



**OPERATIONS PLAN FOR THE ANSON COUNTY  
MUNICIPAL SOLID WASTE LANDFILL**

**Prepared for:**

**WASTE CONNECTIONS OF THE CAROLINAS, INC.  
375 DOZER DRIVE  
POLKTON, NORTH CAROLINA 28135**

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## **1.0 INTRODUCTION**

### **1.1 GENERAL**

This document is the Operations Plan for the Anson County Municipal Solid Waste (MSW) Landfill, located in Anson County, North Carolina, owned by Chambers Development of North Carolina, Inc. a wholly owned subsidiary of Waste Connections of the Carolinas, Inc. The Plan serves as a guide to the landfill operator with respect to routine landfill operations, environmental monitoring, and record-keeping. The facility will not accept hazardous waste as defined by the North Carolina Department of Environment and Natural Resources (NCDENR). In accordance with the contractual agreement with Anson County, the landfill can operate at a maximum average waste acceptance rate of 750 tons per day during the first year of operation, increasing its waste acceptance rate 10 percent per year up to a maximum average of 1,500 tons of solid waste per day. Based on the operational rates described above, the landfill is expected to be in operation for a minimum of 27.5 years from commencement of waste disposal. Equipment and staffing recommendations in this manual are based on these disposal rates and are subject to change in the event of future modification to maximum disposal rates in the Anson County contractual agreement.

### **1.2 PURPOSE**

The operations plan is intended to serve as a site reference and training documents. Every employee should be acquainted with its contents and location at the site. Each section of this plan is self-contained, easily updated, and may be used for use out in the field, for training sessions, or self-instruction.

The operations manual addressed the following topics:

- Personnel requirements;
- Entrance procedures and recordkeeping;
- Incoming vehicle inspection;
- Traffic control;
- Landfilling operations;
- Compost facility operations;



- Operation and maintenance of environmental controls;
- Inspection and monitoring procedures;
- Contingency and emergency procedures; and
- Safety practices and plan implementation.

This Operations Plan has been prepared in accordance with 15A NCAC .1625 and .1626. Furthermore, the plan is based on engineering judgment and reflects generally accepted solid waste landfilling techniques.

### **1.3 REFERENCE DOCUMENTS**

This operations plan constitutes a portion of the Chambers Development Permit to Construct. The entire Permit to Construct application should be kept on file with this plan at the site to supplement this plan in terms of long-term facility development plans, monitoring requirements, engineering design, site hydrogeology, construction activities, and site closure/post-closure care. Other documents pertinent to facility operations and site development include:

- North Carolina Solid Waste Management Rules, 15A NCAC 13B with current amendments.
- Volume II, Site Application for Solid Waste Management Facility, Anson County, North Carolina. "Geotechnical Study", GZA GeoEnvironmental, Inc., 1992 which provides substantial information on site soils and potential borrow areas.
- Erosion and Sediment Control Planning and Design Manual, NCDENR, June 2006.
- Erosion and Sediment Control Field Manual, NCDENR, June 2006.
- The Landfill's Erosion and Sedimentation Control Plan



## **1.4 REGULATIONS**

15A NCAC 13B .1600 and all conditions of the operating permit granted by the NCDENR, shall take precedence and be complied with by landfill operators if there is an actual or perceived contradiction with the text of this plan, unless written consent for variance(s) is granted by the NCDENR. The Site Manager should be familiar with the NCDENR regulations and facility permit.



## **2.0 SERVICE INFORMATION**

### **2.1 LOCATION**

The Anson County Municipal Solid Waste Landfill is located at the north end of Dozer Drive between Polkton and Wadesboro on U.S. Route 74. The site is bounded on the northwest by Brown Creek, on the east by Pinch Gut Creek, and on the south generally by the CSX railroad. A facility location is presented on Figure 1. The Anson County Municipal Solid Waste Landfill will serve North Carolina and South Carolina.

### **2.2 ACCEPTABLE WASTES**

The Anson County Municipal Solid Waste Landfill will accept all types of wastes except those prohibited by NCAC 13B. Specifically, the following types of wastes will not be accepted:

- Hazardous wastes as defined within 1SA NCAC 13A to include hazardous wastes from conditionally exempt small quantity generators;
- Polychlorinated biphenyls (PCB) wastes as defined in 40 CFR 761;
- Liquid wastes except as provided by 1SA NCAC 13B.1626(9);
- Untreated regulated medical wastes; and
- Petroleum contaminated soils.

The following wastes will not be accepted for landfilling, but may be accepted at a drop-off for alternative processes:

- White goods;
- Electronics;
- Tires;
- Used oil;
- Lead-acid batteries;
- Petroleum contaminated waste;
- Whole scrap tires; and



The Anson County Municipal Solid Waste Landfill will accept all types of municipal solid waste (MSW) and special wastes, to include:

- Spoiled foods, animal carcasses, abattoir waste, hatchery and other animal wastes;
- Asbestos waste;
- Treated medical wastes which are not hazardous, liquid, infectious or radioactive;
- Wastewater treatment sludges;
- Construction/demolition wastes;
- Ash (non-medical);
- Industrial process waste;
- Off-specification, outdated commercial products;
- Barrels and drums which are empty and have been perforated sufficiently to ensure that no liquid or hazardous waste is contained therein, except for fiber drums containing asbestos;
- Laboratory waste (non-hazardous);and
- Other non-MSW wastes not included above.

Acceptance of special wastes will be subject to provisions of 15A NCAC 13B and the special waste acceptance and handling procedures defined herein.

The landfill operator shall be responsible for screening wastes to ensure that hazardous or unacceptable wastes are not disposed in the landfill. Screening of special wastes shall be accomplished in accordance with the requirements of Section 5.3 and the Special Waste Quality Assurance Plan (Appendix E).

Management of this facility reserves the right to establish acceptance criteria and procedures for certain non-municipal solid wastes. These may be more restrictive than required by law based on quantities and characteristics of the waste stream, current operating status of the landfill, and characteristics of waste streams previously received. Acceptability will be based on judgment of the landfill operator's technical personnel with respect to regulatory requirements, physical and chemical qualities and other technical considerations.





## **3.0 PERSONNEL**

### **3.1 MANPOWER**

The Anson County Municipal Solid Waste Landfill will provide the appropriate level of staff to address the needs of a 750 to 1,500 ton per day landfill. If the waste acceptance increases or decreases, the equipment and staff levels will change accordingly. In addition, all employees associated with the waste management operations will be properly trained for their respective duties.

### **3.2 STAFF TRAINING**

The Anson County Municipal Solid Waste Landfill provides on-the-job training for its employees. The training focuses on safety and the performance of environmentally sound landfill operations. Training for each employee will be based on their daily responsibilities and duties. Typical training will address the dangers associated with heavy equipment operation, truck traffic, waste unloading, use of personal protective equipment, landfill gas and leachate management, and precautions for the management of special waste such as asbestos. Documentation related to an employee's participation in safety training will be maintained on site. Certain aspects of the landfill operation require additional training, including, but not limited to, scale operations. This training will include procedures for identifying special wastes and unacceptable wastes; emergency procedures in the event of a fire, spill or injury; confined space entry; and respirator use and fit testing. Other training will be provided as the need arises. This level of training will be documented with written records.



## **4.0 SITE PREPARATION**

### **4.1 DRAWINGS AND SPECIFICATIONS**

Landfill construction will be performed in conformance with the Permit to Construct Application documents and any related conditions imposed by the NCDENR. Summary drawings and specifications for landfill development are contained in the Engineering Plan and Construction Quality Assurance (CQA) Plan. The following information is provided in the Drawings and Technical Specifications:

- Clearing and grubbing;
- Topsoil stripping;
- Excavation;
- Berm construction;
- Storm Water Drainage control structures;
- Leachate collection system;
- Access roads and entrance;
- Screening;
- Fencing;
- Groundwater monitoring; and,
- Other design features.

### **4.2 CONSTRUCTION QUALITY ASSURANCE**

Landfill construction will be performed in accordance with the drawings, technical specifications and construction quality assurance (CQA) plan in the Permit to Construct Application. The CQA plan provides information about observing and documenting certain construction activities, and identifies testing procedures and protocols to assess the construction. A copy of the CQA plan is contained in the Permit to Construct Application.



## 5.0 ROUTINE LANDFILL OPERATIONS

### 5.1 HOURS OF OPERATION

Typical landfill hours for acceptance of waste are:

Hours of Operation	
Weekdays	6:30 AM to 4:00 PM
Saturdays	Closed
Sundays	Closed

Actual hours of operation will be posted at the main entrance to the landfill. The landfill will normally be closed on Sundays and the following holidays:

Hours of Operation	
New Years Day	Labor Day
Memorial Day	Thanksgiving
July 4 <sup>th</sup>	Christmas

### 5.2 PUBLIC USE

Receptacles will be provided in a "resident's drop-off area" in which Anson County residents may deposit small loads (i.e., those which can be carried by a pick-up truck) and recyclables. The recyclables may include electronic waste, tires, and white goods. A large-related sign posted adjacent to the receptacles will clearly state the waste acceptability limitations. Users of the public receptacles will not be required to report to landfill staff before or after making deposits unless their loads are of questionable nature with respect to size or acceptability.

### 5.3 VEHICLE INSPECTION PLAN

A plan shall be implemented by the Site Manager to prevent the on-site disposal of unauthorized hazardous wastes. The plan shall contain an inspection program to be staffed by personnel who have been trained to recognize unauthorized hazardous wastes. At a minimum, the following shall be included in the inspection program:

- Periodic vehicle inspection of loads at the gate and by operators at the landfill face documenting all suspicious materials, the hauler, and if possible, the generator;



- Random monitoring of entering open top loads for organic vapors by use of suitable instruments;
- Thorough inspection of suspicious loads;
- Training of personnel to recognize regulated hazardous wastes; and
- Establishment of specific procedures for notification of proper authorities if a regulated hazardous waste is discovered.

## **5.4 TRAFFIC ROUTING**

### **5.4.1 Site Access**

Access to the facility by all vehicles shall be by Dozer Drive via U.S. Highway 74 West.

### **5.4.2 On-Site Traffic Flow**

Once vehicles delivering wastes have been weighed, they shall follow signs posted along access road(s) to the correct disposal area of the landfill. Trucks will then proceed to and dispose of waste at the appropriate location. A perimeter road will be built as the landfill phases are constructed. The perimeter road will lead traffic to the appropriate point of access onto the landfill. Internal roads will be built on the landfill to provide access to the working face. These internal roads will be constructed and relocated with the phase's progress of landfill operations.

Signs will direct small public vehicles to dispose of their loads of waste into receptacles located in the public drop-off area.

### **5.4.3 Visitors Parking**

Visitors parking will be provided adjacent to the office building.

### **5.4.4 Basic Landfilling Procedures**

This section describes the procedures that constitute daily landfill operations, the "area method" of landfilling, working face practices, and startup of first, second, and subsequent lifts. The landfill should be operated in accordance with these procedures and as shown on the operation drawings.



#### 5.4.5 Method of Operation

The landfilling technique to be used is the "area method".

Proper location of unloading trucks will facilitate spreading of refuse, compaction, and covering. During construction of the first lift, trucks will be positioned at the top of the lift being developed, although in subsequent lifts, unloading at the toe and pushing uphill may be the preferred method. Lateral confinement of vehicles and refuse is important to avoid wasting cover material. Temporary barricades or flags may be used as daily width markers for guiding equipment operators and for traffic control.

Vehicles transporting refuse and cover material to the working face will be routed over previously filled areas, whenever possible, for additional compaction of refuse and soil. Vehicles shall not be routed over final capped areas unless measures are taken to prevent damage to the cap. In order to protect the liner, disposal vehicles shall not be routed over a lined area before a lift of waste has been placed on the liner.

Grade and location stakes can be used to guide filling operations in accordance with the phasing fill plans. Stakes provide a "visual" landmark for equipment operators as filling progresses. Grade stakes shall be reset or adjusted as needed. Maximum daily lift height will normally be about 10 feet to provide good compaction.

Signs shall also be posed in the operational areas to direct traffic, identify buildings, and to identify certain safety requirements such as no smoking, speed limits, and stop signs.

Open burning or incineration of solid wastes shall be prohibited except as may be authorized pursuant to 15A NCAC 13B .1626(5)(b). An infrequent burning of land clearing or disaster debris authorized pursuant to 15A NCAC 13B .1626(5)(b) shall be accomplished outside of the limits of all active or closed landfill units.



#### 5.4.6 Maintenance of On-Site Roads

Potholes should be filled with materials compatible with the road construction material. Potholes should be filled on a routine basis so that they are not allowed to remain open for extended periods of time. New material should be placed in the hole and compacted so that it will have the same density as the road.

As wet-weather gravel roads become uneven due to traffic-caused rutting or displacement of stone, routine grading and application of gravel will be done to provide a smooth surface and promote drainage.

When wet-weather roads are built on fill areas, settlement of the filled area may cause the slope of a road to change. Areas of a sloped road, where the slope has changed drastically, should be built up with material compatible with the roadway. The buildup should be made by placing a 6-inch layer of the material, compacting it, then placing another layer of material and compacting again. This process should be repeated until the desired elevation is achieved.

Proper operation of the landfill should result in little or no debris being found on public roads. However, public roads adjacent to the entrance area shall be inspected daily. If debris from the wheels of vehicles departing the landfill reaches the first state route near the landfill, that road will be cleaned immediately.

Any significant accumulation of dirt, brush, and other debris should be removed from the landfill roadways. A program of road cleaning shall be implemented to prevent any buildup. Unpaved roads will be watered as needed to reduce dust.

Drainage ditches along road beds will be kept free of obstructions. During wet-weather seasons, inspection of all drainage ditches and structures should be made at least once each week, or more frequently if necessary, and debris removed as required.

All roads will be maintained in a passable condition to provide access to the working face during inclement weather. Soft roadway areas will be stabilized as needed by the addition of road base



material. If conditions warrant, road salt and/or sand will be deployed to maintain passable conditions.

