance with 40 CFR 264.314 and 265.314.

To conduct the Paint Filter Tests, a pre-determined amount of material is placed in a paint filter. If any portion of the material passes through and drops from the filter within the 5-minute test period, the material is deemed to contain free liquids. The test apparatus and materials are presented in Figure 10-1. The paint filter is required to be a conical paint filter mesh number 60 (fine meshed size). If the paint filter, with the waste, cannot sustain its weight on the ring stand, then a fluted glass funnel or glass funnel with a mouth large enough to allow at least 1 inch of the filter mesh to protrude should be used to support the filter. The funnel is to be fluted or have a large open mouth in order to support the paint filter yet not interfere with the movement, to the graduated cylinder, of the liquid that passes through the filter mesh.



CDM
environmental engineers, scientists,
planners, & management consultants

PAINT FILTER LIQUIDS TEST

Figure 10-1

Section 11 - Recordkeeping Requirements Operation Plan

11.1 Regulatory Requirements

In accordance with 15A NCAC 13B .1626 (10), the owner or operator of a MSWLF unit must record and retain at the facility, or an alternative location near the facility approved by the Division, the following information as it becomes available:

- Inspection records, waste determination records, and training procedures;
- Amount by weight of solid waste received at the facility to include source of generation;
- Gas monitoring (methane monitoring) results and any remediation plans;
- Any demonstration, certification, findings, monitoring, testing, or analytical data required for groundwater monitoring requirements, groundwater monitoring systems, groundwater sampling and analysis requirements, detection monitoring, assessment monitoring, assessment of corrective measures, selection of remedy, and implementation of corrective action program;
- Any monitoring, testing, or analytical data required for Closure and Post-Closure Plans;
- Any cost estimates and financial assurance documentation required by financial assurance requirements;

All information contained in the operating record must be furnished upon request to the Division or be made available at all reasonable times for inspection by the Division. The owner or operator must maintain a copy of the operation plan required by Rule .1625 at the facility.

The County will keep all required documentation either at the scale house or administration building at the facility entrance.

11.2 Permit File

A file containing all appropriate permits should be kept on site. The file shall include the following permits at the minimum:

- Current solid waste permits (Permit to Construct and Permit to Operate);
- Sediment and Erosion Control Permits;
- Applicable NPDES Stormwater Permits; and
- Applicable leachate disposal permit

Section 12 - Spreading and Compacting of Waste Operation Plan

12.1 Solid Waste Working Area

In accordance with 15A NCAC 13B .1626 (11) (a), operators shall restrict solid waste within MSWLF units to the smallest area feasible. The working face is defined as where waste is unloaded, inspected, spread, compacted, and ultimately covered with cover material. The working face shall be wide enough to prevent a backlog of vehicles waiting to unload and to allow adequate working space for landfill equipment. At a maximum, the width of the working face shall not exceed 100 feet.

12.2 Solid Waste Compaction

In accordance with 15A NCAC 13B .1626 (11) (b), solid waste shall be compacted as densely as practical into cells. After solid waste is discharged from vehicles, it shall be inspected for unacceptable items and subsequently spread on the working face not steeper than four feet horizontal to one foot vertical in layers not to exceed 2 feet in thickness. All areas of each layer shall be compacted by at least four passes of a compactor in order to achieve a minimum waste density of approximately 1,000 pounds per cubic yard.

12.3 Controlling Wind Blown Material

In accordance with 15A NCAC 13B .1626 (11) (c), appropriate methods such as fencing and diking shall be provided as needed within the landfill area to confine solid waste subject to be blown by the wind.

Portable litter screens shall be placed downwind of the working face as needed. The screens shall be kept as close to the working area as possible without unduly interfering with landfill operations. The screens shall be moved promptly when required by change in wind direction or progress of the fill. Additional screens or alternative measures may be required to prevent blowing litter from escaping the working area.

At the conclusion of each day of operation, windblown material at the landfill site shall be collected and returned to the working face.

Section 13 - Leachate Management Plan

Operation Plan

This plan has been prepared in accordance with Rule .1626 (12) and the Leachate Spill Corrective Action/Permit to Operate dated July 2008.

13.1 Maintenance and Inspection of the Leachate Storage Pond and Collection System

The maintenance plan has been prepared in accordance with Rule .1626 (12) (a).

13.1.1 System Design

The leachate collection pipes within the municipal solid waste landfill (MSWLF) cells will convey collected leachate by gravity to a sump area, where a submersible pump will pump leachate to the leachate storage pond located south of the landfill. Cleanouts are located at the upstream ends of the collection pipes, and at the sump area low point. A submersible pump at the storage pond can pump leachate through a flow metering vault, to a truck loading station, where tank trucks can be filled to haul leachate to the Metropolitan Sewerage District (MSD) wastewater treatment plant. The pond will serve as an equalization basin to absorb peak flows coming from the submersible pumps in each cell.

Each leachate pump station is provided with numerical identification at the leachate pump control panel. One pump control panel is provided for each submersible leachate pump station and is provided in a common enclosure. The control panel is programmed to respond to the liquid level sensor to automatically start and stop pumps in response to changes in liquid levels and to allow manual control of the sump when needed. Each control panel is equipped with visual and audible high level alarms programmed to activate when the leachate levels exceed one foot of head.