## **5.5 WASTE HANDLING AND INSPECTION**

Incoming waste will be observed to verify that it is acceptable in content and origin. Accurate and up-to-date records will be maintained for all waste accepted and all landfill operations. The following is a general discussion regarding waste handling procedures and the types of waste which will be accepted at the landfill, and procedures normally implemented to ensure that only authorized waste is disposed of at the landfill.

Landfill employees will be trained on and be required to follow the specific procedures outlined in the programs referenced below and appended to this document:

- Unauthorized Waste Control Program (see Appendix C)
- Random Load Inspection Plan (see Appendix C)
- Asbestos Management and Disposal Plan (see Appendix D; see also Appendix E, Special Waste Acceptance Procedures)
- Special Waste Quality Acceptance Procedure (see Appendix E)

### **5.5.1 Types of Waste**

Anson County Municipal Solid Waste Landfill will only accept solid waste as described in 15A NCAC 13B and will not accept wastes as described in Section 2.2.

Anson County Municipal Solid Waste Landfill may accept the following special wastes and will follow the handling procedures described in below.

**Bulky Waste**-Bulky waste such as furniture, appliances and other over-sized items will be handled in a way that maximizes their compaction and allows proper management at the working face. Bulky wastes will typically be crushed on firm ground prior to disposal. If crushing or other size reduction is not possible, bulky wastes will be placed at the base of the working face and run



over with the landfill compactor to reduce its size as much as possible. The bulky waste would then be placed at the toe of the working face and covered with other solid waste.

**Low-Density Wastes-**Waste types such as agricultural wastes, loose plastic film or foam rubber and plastic scraps or shavings require special handling. These materials present problems because they rebound after being compacted by the equipment. In order to achieve maximum densities, light-weight materials should be spread into 1 to 2 feet deep layers, and then covered with regular waste and compacted as usual into the base of the cell.

**Powdery Waste-**Anson County Municipal Solid Waste Landfill may accept powdery waste such as ash, sawdust or exhaust trappings. Since these wastes are dry and powdery, they require special management to minimize dusting and blowing. Wetting and/or quickly covering with other solid waste will be the principal means for controlling dust.

If conditions warrant, landfill workers managing these wastes will wear protective clothing and respirators as determined by the site safety officer.

**Sludges-**Anson County Municipal Solid Waste Landfill will not accept municipal sewer sludge and sludges that contain free liquids as determined by the Paint Filter Liquids test.

Anson County Municipal Solid Waste Landfill will accept all other sludges subject to the requirement of the Special Waste Quality Assurance Plan (Appendix E). Sludges that are determined to be acceptable will be mixed/bulked with municipal solid waste or other solid waste at the working face. Sludges will be stabilized, digested or heat treated prior to disposal at the landfill.

The amount of sludge managed on a daily basis will be dictated by operating conditions. A maximum ratio of 1 ton of sludge to 5 tons of solid waste for daily intake of sludges will be employed.

**Free Liquids-**Anson County Municipal Solid Waste Landfill will not accept solid wastes that contain free liquids as determined by the Paint Filter Liquids Test. However, Anson County





Municipal Solid Waste Landfill may treat liquid waste by thickening or solidification to make the waste suitable for disposal at the landfill.

Solidification of liquid waste will be conducted in leak-resistant containers or steel tanks partially buried within an active landfill cell. Incoming liquid waste will be deposited directly into the containers followed by the addition of a thickening or solidification agent. Thickening or solidification may be accomplished using soil, mulch, wood chips, etc.

The liquid waste will be mixed with the thickening/solidifying agent in the tanks using a backhoe or other appropriate equipment until free liquid is no longer observed. The thickened/solidified waste will then be removed from the tanks and disposed at the working face. The number and location of mixing tanks will be dictated by the landfill operations.

The requirements of this section do not apply landfill gas condensate management.

**Putrescible Waste**-Occasional animal carcasses, in small volumes, may be managed at the landfill. If a large volume is delivered to the landfill, they will be accepted in a designated area away from the working face and promptly covered.

**Asbestos Containing Material**-Anson County Municipal Solid Waste Landfill will designate certain areas of the landfill for the management of asbestos waste. The management of asbestos waste will follow the procedures described in Appendix D and Appendix E.

**Tires**-Anson County Municipal Solid Waste Landfill will not accept whole tires for disposal at the landfill. Tires that may be pulled from waste loads delivered to the landfill will be temporarily stockpiled in piles not exceeding 5 feet in height, and/or in trailers. Anson County Municipal Solid Waste Landfill will arrange for the proper management of the tires.

#### *5.5.1.1 Weighing and Control of Waste Volumes*

All landfill users entering the disposal area are to stop at the entrance gate for security check-in. All open topped waste loads shall be inspected for hazardous or otherwise unacceptable wastes



by the gatekeeper. An observation platform is provided above the gate house for this purpose. All other waste loads shall be inspected at the active face by the equipment operators. All trucks delivering waste to the disposal area shall be weighed. Load weights, customers, and charges to all vehicles will be recorded. The Anson County Municipal Solid Waste Landfill will promptly repair and/or replace any malfunctioning scales. Vehicles will be directed to the appropriate disposal area by signs. However, verbal or other instructions will be given when necessary.



### 5. 5.1. 2      *Inspection*

Anson County Municipal Solid Waste Landfill will follow the procedures for incoming inspection, random load inspection and unauthorized waste response as described in Appendix C, Unauthorized Waste Control Program.

## **5.6    LITTER CONTROL**

The level of effort needed to control this problem will be dictated by weather conditions and wind directions. A few of the methods that Anson County Municipal Solid Waste Landfill may employ are presented below.

Portable Litter Fence-The most suitable location for litter control fence will be determined on a daily basis, based on the wind's direction. The fence will be placed as close to the active face as practical without disturbing the landfilling operations. Litter will likely occur even with proper litter controls. The following cleanup procedures will be followed on a routine basis:

- Litter Clean-Up From Fences -Litter will be removed from and along litter fences daily.
- Clean-Up Along On-Site Roads -Litter occurring along on-site roads will not be allowed to accumulate. This litter will be cleaned up as necessary.

Clean-Up at Entrance Area and Entrance Roads-The site entrance and road leading to the entrance will be inspected each day. These locations will be cleaned of litter as necessary.

Active Face on Interior Slopes-On windy days, the active face may be maintained on interior slopes, sheltered from the wind.

- Much of the potential litter problem may be prevented by following proper techniques at the working face. This will reduce the amount of refuse exposed to the wind
- When top dumping, refuse should be placed as usual and spread downward.
- Compacted waste should be covered as soon as practical to minimize blowing litter.



Litter Patrols-Litter pick-up crews will be deployed as needed to pick-up windblown litter that may accumulate along nearby public roads near the main entrance and nearby property.

## **5.7 DUST, ODOR, AND VECTOR CONTROL**

### Dust Control

Due to the nature of landfill operations, dust has the potential to be generated during dry periods of the year. The following control measures may be employed at the landfill:

- Soil wetting. Periodic watering using a water tank truck will be utilized to control dust originating from paved and unpaved access roads. The main access road to the scale will be paved, while the perimeter roads will be graded-surfaced. Soil wetting may have to be performed several times during an operating day.
- Application of soil wetting agents. Soil wetting agents, such as calcium chloride, may be used to supplement other dust control methods.
- Vegetative cover. Landfill areas or stockpiles not intended for near-term use will be seeded, in accordance with seasonal limitations, to encourage the growth of vegetation and reduce erosion.

Anson County Municipal Solid Waste Landfill will employ a street sweeper on an as-needed basis to sweep and clean the entrance road.

### Odor Control

Odors shall be controlled in accordance with state regulations as well as by the provisions of the Agreement relating to the reporting, monitoring, and necessary corrective actions to be taken. If any particularly odorous wastes are received, the wastes will be covered with sufficient material to minimize the odor.

Anson County Municipal Solid Waste Landfill will employ appropriate waste compaction and covering techniques to minimize the potential for odors related to the working face. This includes the timely placement of daily cover, placing cover quickly over odorous loads and the



spreading of lime or other odor neutralizing agents on areas of the landfill that may exhibit odors. Odor neutralizing mists may be employed as well.

Once sufficient waste has been landfilled, a landfill gas management system will be installed in accordance with state and federal requirements. A landfill gas management and control plan is provided with the Permit to Construct application.

### Vector Control

Vector control at the landfill may be accomplished by employing the following control methods:

- Periodic application of cover material. If vectors are determine to be a problem, progressive cover techniques (cover placed more often than just at the end of the working day) maybe used to reduce the size of the active working face.
- Immediate application of cover material. Refuse loads which contain a high percentage of putrescible waste may have to be covered immediately to discourage the proliferation of vectors.
- By far the best method for minimizing vectors is the timely application of cover materials and to make sure cover materials are sufficiently thick to prevent vector contact with the waste.
- Although the refuse is the greatest attraction to the vectors, piles of tires and other salvaged materials will also attract vectors. It is important to maintain these materials in an orderly fashion and to remove them periodically, before vectors breed.
- A summary of the bird controls that may be employed include but are not limited to:
  - Working Face. The working face will be managed so as to minimize bird attraction.
  - Timely Cover Placement. Although daily cover will be applied at the end of each operating day, there may be occasions when more frequent placement of daily cover is necessary to limit the number of scavenging birds at the landfill. This method will be considered for incoming refuse loads that contain large quantities of putrescible wastes (i.e. food waste).
- Habitat Control. Alter the landfill environment to make it less attractive, including but not limited to the installation of monofilament line.



- Sonic Devices. Propane cannons and hand held screamers will be used to frighten scavenging birds.
- The timing of sonic devices will be variable.
- Lethal. Anson County Municipal Solid Waste Landfill may obtain a depredation permit as a method to deter scavenging.

## **5.8 NOISE CONTROL**

All equipment powered by internal combustion engines will have mufflers installed and maintained in good repair.

## **5.9 LIGHTING CONTROLS**

Once construction of the Anson County Municipal Solid Waste Landfill is complete, the maximum illumination at the property lines of the Anson County Municipal Solid Waste Landfill property will be limited to 0.5-foot candles. Permanent exterior lighting fixtures on the Anson County Municipal Solid Waste Landfill property will not exceed 30 feet in height above final grade level. The exterior lighting fixtures will be limited to "shoebox" or similar type capable of shielding the light source from direct view. The temporary working lights utilized on the face of the disposal area are specifically excluded from the limitations contained herein.

## **5.10 AESTHETICS AND VEGETATIVE BUFFER**

The Anson County Municipal Solid Waste Landfill will maintain a vegetative buffer in and around the landfill to shield the operations from adjoining property and public roads. Vegetative buffer areas with a minimum width of 100 feet will be maintained between the landfill's permitted areas for waste disposal and adjoining property owners' property. In areas where landfill operations and/or disposal areas would not be so limited, Anson County Municipal Solid Waste Landfill will maintain a 300-foot vegetative buffer area. The vegetative buffer area will be established and maintained by Anson County Municipal Solid Waste Landfill to create a visual buffer to screen the disposal operations of the landfill. In constructing and operating the landfill, Anson County Municipal Solid Waste Landfill will minimize the cutting of existing trees in the vegetative buffer area in order to maintain and enhance the integrity of the buffer. Any portions of the vegetative buffer area from which a materially significant number of trees are removed or



die, or for which the visual buffer is insufficient to create a continuous visual screen between the landfill operations and the adjoining properties, will be supplemented by Anson County Municipal Solid Waste Landfill by planting and maintaining white pine trees, loblolly pine trees or other non-deciduous trees and shrubs, along with the construction of earthen berms as needed, to create a continuous visual buffer. Any such planted trees needed to maintain or supplement the visual buffer will be no less than 5 feet in height when planted. Where planned activities will disturb the vegetative buffer, seedlings may be planted in advance of working in these areas as long as seedlings have reached 5 feet in height before initiating work. Anson County Municipal Solid Waste Landfill will be allowed to access the vegetative buffer area for security, roads, utilities and any actions or activities required by local, state and/or federal regulations.

The Anson County Municipal Solid Waste Landfill will maintain all vegetated buffers and conservation easements associated with the facilities' Section 401/404 permit and Final Mitigation Plan as it relates to nearby streams and wetlands.

#### **5.11 OPEN BURNING**

Open burning will not be allowed on area where solid waste has been disposed or areas being used for active disposal. Burning associated with construction clearing operations will be performed in accordance with all applicable regulations.

#### **5.12 SALVAGING**

Anson County Municipal Solid Waste Landfill will only allow salvaging of recyclable material by authorized personnel. The salvaging will be conducted in a designated area, and performed in a manner that will not interfere with landfill operations or create hazards or nuisance conditions.

#### **5.13 FILING OPERATION**

Anson County Municipal Solid Waste Landfill will employ the area method for landfill operations. Using this method, waste is typically unloaded at the base of the active working face in layers 8 to 10 feet in thickness. The unloaded waste will be spread in layers 2 to 3 feet in thickness to enhance compaction. Compactors will then make 3 to 6 passes. The thickness of completed lifts will be 15 to 20 feet.



Initial Landfilling Operation-The first lift of waste placed on new operational areas with exposed leachate drainage layer will consist of select solid waste, such as contaminated soil, bottom ash and municipal solid waste or other waste with low potential for damaging the liner system. The select waste layer will be placed in loose lifts approximately 8 feet in thickness and compacted to a thickness of approximately 5 feet. This initial fluff layer will be placed as a single lift. The waste compactors will not be allowed on the surface of the leachate drainage layer and at no time will the compactor be allowed to work on a lift thickness of less than 5 feet. Styrofoam or other non-damaging posts supported by pads seated on top of the liner may be used as an alternative to grade stakes where control markers are required to maintain the proper cell width, height, and slope at the working face. Grade stakes are not permitted for setting elevations in the first lift. The posts shall extend through the granular material covering the liner. To minimize unloading times, a specific area of the working face should be designated for tractor-trailer transfer trucks.

During placement of the select waste for the first lift, it will be inspected for the presence of objects and wastes that have the potential to damage the liner system. Any waste that is identified that may have the potential to damage the liner system will be removed. Equipment should not be allowed to traffic on or to spread waste over the protective cover in a manner that disturbs the underlying leachate collection layer. Landfill personnel will monitor the placement, compaction, and covering of the first layer of waste. Landfill personnel will maintain grade control and inspect filling techniques. Inadvertent damage to the base liner system must be reported to the Site Manager and restored prior to filling in the damaged area. To assist in the uniform placement of waste in the first layer, only select solid waste will be directed to that area.

To protect the liner system, a bulldozer will normally be used as the primary spreading and compacting machine for the first lift. The compactor may only be operated on top of the waste. It will not be used on the landfill base or waste side slopes. The waste inspectors will also make sure that no bulky waste or demolition material which could damage the liner is landfilled in the first lift. At the end of each working day, daily soil cover or alternate daily cover shall be applied to control odors, vectors, and litter. Appropriate earth hauling equipment will be used to excavate and haul soil from the borrow area to the stockpile located near the working face where it will be placed and compacted. Intermediate cover shall be applied on areas that will be exposed for more than 30 days (i.e., outside side slopes and top of the final lifts, or portions of





the other lifts that will not be soon covered by additional refuse). Alternate daily cover may consist of foundry sand, foam, a fabric blanket or other approved material that will control odors, blowing litter, and vectors.

Excavated material from on-site borrow areas may be used to supply daily and intermediate cover requirements. To conserve soils and landfill space, daily and intermediate cover may be scraped back immediately before placement of additional waste on top of the previous lift, and then reused as cover material. Daily and intermediate cover should be graded to drain away from the active working area.

Subsequent Lifts-After the first lift is safely in place; normal operating procedures can be used in placement of subsequent lifts. Trucks and compactors are permitted to operate on these lifts. Bulky wastes delivered to the facility, and any stockpiled bulky wastes received during construction of the first lift, can be filled in subsequent lifts. Daily operating procedures include positioning traffic controls and applying daily and/or intermediate cover. Soil erosion control and site maintenance tasks shall be implemented throughout the development of all lifts. Once the final landfill elevations have been reached, final cover may be applied to the landfill.

Filling Procedures-Phasing plans presented on the Operation Plan drawings provide details for refuse cell development as well as other details associated with landfill development.

The refuse cell is the basic building block of a sanitary landfill. It is composed of several compacted layers of waste and enclosed by cover material.

### Working Face

The working face is that portion of the uncompleted cell on which additional waste is spread and compacted. The working face will be kept as small as feasible based on operational conditions each day. Typically, the working face will be approximately 250 feet in width in order to manage incoming waste vehicles and waste compaction and covering equipment. The length of the vehicle turning area in front of the working face will be approximately 400 feet.



Although the landfill will generally operate with a single working face, there will be occasions when multiple working faces are needed to accommodate physical constraints (i.e. the opening of a new cell, final grading associated with slope closure, etc.), inclement weather, or the management of certain special waste.

**Dumping-**When dumping from toe of slope, waste should be dumped 10 feet from the toe of the working face and pushed up the slope. For safety purposes, a minimum 8 to 10-foot separation should be maintained between refuse trucks. In order to prevent loads of waste from being dumped too far away from the toe, refuse trucks can back toward the toe, following a path created by the equipment pushing refuse into the working face.

When top dumping, waste should also be dumped as near to the edge of the active working face as safe operations permit. Truck separation, as discussed above, should be maintained.

**Pushing, Spreading and Compacting-**Proper cell construction involves pushing, spreading, and compacting. These functions can be accomplished with a compactor and/or bulldozer.

- Pushing is the action of moving waste from the tipping location into the working face.
- Spreading will be done by either a compactor or bulldozer. The purpose of the spreading action is to distribute waste over the working face in a thin layer (about 2 feet). Higher in-place densities can be achieved by compacting in thin layers.
- Good compaction is achieved by operating the landfill compactor up and down the working face after waste has been spread into a thin layer. Proper compaction of the waste will extend landfill life and reduce litter and bird problems. To maximize compaction, the working face should be kept at a maximum slope of 3 horizontal to 1 vertical. The Site Manager or his designee will periodically verify compaction procedures.



## **5.14 MANAGING SPECIAL WASTE**

Management of Special Waste will follow those guidelines outlined in the Special Waste Quality Assurance Plan, Appendix E.

## **5.15 PLACEMENT OF WASTE IN STATE WATERS**

Anson County Municipal Solid Waste Landfill will not deposit solid waste in State waters and will not allow the waste to enter such waters.

## **5.16 EQUIPMENT**

Anson County Municipal Solid Waste Landfill will provide the equipment needed to perform landfill operations. The Anson County Municipal Solid Waste Landfill will utilize more or less equipment on the site as is necessary.

In the event of equipment failure or break-down, the Anson County Municipal Solid Waste Landfill will make arrangements for substitute equipment within 24 hours.

### **5.16.1 Leachate Removal System**

Leachate generated in the landfill will flow by gravity to the leachate removal sump in each cell from the sump, leachate shall be pumped to aboveground storage tanks via a force main. Inactive cells shall be fitted with a nominal 15 gpm pump. Active cells will be fitted with a 50 gpm (for cells constructed with granular drainage media) or a 75 gpm (for cells constructed with a geocomposite) capacity pump. A nominal 100 gpm capacity pump shall be maintained on site as a back-up in the case of failure of an active cell pump or for use in removing unusual storm surges from a newly opened cell. At least one spare 15 gpm pump shall be maintained on site for use in event of the failure of a pump in an inactive cell.

Each pump shall be provided with a pressure transducer and appropriate controls to effect automatic operation of the pumps. The control system shall also provide for shutdown of all pumps should the leachate tank(s) become full or if liquid in the tank containment area is detected.



The volume of leachate pumped from the landfill shall be monitored by a flow meter installed in each leachate riser vault so that cell-by-cell leachate generation can be tracked. Flow meters shall have digital readouts and provide a totalizer function. Leachate generation data shall be recorded in one of two ways:

- By manual reading and recording of the flowmeter readings at each cell on a monthly or more frequent basis; or
- By electronic signal to a central readout station or automatic data storage in a computer.

A hard copy summary of leachate generation data shall be prepared at least monthly. A spare flowmeter and readout device shall be maintained available on site for replacement of malfunctioning equipment.

The leachate removal system shall be equipped with alarm devices to alert the landfill operator regarding inoperative pumps and high levels in the leachate collection sumps or leachate storage tank(s).

#### 5.16.2 Storage Capacity and Off-site Treatment

The leachate aboveground storage tanks are designed to handle up to 500,000 gallons (two 250,000 gallon tanks) of leachate. The leachate will be pumped from the storage tanks to Anson County WWTP via a force main.

The leachate storage tanks are designed to provide 30 days of storage based on the average daily leachate flow for landfill Phases 1 and 2 generated by the HELP model. The leachate storage facility will be expanded as required to maintain the minimum storage volume required.

The landfill operator will maintain a recordkeeping system including leachate collected, leachate head over the liner will be evaluated by the landfill, and leachate pumped to an off-site treatment facility. These records are updated by the operator on a bi-annual basis to determine trends in leachate generation that could influence site operation.



### 5.16.3 Leachate Sampling and Analysis

Leachate discharged to the Anson County Wastewater treatment plant shall be sampled and analyzed as required by the applicable "pretreatment permit". At a minimum, leachate shall be sampled semiannually in conjunction with site water quality sampling and analyzed for the same parameters as the groundwater (refer to the facility Water Quality Monitoring Plan).

Sampling ports shall be provided at the headworks of the leachate pump risers such that leachate from each cell can be sampled individually, if necessary.

Should a leachate storage tank(s) be taken out of service, the tank shall be dismantled and the tank area closed in accordance with the following procedures:

1. Prior to dismantling any of the storage tanks or other appurtenances, an environmental characterization will be performed to assess the presence and extent of any contaminants in and around the storage facility. This assessment will include obtaining samples of the sludge from the bottom of the tank, soil samples just below and outside the secondary containment slab, a concrete core of the containment slab, and wipe samples from the inside and outside walls of the tanks. These samples will be analyzed for the following parameters:
  - Volatile Organic Compounds
  - PCBs
  - RCRA Metals
  - Total Petroleum Hydrocarbon
  - Other contaminants of concern, as needed
2. Based on the results of the environmental characterization a tank specific work plan shall be developed.
3. The liquid and the sludge will be removed from the tank and disposed appropriately based on the results of the above characterization. Any contaminated soil will be excavated and



disposed appropriately. The contaminated soil excavation (if any) will be backfilled with "clean" fill. The tank and other appurtenant structures will be dismantled and disposed appropriately.

4. All pipes leading to the tank will be disconnected and securely capped or plugged.
5. The concrete containment walls shall be thoroughly broken up and the containment area backfilled with clean soil, graded to match the surrounding ground, and seeded.

## **5.17 COMPACTION AND COVER**

### **5.17.1 Waste Compaction and Lift Thickness**

With the exception of the fluff layer, all waste will be spread in layers approximately 2 feet in thickness and compacted. Lift heights will be sized to accommodate the incoming waste volume. Given the expected waste volume at the landfill, the typical lift height will be approximately 15 to 20 feet. This will allow the landfill operator to maintain a confined and efficient working face.

### **5.17.2 Daily Cover**

Daily cover comprised of 6 inches of compacted soil or other approved alternative material will be placed on the working face and other exposed waste at the end of each operating day. If conditions warrant (such as adverse weather or excessive wind), daily cover will be applied at more frequent intervals. Daily cover will also serve as a firebreak.

Asbestos containing materials will be covered as described in the Asbestos Management and Disposal Plan, Appendix D.

Removal of daily cover prior to waste placement will only occur during normal weather conditions. Removal of daily cover will not occur during periods of high winds or heavy precipitation. The daily cover removed prior to waste placement will be stockpiled adjacent to the working face for use at the end of the working day.



### 5.17.3 Intermediate Cover

An additional 6-inch layer of compacted soil will be placed whenever an additional lift of waste will not be placed within 30 days. All areas with exposed intermediate cover will be inspected weekly. Additional compacted soil will be placed to repair cracks and erosion as necessary.

### 5.17.4 Final Cover

The placement of final cover will follow the schedule provided in the Closure/Post-Closure Plan. An alternate schedule may be approved by NCDENR. Upon reaching final grade, all areas will be covered with a minimum of 12 inches of intermediate cover soil and then seeded. These areas will be inspected quarterly and after every major storm event for excessive erosion, and will be repaired accordingly. These areas will be maintained until the construction of the final cover system.

The landfill will be closed with a final cover system in accordance with the Closure/Post Closure Plan (Permit to Construct Application). The final cover system construction will be initiated when a closure phase is to final grade or when an area of 25 acres has reached final grade elevation. The landfill will perform an aerial survey each year and will determine areas that have reached final grade elevation.

In the event that areas of the landfill reach final elevations in advance of the proposed closure phasing, the landfill shall not have any area greater than 25 acres at final grades without final cover or in the process of receiving final cover.

Upon reaching intermediate grade, all internal slopes will be covered with a minimum of 24 inches of cover soil and then seeded. These areas will be inspected quarterly and after every major storm event for excessive erosion, and will be repaired accordingly.

### 5.17.5 Vegetative Cover

After the final cover has been placed, a vegetative cover must be established and maintained on all final cover areas. The vegetative cover must be established within 4 months after final placement or as seasonal conditions allow.



#### 5.17.6 Borrow Areas

Anson County Municipal Solid Waste Landfill has access to off-site and on-site borrow areas to handle the daily cover and construction material needs for landfill operations. Borrow areas, which will be periodically located within the facility boundary will have stormwater management and erosion control plans that have been developed in accordance with NCDENR guidelines. Temporary stockpile of borrow soils will be placed at the location designated by the landfill operator and have appropriate erosion controls.

#### 5.17.7 Alternative Daily Cover

Anson County Municipal Solid Waste Landfill may employ alternative daily cover materials in lieu of soil. A list of several options and special requirements are provided below.

- Fabric Tarps. Anson County Municipal Solid Waste Landfill may employ a geotextile as alternative daily cover system. Typically, these cover systems are deployed in panels (of size suited to operation), using landfill equipment. The cover will be deployed on the working face at the end of each operating day and ballasted with soil or other suitable weight. Prior to commencing operations the following day, the geotextile will be removed to a storage location near the working face. This type of ADC may include, but is not limited to: geotextiles, polyethylene membranes, plastic film, tarps, composite geotextile/plastic membranes, plastic emulsion, etc.
- Shredded Tires. Anson County Municipal Solid Waste Landfill may employ a mixture of shredded tires and soil (or other non-flammable materials) as an alternative daily cover. The mixture will include approximately 50 percent shredded tires and will be produced prior to its use. The maximum tire chip size will be 40 square inches and will not have any dimension exceeding 10 inches. The shredded tire cover mixture will be deployed in a 6-inch thick layer.
- Coal Combustion By-products (CCB). Anson County Municipal Solid Waste Landfill may employ CCB as an alternative daily cover. CCB is typically comprised of fly-ash and bottom ash. If employed, Anson County Municipal Solid Waste Landfill would mix CCB in a ratio of 1 or 2 parts CCB to 1 part soil, by volume, prior to its use. The CCB/soil mix would be compacted to a 6-inch thickness over the waste. Mixing of CCB





and soil would only take place within the footprint of the lined landfill. Any stockpiles of CCB will be stored within the footprint of the landfill and managed so as to minimize dusting.