13.1.2 Leachate Storage Pond

Inspection of the leachate storage pond constructed, visible surfaces will be made on an annual basis by County staff. Any stored leachate and sediment in the pond must be removed so that the pond bottom is visible. The inspector should perform a thorough walkover of the pond bottom, surveying the protective layer for any signs of damage, such as cracks, tears, gouges, uplift, or soft spots. Observations should be recorded and photographs should be taken of the areas of concern and also placed in the operating record.

If damage or potential problems are discovered, they should be reported to the facility supervisor so that repairs may be made as soon as possible. All repair activities should be recorded. The pond should be put back on-line as soon as possible, to minimize leachate storage time within the sump areas in the cells.

13.1.3 Leachate Collection System

The perforated leachate collection piping will be pressure cleaned and flushed annually to remove any accumulation of debris, sediment, or organic growth, which will be achieved by inserting a self-propelled, high pressure jetting system into the collection pipes by way of the clean-out ports. Remote camera inspections of the leachate collection lines shall also occur, following initial cleaning, and at least once every five years thereafter.

The sump control panels will be visually inspected during weekly leachate quantity data collection to ensure proper audio and visual alarm operations, reset functions and normal operations performance. Any components not properly functioning shall be promptly repaired or replaced.

Flow meter operation will be validated by comparing the recorded flows at each individual sump. Flow meters not properly operating will be removed and replaced.

The operator shall also, on a weekly basis, visually observe the landfill sideslopes for leachate breakouts and the perimeter berm for staining, which would indicate a potential pipe failure. All exposed leachate piping shall also be monitored for leaks.

In addition to weekly observations, the operator shall, after substantial rainfall events equal to or exceeding ½ inch, observe the landfill sideslopes for leachate breakouts, leaks or pipe failures.

13.2 Leachate Monitoring

13.2.1 Quantitative Monitoring

Per Rule .1626 (12) (b), the County maintains leachate generation records. Each sump pump station is designed with a flow meter to measure the leachate generated from each cell. The operator shall read and register the leachate flows on a weekly basis at each of the sump pump stations.

The information to be collected shall include the date, time, leachate quantity (in gallons), pump run time, leachate levels, and the name of the person taking measurements. Weekly measurements recorded at each sump pump station will be used to detect potential pump malfunction. While taking weekly sump readings the operator shall also record the leachate level within the leachate pond. Should the leachate pond minimum freeboard level of 12 inches be exceeded the NCDENR will be notified immediately.

Leachate that is trucked off-site is also recorded.

13.2.2 Qualitative Monitoring

Per Rule .1626 (12) (c) semi-annual leachate quality sampling is required.

13.2.3 Recordkeeping

All records shall be maintained at the landfill by the operator and made available to Solid Waste Section (SWS) personnel for inspection when requested.

13.3 Leachate Disposal Approval

Per Rule .1626 (12) (d), approval for final leachate disposal is required. Leachate from the landfill will be pumped from the storage pond to the truck loading station, which will fill trucks used to haul the leachate to the MSD sanitary sewer system for final disposal. An approval letter from MSD stating that they will accept the landfill leachate will be included in the operating records.

13.4 Leachate Management Contingency Plan

The leachate management contingency plan is prepared in accordance with Rule .1626 (12) (e).

13.4.1 Leachate Sump Pump Station

Should a pump station not appear to be functioning properly, based upon weekly monitoring records, the pump will be removed and evaluated in accordance with manufacturer recommendations. If troubleshooting techniques do not provide a prompt resolution, one of the spare pumps located on-site will be installed in its place and necessary repairs will be made.

Should power be lost at the site the pump station control panels are equipped with receptacles for a portable emergency generator to operate the pump stations until power is restored. A portable emergency generator will be available within 12 hours and used in the event of a power outage.

13.4.2 Leachate Storage

During periods when components of the leachate pond pump station are inoperative or down for maintenance, or when storm flows are extremely high, excessive leachate will be dealt with using either of two contingency plans.

The storage capacity of the leachate storage pond is approximately 1,000,000 gallons, when completely full to within 12 inches of the top of the pond liner. This will provide up to 17 days of storage during peak leachate flow periods, and about 69 days storage for average annual daily flows. If surface evaporation rates are considered, even longer storage periods can be achieved. This volume is also adequate to capture the leachate from the peak rainfall event from the five years of rainfall data used in the HELP model leachate projections (assuming several acres of open cell area with only the first solid waste lift installed) and still have reserve capacity for additional daily flows. Therefore, considerable storage capability is provided by the leachate pond for periods of unusually high precipitation or unusual operating conditions.

Should a period of substantial rainfall persist, and the leachate pond approach full stage, the pumping stations can be turned off. The leachate would be temporarily stored in the disposal cells until the level in the pond is adequately reduced. The cells would be monitored daily to ensure that overflow does not occur. If the storage pond encroaches to within 6 inches of the ponds 12-inch freeboard (18 inches from the top of the pond liner), leachate hauling will be increased to a frequency adequate to deplete the leachate volume in the storage pond to an acceptable level.

Should power be lost at the site the pump station control panel at the leachate pond is equipped with receptacles for a portable emergency generator, to operate the pumps long enough to control leachate flow volumes. A portable emergency generator will be available within 12 hours of a power outage.

13.4.3 Leachate Breakout

In the event of a breakout, leak or pipe failure, the County will immediately notify SWS and identify the areas contaminated by the breakout/leak/pipe failure, if any. Should leachate collect in a sediment pond or other surface waters, the County will analyze the contaminated water for the Appendix 1 list of constituents and BOD₅, COD, phosphate, nitrate and sulfate. The sample results will be forwarded to SWS and used to determine whether the pond or surface waters are impacted by the release.