- Contaminated Soils. Anson County Municipal Solid Waste Landfill may employ contaminated soils as an alternative daily cover on interior slopes of the landfill where run-off is collected as leachate. The contaminated soils will be subject to conditions in the Special Waste Quality Assurance Plan (see Appendix E).
- Posi-Shell®. Anson County Municipal Solid Waste Landfill may employ Posi-Shell as an alternative daily cover. Posi-Shell is a spray applied cementitious product that forms a hardened shell over waste. Posi-Shell may be used as daily cover for a period not to exceed 30 days.
- Auto Fluff. Anson County Municipal Solid Waste Landfill may employ Auto Fluff as an alternative daily cover. Auto Fluff is the discarded material from automobiles once their metal has been recycled.
- Mulch. Anson County Municipal Solid Waste Landfill may employ mulch as an alternative daily cover. The material to be used would be from the Compost Facility as discussed in Appendix F.

## **5.18 SAFETY AND EMERGENCY RESPONSE**

Anson County Municipal Solid Waste Landfill will implement the Safety Plan provided in Appendix A and the Emergency Response Plan provided in Appendix B.

The following plan generally describes requirements for emergency response, including firefighting procedures:

Pursuant to state regulations, an emergency contingency plan which delineates procedures for responding to fire, explosions, or any unplanned, sudden and non-sudden releases of harmful constituents into the air, soil, or surface water, will be submitted to the local police and volunteer fire department. The emergency plan contains:

1. A description of the actions landfill personnel shall take in the event of various emergency situations;



2. A description of arrangements made with the local police and fire department which allow for immediate entry into the landfill by their authorized representatives would the need arise, such as in the case of personnel responding to an emergency situation; and
3. A list of names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator for the landfill. This list will be kept up-to-date. Where more than one person is listed, one shall be named as the primary emergency coordinator and the other(s) shall be listed in the order in which they will assume responsibility as alternates.

The referenced plan specifically addresses fire prevention and protection, as well as firefighting procedures in the event of a fire. Certain precautions will decrease the potential for fire at the landfill. These include limiting smoking to designated areas, refusing acceptance of hazardous waste which could possibly have characteristically low flash points, and performing load checking for ignited or "hot" loads of wastes entering on trucks or other vehicles. Minimum setback distances of buildings from fuel tanks, proper fueling procedures, and routine maintenance and preparation of equipment will also contribute to fire prevention

In the event that a fire does develop, immediate steps will be taken to rectify the situation. The steps taken in reaction to a fire depend on the cause and location of the fire. Typical steps include isolation of the burning material and application of a fire-retarding agent such as soil, water, or other material. Following are three potential situations involving the development of a fire and the appropriate response:

1. If a fire occurs within the waste, affected waste will be removed to a safe distance as soon as possible. If a subsurface fire occurs at the landfill, the material will be dug out or suffocated until the fire is extinguished.
2. If a fire occurs at the working face of the landfill, the materials will be isolated from other combustible materials in a manner which will not cause danger to the employees and which will provide protection against spreading of the fire. Determining the characteristics of the burning material will allow the fire fighter to choose the most appropriate method to douse the flames (i.e., soil, water, or other appropriate methods).



If the burning material has not been adequately extinguished, other methods may be required and the local fire department may be contacted.

3. If a fire occurs in a load on an incoming truck, it will be detected by the gate attendant or by the equipment operator. The smoldering material will be unloaded to a remote area if possible. After unloading, the burning materials will be extinguished by placing cover material over the surface. If required, the landfill will contact the local fire department

Each piece of heavy equipment will be equipped with a multi-purpose fire extinguisher. A soil stockpile will be located near the working face of the landfill which will provide additional aid in extinguishing small fires that are too large to control with fire extinguishers. Fire extinguishers applicable to the chemicals and operations at the landfill will be strategically placed at accessible locations within each building. Furthermore, a clearance around heaters and light equipment will be maintained in order to prevent the potential for ignition of combustible materials.

The local fire department will be contacted to supply fire and emergency services to the landfill. If necessary, the fire department will be provided with access to any landfill equipment which would help with emergency response. Access throughout the landfill can be achieved on permanent and temporary roadways, or with the assistance of onsite heavy equipment.

## 5.19 INSPECTION PLAN

### 5.19.1 Inspection Schedule

Weekly:	Leachate storage tank (exterior)
Monthly:	Leachate removal pumps Stormwater management system Cover in completed areas Leachate force main
Quarterly:	Stormwater management system
Semi-Annually:	Leachate removal pumps and pipelines (including flow meters, valves and risers)
Annually:	Main stormwater ditch around landfill to detention basin Topographic survey of cover Leachate storage tank (interior)



### 5.19.2 Incoming Waste

Waste delivered to the landfill will be inspected for unacceptable wastes as discussed in Appendix C.

### 5.19.3 Leachate Collection System

The landfill leachate collection system (LCS) is placed over the landfill's base liner system geomembrane utilizing a drainage geocomposite, 24 inches of earthen material drainage/protective cover, collection pipes, and submersible pumps. The LCS external to the landfill consists of forcemain pipes, manholes, cleanouts, and storage tanks. Guidelines for inspection of the leachate collection system are provided below.

- Cleanouts and manholes -inspect annually.
- Leachate storage tanks -liquid level inspection each operating day and interior of tank inspection every 5 years.
- Leachate pumps -inspect for operation each operating day and as recommended by the manufacturer.

Care must be taken when inspecting all leachate facilities. There is the potential for the build-up of methane in structures and pipes, and there is potential for dermal contact with leachate. A Safety Plan is provided in Appendix A.

### 5.19.4 Landfill Gas System

The effectiveness of the landfill gas system is dependent upon regular inspection of critical system components. The landfill gas system will be operated and inspected in accordance with the Landfill Gas Management Plan (see Permit to Construct Application), and in accordance with applicable state and federal regulations.

### 5.19.5 Storm Water Conveyance

The storm water conveyance system is comprised of swales, channels, sediment collection basins and detention basins. The components of the system will be inspected quarterly and following major storm events.



During inspection of the sediment collection basins, the integrity of the basin and outlet structure, as well as the depth of sediment accumulation, will be checked and recorded. Removal of accumulated sediment will occur as needed to maintain proper operations. It is recommended that the sediment be removed at least once every 2 years during active waste placement within the drainage area.

#### 5.19.6 Erosion and Sediment Controls

Erosion and sedimentation controls will be inspected in conjunction with the inspection of the storm water conveyance system.

#### 5.19.7 Cover Maintenance

Cover maintenance includes both cover soil and vegetation. The inspections performed monthly will help in assessing the cover condition to verify the integrity of the cap (e.g., check for cracking due to differential settlement, erosion or desiccation), and condition of the vegetation.

Areas of ponding or substantial differential settlement will be checked to determine the cause. If a significant problem with the cover, vegetation, perimeter berms, erosion, or drainage structures is identified, work orders will be issued to correct the problems.

Timing of repairs will be dependent on the nature of the repair. Minor filling to eliminate ponding, and reseeding and fertilizing of disturbed or problem areas can be accomplished with little delay. Major repairs, such as extreme erosion, significant local instability of slopes, or substantial settlement, might require evaluation and design prior to implementing final repairs. Thus, in some cases, final repairs could be delayed. In this case, temporary repairs will be performed until a final solution is determined.

If repairs are necessary to the lined cover ditches to correct run-off containment system problems, it is essential that the repairs be undertaken prior to winter and spring snow-melt.

Repair of damages to the cover resulting from erosion and differential settlement may include backfilling, replanting and stabilizing eroded areas, providing additional drainage facilities to



prevent future erosion, refilling depressions, repairing cracks in the cover, and re-vegetating disturbed areas.

Additional detail on maintenance to the environmental control system following partial or final closure of areas can be found in the closure and post-closure plan for the landfill.

#### 5.19.8 Operating Equipment

Equipment used for landfill activities will be inspected daily, before use, to check for visible signs of deterioration or malfunction. In addition, the equipment will be inspected and maintained in accordance with manufactures recommendation.

Equipment will be subject to preventive maintenance as recommended by the manufacturer (or Waste Connections of the Carolinas, Inc. internal PM program) and recorded.

Anson County Municipal Solid Waste Landfill will maintain equipment in proper working order and will have ready access to temporary replacement equipment in the event of an emergency.

#### 5.19.9 Areas Subject to Spills

Potential areas subject to spills include the leachate storage tank, the leachate load-out area, and the fuel storage area. The leachate storage tank and fuel storage areas will have secondary containment in the event of a spill. Leachate load-out will be conducted over a concrete pad with a sump to capture spills that may occur during load-out.

#### 5.19.10 Groundwater Monitoring System

A site-specific groundwater monitoring program will be maintained for the landfill in accordance with all applicable federal and state regulations. The program will monitor the groundwater at the landfill and verify that the landfill is functioning as intended, as well as provide an early warning system in the unlikely event of a release. Copies of all required monitoring tests will be provided to the County during the life of the landfill. The groundwater monitoring network to be installed will, in turn, be based upon the site hydrogeological investigation, the landfill design,



and the groundwater impact assessment. Monitoring wells will be constructed in accordance with all applicable local, state, and federal requirements.

A list of groundwater monitoring parameters, sampling frequencies and reporting requirements are provided in the Groundwater Monitoring Plan, as amended. The groundwater monitoring wells identified therein will require sampling during active landfill operation and during the post-closure care period.

Each time water levels are measured or a groundwater sample is collected, the integrity of the well will be inspected. A record of each inspection will be made and kept on file at the landfill. The following will be recorded during each inspection:

- Check well identification and make sure it is clearly marked.
- Check the protective casing for damage or corrosion.
- Check the concrete surface seal for cracks.
- Check the casing lock.
- View the well casing and check for damage.

If any damage is detected, the well will be repaired, if possible, or replaced before the next scheduled sample event if repair is not possible.

#### 5.19.11 Safety Equipment

Anson County Municipal Solid Waste Landfill will maintain safety equipment for use by personnel. The safety equipment will be maintained in proper working condition and will be subject to periodic inspection.

- Fire Extinguishers. Fire extinguishers will be provided in landfill operations equipment and in all structures as prescribed by the local fire code. Each will be inspected in accordance with the recommendations of the manufacturer.
- First Aid Kits. First aid kits will be kept in conspicuous locations as designated by Anson County Municipal Solid Waste Landfill's site safety officer. Each kit will be inspected monthly and restocked as may be necessary.



- **Personal Protective Clothing.** Personal protective clothing such as hard hats, safety vests and protective eye wear will be periodically inspected for wear and replaced as necessary.
- **Detection Devices.** Devices for monitoring work areas will be maintained in accordance with the recommendations of the manufacturer.
- **Emergency Lighting.** Emergency lights will be inspected and tested in accordance with the recommendations of the manufacturer.

A site safety plan is provided in Appendix A.





## **6.0 COMPOST FACILITY**

Anson County Municipal Solid Waste Landfill will perform composting activities on site. Please see Appendix F for the Type I Composting Application.



## **7.0 CONTROL & MONITORING OF LIQUIDS AND GAS**

### **7.1 LEACHATE**

#### **7.1.1 Collection and Storage**

Each cell of the landfill will have a liner and leachate collection layer. The leachate collection layer consists of a 24 inches drainage layer constructed with porous earthen materials, drainage geocomposite, and pipes, and will direct leachate to a low point with a sump. The sumps will have a submersible pump to remove leachate from the collection layer and direct the leachate, via a pressure sewer, to an on-site leachate storage area. The pumps will operate automatically based on the liquid level in the sumps.

#### **7.1.2 Disposal**

Disposal of leachate from the landfill will occur by transporting leachate via a forcemain to the Anson County WWTP.

### **7.2 GAS MIGRATION MONITORING**

Gas migration monitoring is required at the perimeter of the landfill property line and must be performed in accordance with the requirements of 15A NCAC 13B .1626 and as described in the Landfill Gas Management Plan (Permit to Construct, Landfill Gas Management Plan).

Since the Anson County Municipal Solid Waste Landfill will be lined and active landfill gas collection and treatment is to be implemented as each phase is completed, potential for landfill gas migration through the ground is limited. Nevertheless, monitoring is to be implemented to verify that explosive gas levels in on-site structures (excluding gas control and leachate collection facilities) are less than 25 percent of the lower explosive limit (LEL) and that explosive gas levels at the facility property boundary are less than the LEL.

Automatic sensors and alarms shall be installed in each on-site structure to provide continuous monitoring of building atmosphere.



Monitoring probes shall be installed between the landfill and the property limits as indicated on the engineering drawings. These probes shall be monitored quarterly with a portable combustible gas meter.

Should explosive gas levels exceeding the specified limits (>25 percent LEL in buildings, LEL at property boundary) the Site Manager shall:

- Take all necessary steps to ensure protection of human health and safety.
- Notify the NCDENR.

Within 7 days of detection, the Site Manager will place written records of the gas levels detected and a description of the steps taken to protect human health. Within 60 days of detection, a remediation plan for landfill gas control must be implemented and written notice of same placed in the facility operating record and forwarded to the NCDENR.

### **7.3 GROUNDWATER MONITORING**

Groundwater monitoring must be performed in accordance with the requirements of 15 NAC 13B .1630 -.1634 and as described in the Permit to Construct Application Water Quality Monitoring Plan.



## **8.0 RECORDS AND REPORTING**

Anson County Municipal Solid Waste Landfill must maintain records related to the operation of the landfill, including:

- A log of the date, quantity by weight or volume, and origin of solid waste received at the landfill.
- A log of special wastes as described in the Special Waste Quality Assurance Plan (Appendix E).
- A record of asbestos containing material accepted at the landfill and the areas of the landfill where such waste is disposed.
- A record of the quantity of leachate collected, and the volume taken off-site for treatment and disposal.
- Copies of environmental monitoring reports.



Table 8-1 displays a list of items/events which must be routinely recorded and keep on file or submitted to Anson County or NCDENR Drawings showing the actual location of all construction elements will also be supplied to the County upon completion of each cell.

**TABLE 8-1**

<b>Type of Record</b>	<b>Frequency of</b>	<b>Submitted to</b>	<b>Frequency of Submission</b>
Facility Inspection Records	As needed	Kept at landfill	N/A
Training Record	As needed	Kept at landfill	N/A
Gate Log Wastes Received	Daily	Kept at landfill	N/A
Recycling Report	As needed	County	Annually
Special Waste Determination	As needed	Kept at landfill	N/A
Post-Closure Inspections	Per Closure-Post Closure Plan		
Load Rejections for Unacceptable Wastes	As needed	NCDENR, kept at landfill	Report to NCDENR Within 24 hours
Construction (as-built) Drawings	As new elements Are completed	County, NCDENR, kept at landfill	As each cell is completed
Accident Report	After each on-site	Kept at landfill as Required by OSHA	Quarterly
Gas Monitoring	Quarterly	Kept at landfill	Immediate to NCDENR if >25% LEL in buildings> LEL at property line
Water Quality Monitoring	Per Water Quality Monitoring Plan		
Leachate Generation (per cell)	Monthly	Kept at landfill	N/A
Leachate Disposal	Per Pretreatment Permit		



A standard checklist for facility inspections is to be developed and appropriately updated as cells and facilities are brought on-line. Facility Inspection Records shall be kept for a minimum of 5 years.

A record of observed climatic conditions shall be maintained at the landfill. Such observations need not include detailed statistical data but rather are to present qualitative observations. Climatic conditions shall be recorded daily at the landfill. A rain gage is to be maintained for determining daily precipitation.

All information contained in the operating record must be furnished upon request to the NCDENR or be made available at all reasonable times for inspection by the NCDENR.



## **9.0 CLOSURE AND POST-CLOSURE CARE**

Closure and post closure care must be performed in accordance with NCDENR requirements and as described in the Permit to Construct Application Closure and Post-Closure Plan.

## **10.0 WASTE CONNECTIONS OF THE CAROLINAS, INC. SPECIAL WASTE MANAGEMENT POLICY**

### **10.1 PURPOSE**

The purpose of this policy is to comply with all laws, rules, and/or regulations pertaining to the generation, transportation, and/or disposal of special waste and minimize any impact resulting from the handling of any waste material which requires special handling techniques or which contains material other than would routinely be contained in normal municipal solid waste. This policy is also intended to minimize any paperwork burden on our customers.

### **10.2 APPLICABILITY**

This policy applies to all special wastes which are generated, transported, and/or disposed of at Waste Connections of the Carolinas, Inc., or its subsidiaries.

### **10.3 POLICY STATEMENT**

It is the policy of Waste Connections of the Carolinas, Inc. and its subsidiaries to:

- a. Comply with any and all laws, rules, and/or regulations pertaining to the generation, transportation, and/or disposal of special waste;
- b. Identify any waste material other than routine municipal solid waste which may require special handling and/or permitting prior to the handling of said material by Waste Industries, Inc. or its subsidiaries;
- c. Evaluate the physical, chemical and biological characteristics, compatibility with other waste and other potential impact to employees, property or the environment;
- d. Review the information and make a decision on acceptability while maintaining customer dialog; and,
- e. Handle and/or disposal of the special waste in a manner which minimum impact to employees, property, or the environment.

### **10.4 IDENTIFICATION OF SPECIAL WASTE**

It is the responsibility of the landfill site management, either directly or through a designee, to identify and characterize special waste that is generated or handled by the company and maintain compliance with this policy and pertinent laws and/or regulations. In addition to customer



requests for special waste services, the management shall also evaluate all other waste generated or handled by the company to determine if this policy applies to said waste. Furthermore, it is the responsibility of the landfill site management, either directly or through a designee, to train appropriate employees to identify potential special waste generated or handled by the company. Each waste material suspected of being special waste must be evaluated to determine if this policy applies and if so, must be reviewed for acceptability prior to handling by Waste Connections of the Carolinas, Inc., or its subsidiaries.

Special waste is defined as: any waste material which, because of its physical characteristics, chemical makeup, or biological nature requires either special handling procedures or permitting, or which poses an unusual threat to human health, equipment, property, or the environment. Generally, special waste can include:

- Liquid sludge and/or paste type material;
- Containerized materials (i.e., tank trucks, barrels, drums, pails, etc.);
- Chemical compounds or petroleum products -new or used;
- Fine powders or highly dusty materials;
- Demolition waste coming from industrial facilities;
- Asbestos containing materials;
- Debris and/or residue from spill cleanup work;
- Underground storage tank remediation material
- Industrial process wastes;
- Pollution control wastes;
- Ash from fires, furnaces, boilers, or incinerators;
- Off-specification products (in large quantities) (i.e., food, consumer or industrial products); and,
- Other materials defined as special waste by State or Federal rules and/or regulations.

## 10.5 EVALUATION OF SPECIAL WASTE

The evaluation process begins with a discussion between sales or management representatives and the potential customer (or broker for generator) of the waste. An assessment of special handling requirements and a determination of the chemical characterization needs are to be achieved. If there are questions on what chemical characterization is necessary, refer to the Environmental Compliance Department.

There are three (3) potential levels of evaluation required for any special waste generated, handled, brokered, or disposed of by the company:

- a. Special waste to be disposed of in a Waste Connections of the Carolinas, Inc. subsidiary landfill regardless of who generated, handled or brokered the material requires evaluation and characterization of the waste and approval PRIOR to acceptance. It is the landfill's responsibility to assess the incoming loads of the waste material.
- b. Special waste handled or brokered by Waste Connections of the Carolinas, Inc., or subsidiary hauling company, but, NOT disposed of in a Waste Connections of the Carolinas, Inc., subsidiary landfill.

Our company chooses the disposal site and requires evaluation and characterization of the waste and approval prior to disposal. If a third party disposal site requires similar characterization and approval, their program may be accepted provided its documents that the waste is not hazardous or toxic. Copies of the approval must be retained.

Our company is directed in writing by the generator or the State to utilize a specific disposal site. Requires certification that the material is not hazardous or toxic waste, disposal is in compliance with State and/ or Federal regulations and documentation of the choice of disposal site was made by others. This certification can be in the form of a letter from the generator.

- c. Special waste generated by Waste Connections of the Carolinas, Inc. or its subsidiaries, but not disposed of in a company landfill requires the evaluation and characterization of the waste and approval prior to disposal.

The customer is required to complete the appropriate Generator Special Waste Profile Sheet, sign a Service Agreement, and must include laboratory analytical data documenting the information provided along with any miscellaneous forms required by the State. The chemical analysis must be less than 1 year old and performed by a third party analytical laboratory which is certified by the State (or which is acceptable to the company if State certification is not present). The Generator Special Waste Profile Sheet can be modified to incorporate site-specific or subsidiary-specific information. However, modifications to the Generator Special Waste Profile Sheet must be approved by the Environmental Compliance Department-"IN WRITING"- prior to utilization of the modification. All Generator Special Waste Profile Sheets and analytical reports must include sufficient information to make a determination of the acceptability of the waste.

## **10.6 APPROVAL PROCEDURE**

It is the landfill site management's responsibility to assure that special waste is identified, properly evaluated and reviewed for approval prior to acceptance of the material for handling and/or disposal. Landfill site management or its designee shall review the information supplied through the evaluation process and make a determination on the acceptability of the waste. Consideration should be made of compatibility with other waste received, potential impact to personnel and equipment, and compliance with governing laws, rules and regulations. Approval can be granted conditional on routine chemical analyses based on the variable nature of the composition of the waste.

Once landfill site management, or its designee, has determined that a particular special waste is acceptable, they must assemble the appropriate information characterizing the material and submit to the Environmental Compliance Department for final approval. No special waste is to be accepted for handling, transporting, brokering and/or disposal prior to the written approval by the Director of Environmental Compliance or his/her designee. The designee of the Director of Environmental Compliance may be a third party engineering company or person who is familiar

with the Federal and State rules and regulations and the restrictions of facility environmental protection mechanisms.

Copies of all approved Generator Special Waste Profile Sheets must be maintained at the landfill and the transportation company which handled, brokered and/or disposed the waste. Copies of the final State Approvals (where applicable) must also be maintained at the Environmental Compliance Department.

## **10.7 TERM OF APPROVAL**

1. The extent of special waste approval will be based on the following:
  - a. The expiration date of required State approval or permit.
  - b. A change in the process generating the waste which could affect the characteristics or composition of the waste.
  - c. Expiration date of Special Waste Service Agreement.
  - d. Three (3) years from the date of the original laboratory analytical report.

If a term of approval has expired, but the waste material has not changed in composition, the waste may be recertified under the same Generator Special Waste Profile Sheet along with the Generator Special Waste Recertification form. However, anytime a State approval or analytical parameters are required for a specific waste, a new profile must be prepared. A new analytical report is required at least once every 3 years.

## **10.8 LANDFILL SPECIAL WASTE ACCEPTANCE PROCEDURES**

### **10.8.1 Pre-Acceptance**

No special waste can be accepted unless that waste is approved prior to disposal.

Before special waste can be shipped to a company landfill for disposal, the material must be evaluated and prequalified. The Waste Profile Sheet and analytical report will be reviewed and qualified for either acceptance under existing permits or subsequent submittal to the regulatory agency for authorization. The generator will be notified in writing, either by the company or by the state agency (where applicable) when the material has been approved or denied for acceptance.

A copy of the Generator Waste Profile Sheet and approval letter for each waste stream will be maintained at the landfill for the purpose of comparison with the incoming load. A tracking system must be compiled to track the status of incoming approved waste streams. The tracking database, the original Generator Waste Profile Sheet, and the approval letter will be maintained in the main administrative offices of the landfill.

#### 10.8.2 Gate Acceptance Procedures

A Special Waste Acceptance Checklist shall be utilized as a guide for facility personnel during inspection and prior to acceptance of shipments of non-hazardous special waste. This checklist must be utilized for each load of waste arriving at the gate. The checklist is to be posted at the landfill's acceptance gatehouse.

Following are instructions for using the checklist as a guideline:

##### Item 1 - Approval Letter Verification

If no written waste stream approval letter is on file at the site, facility personnel shall call the main administrative office to verify whether the waste stream was in fact approved. A current file (organized by generator) of all waste stream applications received and the status of their review/approval will be maintained at said office. If the approval cannot be verified, the load MUST be rejected. However, landfill management must be contacted before any load of special waste is rejected.

##### Item 2 - Manifest Verification

- a. If the manifest accompanying the shipment is not on a current manifest form, the load may be accepted if the information is transferred onto an updated manifest and a discrepancy is noted on the form. Copies of the original (incorrect) generator-signed manifest must be attached to the corresponding corrected manifest copies to document that the waste shipment was manifested to the facility. Contact must be made with the generator/broker to obtain and utilize the correct manifest forms for subsequent shipments.

- b. If the manifest is not complete, contact with the generator/broker must be made to properly complete the manifest by both the generator and the landfill (on all copies). The discrepancy must be indicated on the manifest.
- c. If there is information on the manifest that does not correspond to the information contained in the approval letter/permit, the generator must be contacted to resolve the discrepancy. The discrepancy must also be amended and indicated on the manifest.
- d. If a discrepancy item involves the lack of the generator's signature, the generator must be contacted and a follow-up letter must be forwarded to the landfill to indicate the generator's acknowledgement. If the transporter has not signed the manifest, bring the item to the driver's attention and allow him to sign the manifest prior to accepting the load.
- e. For all loads, particularly those accepted and billed on a volume basis, the volume on the manifest will require verification. The transporter trailer will be measured in length and width in addition to measuring the average height of the waste in the trailer. The calculated volume must be within ten percent of that indicated on the manifest. If the volume is beyond ten percent acceptable margin of error, the generator must be contacted and the volume discrepancy resolved and noted on the manifest.

### Item 3 - Load Inspection

During the visual inspection of the load, note any variation of the waste material from that shown on the Generator Waste Profile Sheet. Compare the material with the Physical Characteristics described in the Special Waste Profile Sheet of the waste. If there is a discrepancy regarding waste variation, contact the landfill management. If the landfill management is not available, contact the sales representative or Environmental Compliance Department. Landfill management should discuss any discrepancy with the customer/generator of the load. If the discrepancy cannot be properly explained, the load may be rejected by landfill management.

### Item 4 - Load Sample Collection

Note: Sampling is required once a day per Generator waste stream or as specified by State agencies or site-specific approvals.

A representative sample of the load will be collected by the following procedure:

- Utilizing a trowel (and/or shovel), a 20 oz. composite sample will be consolidated from random samples collected at three separate locations (front, middle and back of trailer) at verifying depths and placed in a sealable ("ziploc") baggy labeled with the authorization number, name of generator, date, time and initials of sampler. Facility personnel are to use protective latex gloves and goggles during sampling.

#### Item 5 - Load Fingerprint Testing

(Note: Fingerprint Testing is required once a day per Generator waste stream or as specified by State agencies or site-specific approvals.)

The collected sample will be subjected to the following "Fingerprint tests": Paint Filter Test (for presence of free liquids)-EPA Method SW846, 9095

1. Place approximately 5 oz. of the sample into a pain filter that has been secured above a clear plastic cup.
2. Allow the sample to stand for 5 minutes and observe for any passage of liquid through the paint filter into the cup.
3. If liquid is observed, the material does not qualify for acceptance as a solid waste and must be rejected.

#### Ignitability Test - Open Cup and Flame Method (Solids Ignitability Assessment)

1. Place approximately 5 oz. of the sample in a disposable aluminum container.
2. Light a wooden match and pass the match over the top of the sample several times. Bring the match as close as possible to the sample without touching it with the flame. Observe for any "flashes" incurred to the sample or whether the material burns vigorously emitting smoke. If either a "flash" or combustion of the material is noticed, the material is considered to exhibit the ignitability characteristic hazard and is subject for rejection.

PH Test-Standard Method of Chemical Analysis 1993

Moisten a small portion of the sample with water. Place a piece of pH litmus paper on the moistened area. Read the color chart on the litmus paper to determine if the pH is similar to that shown in the Generator Waste Profile Sheet. If the pH is above 12.5 or below 2, the material may be rejected. If the paper does not turn color, the pH is as shown on the Generator Waste Profile Sheet.

#### Items 6 - Documentation

After Fingerprint Tests are performed, enter the results on the Daily Operating Log Sheet. The remaining sample will be returned to the load.

#### Item 7 - Manifest Acceptance and Management

After recording the load in the Operating Log, the landfill facility representative will sign the manifest for the approved acceptable load. Give the transporter a signed copy. The remaining manifest copies are to be forwarded to the appropriate facilities. Place the landfill's copy on the customer manifest file. When a load is rejected, DO NOT SIGN THE MANIFEST. Keep a copy of the manifest for the rejected load file. Give the remaining manifest copies back to the driver to return to the generator with the rejected load.

#### Item 8 - Recording and Tracking Special Waste Loads

An operating log will be maintained on-site at all times for all shipments of non-hazardous special waste received. The Daily Operating Log-Special Waste Form must be completed and maintained on a daily basis at the landfill.

The following information for each special waste load must be recorded in the Daily Operating Log by the landfill ticket agent: Manifest Number, Generator Name, and Waste Description and Waste Approval Number

Analysis Information: Paint Filler, Flash Point, pH Accepted/Denied and Volume Received

Disposal Location: Quad, Cell, Lift

To be kept current, the Daily Operating Log must be maintained on a daily basis either in a ring binder to entered in the tracking system.



A Generator Log Sheet-Special Waste Form must be completed and maintained for each generator waste stream approved for disposal at the landfill. Each special waste load must be entered on the date it is received. The landfill ticket agent must enter the following information:

- Date Received
- Incoming Volume
- Total Cumulative Volume
- Bill to Customer
- Hauler
- Ticket Number
- Manifest Number

To be kept current, Generator Log Sheets must be maintained in alphabetical order, by generator name, either in a ring binder or entered in the tracking system as each load is received.

These forms will enable tracking special waste loads on a daily basis and will assist in the completion of monthly, quarterly or annual reports required for local, state, or federal regulations regarding special waste received at the landfill. The forms will also aid management and sales personnel with their budget projection for upcoming years. The Generator Log Sheet may be revised to conform to information that is needed in your area; however, any revision must first be approved by the Environmental Compliance Department.

### **Interpretation of This Policy**

Any questions on policy interpretation or clarification shall be referred to the Environmental Compliance Department in writing.



**APPENDIX A**  
**EQUIPMENT INFORMATION**  
**SAFETY PLAN**



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## 1.0 EMERGENCY PROCEDURES

1. Posting of Procedures - All emergency procedures must be updated as appropriate and after each emergency. All emergency procedures should be posted in the landfill site office, in conspicuous places at the site, and at the gate house.
2. Emergency Contact Information - The name, location, and telephone number of the nearest police, fire department, doctors, medical facilities, and ambulance service should be posted in the office and maintenance buildings. (see Emergency Response Plan, Appendix C)
3. Instructions of Procedures - All new personnel should be instructed on the emergency procedures used at the landfill. All employees should be informed of any changes in emergency procedures.
4. Responsibility of Employee- It is the responsibility of every employee to know and remember his role in each emergency procedure at the site.



## 2.0 GENERAL SAFETY PROCEDURES

1. Knowledge of Procedures - All employees at the landfill will know the proper procedures for reporting accidents, injuries, and fires.
2. Posting of Information - Landfill rules, roadway limits and speed limits on each road will be clearly posted. Direction of travel and location of curves will be posted. The location of disposal areas should be clearly indicated.
3. Dumping - For safe operations, the dumping area will be only slightly sloped at all times and equipment maintained in good repair.
4. Safety Devices - Proper safety devices, such as roll-over protective cabs, will be installed on all equipment and kept in good repair.
5. Fire Extinguishers - Fire extinguishers will be provided in buildings and on all heavy equipment. Each extinguisher will be appropriate for the types of fires likely and they will be checked or serviced as appropriate. Discharged fire extinguishers will be removed and replaced with fully charged units.
6. Employee Alertness - All employees will be alert for hazards at the landfill. Potential hazards will be reported to the supervisor.
7. Safety Meetings - Safety meetings will be regularly scheduled. Situations that can cause accidents and ways to prevent them will be discussed. Also, the effectiveness of corrective action will be discussed. Records will be maintained including attendance of the safety meetings and the subjects discussed.
8. NO SMOKING near flammable materials, methane extraction facilities, or other designated areas.



### 3.0 SAFETY PROCEDURES FOR HANDLING ASBESTOS WASTE

1. All asbestos containing waste shall be disposed of in accordance with Asbestos Management and Disposal Plan (Appendix E).
2. Asbestos is a known human carcinogen for which no level of exposure is known to be without risk. Single exposures may even present a health risk to some individuals.
3. As discussed in the Asbestos Management and Disposal Plan, asbestos waste materials require special handling, bagging, and sealing requirements. In the event that asbestos containers are broken or damaged such that asbestos fibers may come in contact with operating personnel, the precautions listed below regarding protective equipment and clothing shall be utilized.
4. The maximum feasible level of respiratory protection shall be used by workers engaged in work with or in close proximity to asbestos-containing material, when such workers are, or could reasonably be expected to be, occupationally exposed to airborne asbestos. "Occupationally exposed" means exposed to any detectable level of airborne asbestos at or above the lowest limit of reliable quantification as determined by the Transmission Electron Microscopy method (Code of Federal Regulations Title 40, Part 763, Subpart E, Appendix A).
5. An air purifying type respirator approved for use with asbestos shall be worn by all employees involved in the handling of asbestos waste.
6. An effective respirator program shall be established to include:
  - a. Written standard operating procedures governing the selection and use of respirator.
  - b. Medical examination of workers to determine whether or not they may be assigned an activity where respiratory protection is required.
  - c. User training in the proper use and limitations of respirators (as well as a way to evaluate the skill and knowledge obtained by the worker through training).
  - d. Respirator fit testing.
  - e. Regular cleaning and disinfecting of respirators.
  - f. Routine inspection of respirators during cleaning, and at least once a month and after each use for those respirators designated for emergency use.
  - g. Storage of respirators in convenient, clean, and sanitary locations.
  - h. Surveillance of work area conditions and degree of employee exposure.
  - i. Regular inspection and evaluation of the continued effectiveness of the program.
  - j. Recognition and resolution of special problems as they affect respirator use (e.g., facial hair, eye glasses, etc.)
  - k. Proper respirator use (procedures for donning and doffing respirators when entering and exiting the disposal area).



#### 4.0 SAFETY PRECAUTIONS FOR EQUIPMENT OPERATORS

1. Check Equipment - Check equipment for defects before operating. This can best be done by completing check-out lists prior to starting equipment in the morning. Do not start or operate defective equipment.
2. Use Stepping Points - To prevent slipping, use stepping points and hand holds when mounting and dismounting equipment.
3. Keep Debris From Cab- Keep operator's compartment, stepping points, and hand holds free from oil, grease, mud, loose objects, and solid waste.
4. Look All Ways Before Moving - Protect personnel and other equipment in the area by looking to the front, rear, and sides before moving equipment. If unsure of the surrounding conditions, dismount and inspect area.
5. Control Equipment Properly -The operator should control his equipment only from the driver's seat. Always have equipment under control.
6. Wear Safety Belts and Hard Hats - Always wear seat belts while operating equipment to provide support and security in the operator's compartment. A hard hat will reduce the potential for head injuries and should be worn while outside of any equipment.
7. Do Not Mount Moving Equipment - Never mount or dismount from moving equipment. Wait until the equipment has come to a complete stop and the brake is set before mounting or dismounting.
8. Carry Only Authorized Passengers - Persons other than the operator should not normally be allowed on landfill equipment. If it is necessary to carry a passenger, he should sit in a safe location. The passenger should be performing official duties only.
9. Carry blades and attachments low when equipment is traveling.
10. Check Blind Areas - Never push waste until sure that no person or equipment is in the blind area ahead of the machine, the blade, or the solid waste. If the operator is not sure of the surrounding conditions, he should get off the equipment and personally inspect the area. When operating in reverse, turn around to look in the direction of travel.
11. Maintain Adequate Clearance -When pushing waste, maintain adequate clearance from other vehicles or obstructions to assure that any falling objects will not strike other equipment or persons. Equipment should be kept clear of solid waste vehicles.
12. Operate Up and Down Slope-Avoid sidehill travel to reduce the chance of rolling over.



13. Avoid Excessive Speed - Operating conditions generally determine the speed of heavy equipment. Under no circumstances should heavy equipment be driven at excessive speed or operated recklessly.
14. Move Cautiously Over Bulky Objects - When compacting or traversing bulky items, the operator should proceed with extreme caution to avoid tipping or sudden lurching movements.
15. Constantly Check Work Area - The operator should constantly check the work area for the location of other persons or equipment.
16. NO SMOKING near flammable materials, methane extraction facilities, or other designated areas.





## 5.0 SAFETY EQUIPMENT

Certain safety equipment is specified for equipment operator protection. It is the responsibility of each employee to be sure his safety equipment is in good repair. Each employee must use his equipment at appropriate times. The proper safety equipment for equipment operators is listed below.

### OPERATOR PROTECTIVE EQUIPMENT

Equipment: Each piece of heavy equipment should be provided with:

- Roll-over bars
- Backup warning system
- Fire Extinguisher

Personal: Equipment operators should have available personal protective clothing:

- Ear muffs or ear plugs
- Face shields or goggles
- Dustmask
- Rubber or leather (steel toe) boots
- Work gloves
- Hard hats



## 6.0 FIRE CONTROL PLAN

### 6.1 WHEN FIRE OCCURS

- A. Extinguish small fires with fire extinguisher or smother with soil. Do not remain near large fires or explosive materials.
- B. Determine location, extent, type, and if possible, cause of fire or explosion.
- C. Notify on-site personnel and implement safety and fire control procedures.
- D. Notify facility emergency coordinator if the fire cannot be immediately controlled. E. Notify fire department if necessary. Clearly state:
  - 1. Location of landfill.
  - 2. Location of fire or explosion in landfill.
  - 3. Extent of fire or explosion.
  - 4. Type of fire or explosion.
  - 5. Actions now being taken.
  - 6. Injuries.
- F. Notify Rescue Squad, if necessary.
- G. Notify health care facility, if necessary. H. Notify Police Department, if necessary.
- I. Notify NCDENR (verbal within 24 hours, written within 15 days).

### 6.2 "HOT LOAD" PROCEDURES

A "hot load" is a load of burning solid waste in an incoming truck. It may be actively burning, but more likely will just be smoldering. When a "hot load" is discovered in a vehicle, the driver should be directed to dump the material in an area located away from the actual fill face and cleared of vegetation and debris. After the "hot load" is dumped, the equipment operator should spread the material, and then cover it with soil to smother the fire.

After the fire has been extinguished, the material should remain in the cleared area until no evidence of fire remains. At the end of the day, check to make sure no fire or smoldering remains, and then place it into the fill. Notify the NCDENR verbally within 24 hours and provide written notice within 15 days.



### 6.3 FIRE EXTINGUISHERS

Fire extinguishers should be installed in the following locations:

- A. Scale House
- B. Maintenance Building
- C. Office Building
- D. Fuel Storage Area
- E. Selected on-site Vehicles and Equipment



## 7.0 COMMUNICATIONS SYSTEM

Telephone communications will be available at the scale house and office building. Radio, cellular, and/or other types of communication will be available between the scale house, office building, District Manager, General Manager, Operations Manager, lead operator(s), and other key personnel. A CB radio will also be available to communicate with truck drivers.



## 8.0 CONFINED SPACE

A confined space is defined as any space not currently used for human occupancy, having a limited means of exit, which is subject to the accumulation of toxic contaminants, a flammable or oxygen deficient atmosphere, or other hazards such as engulfment or electrical or mechanical hazards should equipment be activated while an employee is in the space. Confined spaces include but are not limited to storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, air pollution control devices, smoke stacks, underground utility vaults, sewers, septic tanks, landfill pump houses, and open top spaces more than four feet deep such as pits, trenches, or vats.

Confined space entry requires special training. At no time is a Anson County Solid Municipal Solid Waste employee to enter a confined space or a trench without first receiving explicit training and authorization from the General Manager. When entering a confined space, the personnel shall follow all requirements prescribed under OSHA regulations for confined space entry (29 CFR 1910.146) as applicable.



**APPENDIX B**  
**EMERGENCY RESPONSE PLAN**



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## 1.0 EMERGENCY RESPONSE PROCEDURES

- A. Evacuation routes area posted throughout the facility and all personnel are advised during safety meetings as to the shortest route to take from their particular work area. In the event of an emergency that requires the immediate evacuation of the entire building, the decision to evacuate will be made by the General Manager, Operations Manager or the Maintenance Manager. In their absence, the decision will be made by the Manager on site who is best able to evaluate the situation. Decision to evacuate should be made with considerations of the following factors:
1. Is there immediate danger to life?
  2. Can the emergency be safely managed without a complete evacuation?
  3. Is there enough time to evaluate the emergency without allowing the situation to become life-threatening?
- B. Fire Response
1. A minor fire is a fire that can be extinguished with one fire extinguisher in one minute.
  2. Attempt to fight the fire only if you are not endangering yourself.
  3. If in an enclosed area and fire is creating heavy smoke, evacuate the area immediately.
  4. A major fire is any fire that requires more than one minute or more than one fire extinguisher to extinguish.
  5. Contact 911 immediately.
  6. Evacuate the immediate area of the fire.
  7. If in an enclosed area and fire is creating heavy smoke, evacuate the area immediately, proceed to the employee parking lot and stay there.
  8. Notify NCDENR (verbal within 24 hours, written within 15 days).
- C. Toxic Agent Release
1. In the event of a toxic agent release, General Manager, Operations Manager or the Maintenance will order the immediate total evacuation of the facility, and should immediately ensure that all personnel move to a point upwind from the site, and begin personnel accountability procedures as soon as practicable.
  2. The General Manager will ensure that the proper emergency authorities are notified of the situation immediately and are aware that there has been a toxic agent release.
  3. Since there are no chemicals or agents used or stored at the Anson County MSW Landfill Facility that pose such a great threat, the primary avenue by which such agent could be released would most likely be one of the following:
    - Transport into the facility in a located solid waste vehicle as a result of improper disposal of water from a pick-up point.
    - Transport into the facility in a non-Anson County MSW Landfill Facility vehicle, such as a delivery truck or other vendor vehicle.





## **2.0 SPECIAL PROCEDURES**

### **A. Critical operations requiring shutdown:**

1. The main power to the facility will be shut off by the Operations Manager.

### **B. Removal of Equipment**

1. Equipment that can be moved quickly and safely out of the hazard area will be moved to safe locations around the site.
2. The responsibility of making the determination of whether or not to move equipment is assigned to the Maintenance Manager or Operations Manager.
3. Decisions to move vehicles should be made with personnel safety as the top priority. No truck or piece of equipment is worth an injury or death, but we should make an effort to remove our equipment to safety only when it is practical. Equipment will only be moved when it is practical and safe to do so.



### **3.0 MUSTER LOCATIONS**

After evacuation of the building is determined to be necessary, all employees must gather in a safe location. This will be the employee parking lot.



#### 4.0 MEDICAL / FIRST AID

1. Shut down equipment
2. Determine extent of injuries (location, seriousness).
3. Apply pressure (compress) to wound to stop severe bleeding.
4. If victim is not breathing, administer Rescue Breathing and/or CPR, if trained.
5. DO NOT MOVE VICTIM(S), unless
  - a) Victim is still in danger.
  - b) Victim can move self without great pain.
6. Have someone TELEPHONE RESCUE squad (911) unless injuries are clearly minor.
  - a) Clearly state location
  - b) Describe injuries
7. Stay with and keep victim(s) warm.
8. Notify Facility Emergency Coordinator.
9. Transport victim(s) to a nearby medical center if:
  - a) Injury is not serious, but requires medical attention (e.g., broken fingers, minor bums);
  - b) Victim(s) can move self without great pain.
10. Applying FIRST AID
  - a) Landfill Employees - Minor accidents, such as bee stings, minor cuts and small bums may be treated onsite by an employee with first aid training.
  - b) Customers- First aid treatment should not be given to customers who have minor accidents at the site. However, personal information about the victim and a description of the accident should be obtained. The customer should be instructed to go to his/her doctor for examination and treatment, if required.



## 5.0 NOTIFICATION OF AUTHORITIES

- A. It is the responsibility of the General Manager to ensure that all emergency authorities are notified. This notification will be done in the form of a phone call placed from the Anson County MSW Landfill Facility or cellular phone if available.
- B. Call 911 in an emergency.
- C. Emergency phone numbers are posted throughout the Anson County MSW Landfill Facility.

Unless the occurrence of a contaminant release is clearly due to very unusual circumstances, the landfill operator shall take corrective action to prevent recurrence of the release. Corrective action shall be approved by appropriate state and local agencies and the NCDENR.

A report shall be filed at the landfill by the facility Emergency Coordinator in order to have further reference for inquiries by authorities or Anson County MSW Landfill Facility personnel. The report should state:

1. Time/date of incident or its discovery.
2. Type of release and effects.
3. Source.
4. Response and effectiveness.
5. Agencies contacted.
6. Corrective actions planned and schedule.

### Procedures After an Accident

- Accident Investigation -Site Manager will perform a complete investigation of the accident and events leading up to the time of the accident. The investigation should be started as soon as possible after the accident and persons involved in the accident should be interviewed.
- Determination of Cause- After facts about the accident have been gathered, the Site Manager will make a determination as to the cause(s) of the accident.
- Filing of Reports -The Site Manager will complete and file the appropriate accident report forms.
- Corrective Steps - After a thorough investigation and determination of the cause(s) of an accident, the Site Manager will take corrective steps so that the same type of accident will not re-occur. These corrective steps may take the form of repair of faulty equipment, installation of safety equipment, or instruction of personnel in safe operating procedures.
- Discussion with Employees-If it is determined that the cause(s) of the accident were related to employee work habits and that remedial safety instructions would be helpful, a meeting will be held with site employees. The accident and corrective measures which should be taken to prevent another accident will be discussed. All employees will be instructed in proper safety procedures to follow.
- Follow-up -The site Manager will follow-up on corrective measures to make certain that proper safety precautions are being taken. All unsafe practices will be called to the attention of the employees.



## 6.0 CONTACT LIST

### A. Key Personnel

Division Vice President	Timothy J. Fadul
Assistant District Manager	Travis Ricker



## **7.0 EMERGENCY PHONE LIST**

See Section 9.0



## **8.0 CRITIQUE OF RESPONSE**

After each incident involving the application of an Emergency Procedure, the General Manager will review the response to ascertain efficient application and inform the District Manager of the effectiveness of the response.



## 9.0 EMERGENCY RESPONSE CHECKLIST AND PHONE NUMBERS

In case of emergency, all employees are responsible for immediately contacting the appropriate individuals and/or authority listed below. Additionally, following notification, each employee should attempt to record the following information for any accident or emergency.

We need to know who (driver, employee, other parties): What (system type & equipment involved):  
When (time of accident):

Where (exact location):

Complete the AIG incident form if possible and then call the AIG#. Notify the following as appropriate:

EMERGENCY AMBULANCE	911	N/A
Sheriff's Office	911	704-694-41878 (NON-EMER.)
FIRE DEPARTMENT	911	704-272-7933 (NON-EMER.)
STATE POLICE	911	N/A
UTILITY COMPANY	Duke Energy	1-800-777-9898
OIL SPILL, TOXIC CHEMICAL RELEASE	1-800-424-8802	N/A
NC DENR	919-733-4996	NC Dept. of Environment and Natural Resources

### KEY CONTACTS

POSITION	NAME	PHONE NUMBER
AIG INSURANCE		1-888-289-3578
DIVISION VICE PRESIDENT	Timothy J. Fadul	704-398-4488
ASSISTANT DISTRICT MANAGER	Travis Ricker	704-694-6900
REGIONAL ENVIRONMENTAL COMPLIANCE SPECIALIST	Lana Brown	CELL 900-500-1812
REGIONAL ENGINEER	Nelson Breeden	865-200-7650
MAINTENANCE MANAGER	Isaac "Buddy" Powell	704-694-6900





**APPENDIX C**  
**UNAUTHORIZED WASTE CONTROL PROGRAM**



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## 1.0 INTRODUCTION

The requirements for an unauthorized waste control program are outlined in ISA NCAC 13B of the North Carolina Solid Waste Management Regulations (NCSWMR). The objective of the program is to prevent unacceptable wastes from being deposited at the facility and to identify those steps required once an unacceptable waste is identified at the facility. The program includes the following components:

- Methods for determining when an incoming load contains unacceptable wastes
- Contingency response steps to take once an unacceptable waste is identified
  
- Personnel training that is required to implement and maintain the program
- Record keeping requirements
- Reporting requirements



## 2.0 INCOMING INSPECTIONS

Informal load checking will be the responsibility of all employees, particularly those that work at the entrance area and those that work at or near the active fill area. Each employee will observe vehicles entering the Landfill for any potentially unauthorized waste and will alert management personnel if any unauthorized wastes are suspected. Through the waste collection programs, there will be several checkpoints:

- Curbside checkpoints - The hauler is notified at the Landfill as to which materials are acceptable and which are unacceptable.
- Gatehouse checkpoints - Only authorized vehicles and material will be allowed beyond the gatehouse. The gate attendant will refuse entry to any unauthorized vehicles or vehicles observed carrying unauthorized waste.
- Active face checkpoints -All incoming loads of waste will be observed by the equipment operators as it is discharged at the active face
- Checkpoints during compaction at active face -Material will be inspected by the Landfill compactor operator as it is compacted at the active face.



### 3.0 RANDOM LOAD INSPECTIONS

In addition to the visual inspections performed by the equipment operator/attendants, a random inspection program shall be implemented to detect and prevent disposal of any of the unauthorized wastes listed in Section 2.2 of the Operations Manual. Inspections conducted as part of this program shall be performed by personnel trained in the following areas: methods for identification and determination of unauthorized wastes, handling procedures for unauthorized wastes, record keeping requirements of the program, and occupational health and safety. Inspection personnel shall also have a thorough understanding of the North Carolina Hazardous Waste Management Regulations (15A NCAC 13A) and the North Carolina Regulated Medical Waste Management Regulations (15 NCAC 13B .1203 ).

The frequency of the inspections shall be determined by the quantity and type of waste received, the familiarity with the generators and/or transporters, and the occurrences of identified unauthorized waste. Inspections should be performed at the maximum of the following frequencies:

- Once per week; or
- Ten percent of all incoming loads.

The inspections also need to be random. The time of day and day of week shall vary between inspections. The transporter/hauler selected for inspection shall also vary between inspections.

The procedure for the inspection shall be as follows:

- Stop the selected vehicle prior to the working face of the landfill
- Notify the driver of the inspection
- Direct the vehicle to the inspection area. The inspection area may be either a permanently designated location or a temporary location adjacent to the working face.
- If possible, perform a visual observation of the waste prior to unloading. If unauthorized waste is observed, or suspected, the vehicle shall be prohibited from unloading, and shall be directed out of the facility.
- If no unauthorized waste is observed or suspected from the visual observation, or if a visual observation is not possible, the vehicle shall discharge the load at the inspection area. The driver shall remain at the inspection area while the inspection is performed, unless a safety concern requires evacuation of the area. Equipment shall be used to spread and turn the waste to facilitate a visual observation of the load contents. If no unauthorized waste is identified, the waste shall be transferred to the working face for disposal.
- If unauthorized waste is identified in the load, and the unauthorized waste is not a regulated hazardous waste, a regulated medical waste, a regulated toxic waste, a regulated nuclear waste, or a waste which requires special handling, the waste shall be loaded back into the vehicle and removed from the facility.
- If acceptability of the waste cannot be determined by visual observation, the waste can either be rejected and loaded back into the vehicle and removed from the facility, or samples of the waste can be taken to determine acceptability. Testing shall be selected based on the reason for the suspicion of unacceptability.



- If the waste is suspected of being a regulated hazardous waste, a regulated medical waste, a regulated toxic waste, or a regulated nuclear waste, site personnel will safely identify the nature of the unauthorized waste. Except for medical waste, wastes within these categories are not to be handled by landfill staff. Upon assessment of the waste, qualified site personnel (medical waste only) or qualified contractors will be contacted to provide direction for temporary handling, isolation, and security. Within 24 hours of discovery, Anson County MSW Facility will orally inform NCDENR of the incident and make every effort to contact a hazardous waste contractor for the proper packaging, removal, and disposal of the unauthorized waste. The NCDENR will be informed in writing within 5 days of the incident of the steps taken to properly dispose of the unauthorized waste. Medical waste can be managed by trained site personnel prior to shipment offsite by a licensed provider.



## **4.0 RESPONSE**

The appropriate response will be dependent on whether the unauthorized waste is recognized before or after it is deposited at the facility and on the type of unauthorized waste.

### **4.1 PRIOR TO DEPOSIT AT LANDFILL**

If an unauthorized waste is identified prior to the waste being deposited at the working face, the landfill operator shall notify the hauler and reject the load. Such loads of unauthorized wastes may be identified during the scale attendant's inspections, during a random load inspection, or by equipment operators prior to the hauler tipping his load at the working face.

### **4.2 AFTER DEPOSIT IN LANDFILL**

If the unauthorized waste is identified after the waste has been placed at the working face, and the hauler is still present, and the waste is not hazardous, medically regulated, toxic, or nuclear, the landfill operator shall ensure that the waste is re-loaded onto the haul vehicle and rejected.

### **4.3 UNAUTHORIZED WASTE TYPES**

The unauthorized wastes described below shall be rejected.

#### **4.3.1 Hazardous, Regulated Medical, Toxic, and Nuclear Wastes**

Once an unauthorized waste from any of these categories is identified, the landfill operator shall immediately notify the NCDENR, and site personnel will safely identify the nature of the unauthorized waste. Except for medical wastes, wastes within these categories are not to be handled by landfill staff. Upon assessment of the waste, qualified site personnel (medical waste only) or qualified contractors will be contracted to provide direction for temporary handling, isolation, and security. Within 24 hours of discovery, Anson County MSW Landfill Facility will orally inform NCDENR of the incident and make every effort to contact a hazardous waste contractor for the proper packaging, removal and disposal of the unauthorized waste. The NCDENR will be informed in writing within 5 days of the incident of the steps taken to properly dispose of the unauthorized waste. Medical waste can be managed by trained site personnel prior to shipment offsite by a licensed provider.



#### 4.3.2 Containers (drums not triple-rinsed or not properly opened)

Reject the load and follow the procedures in Section 1.2.2 for possible detection of hazardous waste. If the container does not contain hazardous waste, re-load onto hauler if necessary. If hauler has left the facility, call the company and have them return. Set the containers aside, cover with a tarp is necessary to prevent leaks, and, when available, place the subject containers within an impervious reserve container.

#### 4.3.3 Waste Oil

Reject the load, re-load or direct it to the waste oil recycling area. If any is dumped, place appropriate absorbents, such as cat litter, spill pads, etc. to absorb the material. If hauler has left the facility, call the company and have them return.

#### 4.3.4 Petroleum Contaminated Soils

The procedures applied to those petroleum contaminated soils not tested and pre-approved for disposal in accordance with the Special Waste Acceptance procedures.

Reject the load, re-load, or, if hauler has left the facility, call the company and have them return. Push aside the soils and cover with a tarp. For small amounts of wet soils, place in HDPE barrels when available. Call the NCDENR for additional direction.





## **5.0 PERSONNEL / TRAINING / EQUIPMENT**

### **5.1 PERSONNEL**

Listed below are the descriptions of the key personnel and the skill level required for the daily operation of the facility

#### **5.1.1 Landfill Manager I Operations Manager**

The landfill manager/operations manager (manager) will be experienced in all aspects of landfill construction, disposal operations, equipment maintenance procedures, environmental compliance, and safety regulations. The landfill manager shall have at least one year of demonstrated management experience in a similar position. The landfill manager will also have the duties of the site safety manager. This will include familiarity with applicable state and federal regulations regarding employee safety. The landfill manager will have the proper educational background, and will be experienced with occupational safety management and employee safety training

#### **5.1.2 Equipment Operators**

The equipment operators at the site shall be experienced with the various types of equipment used at the landfill. Upon new employment, the operators shall be instructed on the proper usage of the equipment. The operators will also be experienced in equipment maintenance procedures and special waste disposal practices.

#### **5.1.3 Scale/Gate Attendant**

The scale/gate attendant shall be experienced in the operations of the scales used to weigh the incoming waste hauling vehicles. The scale/gate attendant will be trained in the identification of acceptable and unacceptable wastes entering the facility. The attendant will also be knowledgeable of the use of the scale equipment.

### **5.2 TRAINING**

All new employees will be given an orientation program including the following:

- Use of fire extinguishers
- Hearing conservation
- Respirator training and fit testing (if applicable)
- Closed vessel entries (if applicable)



- Emergency response/spill cleanup
- Site rules
- Site emergency procedures
- Special waste handling procedures
- Unacceptable waste training
- Identification of hazardous and PCB-containing wastes

The following types of training will be provided on a regular basis at the facility to ensure that the facility employees are adequately trained and understand their responsibilities in the event that unauthorized waste is identified.

#### 5.2.1 Annual Safety Training

Annual safety training classes will be given by the landfill manager regarding current safety practices. If an accident has occurred, it will be addressed and thoroughly discussed, so that the accident does not happen again. Outside guests, such as the fire, police, and rescue squad departments will be asked to address the facility employees on safety management practices.

#### 5.2.2 Environmental Compliance Training

Compliance with environmental regulations will be the duty of each person employed at the landfill. Compliance training will be provided to all employees, covering all operations of the landfill. Various topics will include but not be limited to leachate and methane gas contra environmental monitoring, and surface water control.

#### 5.2.3 Waste Identification Training

All employees will be given training in the types of waste accepted at the facility and in recognizing PCBs, hazardous wastes, and all other unauthorized wastes. The training will be initiated before the individual's start date. Training will be updated yearly, whenever the regulations are changed, or when new waste types can be accepted at the facility.



## 6.0 RECORD KEEPING

All inspections will be documented in writing by the inspector and retained by the Landfill for a minimum of five years. The following information will be logged for each formal inspection which takes place:

- Name of inspector
- Date and time of inspection
- Name of the hauling firm
- Name of the driver
- Vehicle license plate number
- Source of the waste as reported by the driver
- Inspector observations
- Signatures of inspector and driver

Incidents of unauthorized wastes identified during routine inspections records will include, in addition to the above list:

- Description of the waste
- Determination of waste acceptability and methods used for determination
- Description of any response activities associated with unauthorized waste



## **7.0 REPORTING**

Immediate verbal notification shall be provided to the NCDENR regional office of the discovery of unauthorized waste that is regulated hazardous waste, a regulated medical waste, a regulated toxic waste, or a regulated nuclear waste. A written submission shall also be provided to the NCDENR within 5 business days. The written submission shall include the date and time of discovery, a description of the unauthorized waste, response activities implemented, and, if known, the ultimate disposal of the unauthorized waste.



**APPENDIX D**

**ASBESTOS MANAGEMENT AND DISPOSAL PLAN**



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## 1.0 DEFINITIONS

"Asbestos" means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

"Asbestos-containing waste materials (ACM)" means mill tailings or any waste that contains commercial asbestos. This term includes filters & control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovations operations, this term also includes regulated asbestos-containing waste material and materials contaminated with asbestos including disposable equipment and clothing.

"Asbestos waste generator" means any owner or operator of a source covered by the Code of Federal Regulations (CFR), Title 40, Part 61 (40 CFR 61), National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart M, National Emission Standard for Asbestos whose act or process produces asbestos-containing waste material.

"Category I nonfriable asbestos containing material (ACM)" means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the polarized light microscopy method specified in 40 CFR 763, Subpart E, Appendix E.

"Category II nonfriable asbestos-containing material (ACM)" means any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the polarized light microscopy methods specified in 40 CFR 763, Subpart E, Appendix E, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Commercial asbestos" means any material containing asbestos that is extracted from ore and has value because of its asbestos content.

"Friable asbestos" means any material containing more than one percent asbestos as determined using the polarized light microscopy methods specified in 40 CFR 763, Subpart E, Appendix E, which is capable of being crumbled, pulverized or reduced to powder by hand pressure.

"Leak-tight" means that solids or liquids cannot escape or spill out. It also means dust-tight.

"Natural barrier" means a natural object that effectively precludes or deters access. Natural barriers include

physical obstacles such as cliffs, lakes or other large bodies of water, deep and wide ravines, and mountains.

Remoteness by itself is not a natural barrier.

"Regulated asbestos containing material (RACM)" means: Friable asbestos material; Category I nonfriable ACM that has become friable;

Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; and



Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

For the purposes of this definition "renovation" means altering an installation, structure or building or any part of such installation, structure or building in any way, including the stripping or removal of RACM. Operations in which load-supporting structural members are wrecked or taken out are "demolitions."

"Resilient floor covering" means asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than 1 percent asbestos as determined using polarized light microscopy according to the method specified in 40 CFR 763, Subpart E, Appendix E.

"Waste shipment record" means the shipping manifest, required to be originated and signed by the asbestos waste generator, used to track and substantiate the disposition of asbestos-containing waste material.





## **2.0 APPLICABLE ASBESTOS WASTE GENERATION PROCESSES**

The standards contained herein apply to the management of all asbestos-containing materials (ACM) generated by asbestos mills, by manufacturing, fabricating, and spraying operations, and ACM generated in the course of demolition and renovation of installations, structures or buildings, or other waste generating activities.



### **3.0 PRE-ACCEPTANCE PROCEDURES**

In order for ACM to be accepted for disposal site at the CCDC site, the asbestos waste generator shall follow the pre-acceptance procedures described in this section.

#### **3.1 PACKAGING**

The generator shall conform to all packaging requirements contained in 40 CFR 61.149 and 40 CFR 61.150. All ACM generated in a manufacturing, fabrication, or spraying operation and all regulated ACM generated in a demolition or renovation operation shall be placed in leak-tight containers while wet. Materials that will not fit into containers without additional breaking shall be put into leak-tight wrapping, consisting of 6-mil double "bladder" for bulky wastes, taped shut. The containers shall meet federal DOT standards 49 CFR 173.216 as required by the North Carolina Regulations Governing Transportation of Hazardous Materials (19A NCAC 03D.0802). Materials placed in double, 6-mil thick plastic bags and sealed will conform to the above requirements when transported in motor vehicles that are loaded by and for the exclusive use of the consignor and unloaded by the consignee. To ensure that the personnel at the disposal facility can verify that the material has been placed in double bags, the outer bag should be transparent.

The containers or wrapped materials shall be labeled using warning labels specified by Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.10010(3) or 1926.1101(k)(7). The labels shall be printed in letters of sufficient size and contrast so as to be readily visible and legible and shall contain the following information:

DANGER CONTAINS ASBESTOS FIBERS  
AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD

For materials transported off-site, label containers or wrap materials with a name of the waste generator and the location at which the waste was generated.

Category I nonfriable ACM and Category II nonfriable ACM generated in a demolition or renovation operation that do not meet the definition of regulated ACM need not meet the requirements.

#### **3.2 MARKING**

Conform to all marking requirements for vehicles used to transport ACM during loading and unloading of wastes



#### **4.0 TRANSPORTATION OF ASBESTOS-RELATED MATERIALS**

Anson County MSW Landfill Facility requires the transporter of asbestos related material to conform to the requirements set forth in 19A NCAC 03D .0802 North Carolina Regulations Governing Transportation of Hazardous Materials. All asbestos-containing materials shall be properly packed for transportation in accordance with these requirements. Asbestos-containing waste materials shall be accompanied by the waste shipment manifest record.



## 5.0 DISPOSAL OF ASBESTOS-CONTAINING MATERIALS

Anson County MSW Landfill Facility shall comply with the requirements of this section. All asbestos-containing materials generated in a manufacturing, fabrication, or spraying operation and all regulated ACM generated in a demolition or renovation operation shall be disposed in a designated area of the Anson County MSW Landfill Facility. When Category I and Category II nonfriable ACM is disposed in the landfill advanced notice shall be required and other pertinent requirements of this part shall be met.

### 5.1 UNLOADING OF ACM

Upon arrival at the Anson County MSW Landfill Facility, the vehicles used to transport ACM shall be marked during the unloading process so that the signs are visible. The markings shall:

Be displayed in such a manner and location that a person can easily read the legend;

Conform to the requirements for 20 inches by 14 inches upright format caution signs specified in 29 CFR 1910.145(d)(4);

Display the following legend with letter sizes and styles of a visibility at least equal to those specified in Table 5-1 below. Spacing between any two lines shall be at least equal to the height of the upper two lines.

Table 5-1. Visible Sign - Standards near Unloading

<b>Legend</b>	<b>Notation</b>
DANGER	1-inch Sans Serif, Gothic or Block
ASBESTOS DUST HAZARD	1-inch Sans Serif, Gothic or Block
CANCER AND LUNG DISEASE HAZARD	¾-inch Sans Serif, Gothic or Block
Authorized Personnel Only	14-point Gothic



## **5.2 PLACEMENT OF ACM**

Asbestos-containing waste materials shall be segregated in designated areas and not disposed of on the active work face with other solid wastes. An initial lift of 10 feet of solid waste will be placed in the designated asbestos disposal area. The boundaries of the asbestos area will then be clearly marked and signs posted in the appropriate manner. Prior to receipt of an asbestos-containing waste shipment, an excavator will dig a trench in the solid waste which will be able to contain all the asbestos waste scheduled for that day plus the one foot of soil cover. The depth of the trench will be approximately six feet but no greater than 8 feet. Once the first lift in the designated asbestos area is completely full and the 1 foot of soil cover applied, an additional 10 feet of solid waste will be placed over the designated disposal area for the future placement of asbestos waste. This process will continue until the maximum height of the landfill is achieved. Asbestos containing waste will not be placed within 15 feet of the intermediate cover or of the cells final elevation.

The waste shall either be hand placed in the excavated trench or deposited by means of slowly unloading the asbestos containing wastes. Either placement method will ensure that the integrity of bags, wrapping or containers are not punctured or damaged.

The waste shall not be compacted until a sealing layer of soil has been placed over the waste and great care is taken to prevent the breaking of bags or wrapping. All accidentally broken materials shall be covered with 12 inches or more of soil immediately. A cell which has been completely covered with soil at least one foot thick may be compacted.

All waste shall be covered with at least one foot of soil at the end of each day of operation. A final cover of 3 feet of soil shall be placed over all areas that have not been in use or will not be used for more than 30 days. Areas that will not or have not been used for one year, in addition to final soil cover, shall be graded for erosion prevention and re-vegetated.

## **5.3 ACCESS CONTROL**

The entire landfill will have access control and site security. As such an internal fence is not required. The entrance and waste boundary line shall be clearly marked that asbestos materials are being disposed. Permanent warning signs shall be provided at all entrances and at intervals of 330 feet or closer around the waste boundary line. The warning signs shall:

Be posted in such manner and location that a person can easily read the legend;

Conform to the requirements for 20 inches by 14 inches upright format caution signs specified in 29 CFR 1910.145.d.4;

Display the following legend with letter sizes and styles of a visibility at least equal to those specified in the following table. Spacing between any two lines shall be at least equal to the height of the upper two lines.



The asbestos area within this secure sanitary landfill will not be located closer than 50 feet to the property boundary or occupied building or structure.

Table 5-2. Sign Standards near Access Control

Legend	Notation
ASBESTOS WASTE DISPOSAL AREA	1-INCH Sans Serif, Gothic or Block
DO NOT CREATE DUST	¾-inch Sans Serif, Gothic or Block
Breathing Asbestos is Hazardous to Your Health	14-point Gothic

## 5.4 RECORD KEEPING AND REPORTING

### 5.4.1 Landfill Superintendent

For all ACM received, Anson County MSW Landfill Facility shall follow the following requirements regarding waste shipment records:

- Complete each waste shipment record submitted by the asbestos waste generators for each shipment received by noting shipment discrepancies and dating and signing the waste shipment record. The discrepancies will include:
  - The presence of improperly enclosed or uncovered waste, or any ACM not sealed in leak-tight containers or wrappings; and
  - A discrepancy between the quantity of waste designated on the waste shipment record and the quantity actually received.
- Send a copy of the signed waste shipment record to the waste generator as soon as possible and no longer than 30 days after receipt of the waste;
- Upon discovering the discrepancy in the shipment quantity, attempt to reconcile such discrepancy with the generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report it in writing to the NCDENR. Describe the discrepancy and the attempts to reconcile it, and submit a copy of the waste shipment record along with the report; and
- Retain a copy of all records and reports required at least two years.

### 5.4.2 Disposal Records

Anson County MSW Landfill Facility shall follow the following requirements regarding disposal records:

- Initiate and maintain, until closure, records of the location, depth and area, and quantity in cubic yards of
- ACM within the landfill on a map or diagram of the disposal area;



- Submit to the Director of the NCDENR, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities; and
- Furnish upon request by the director of the NCDENR, and make available during normal business hours for inspection, all records required by the regulations.

#### 5.4.3 Safety and Health Program

CCDC shall institute an occupational safety and health program required under 29 CFR 1910.1001 or 29 CFR 1910.1101, as applicable.

#### 5.4.4 Closure and Post-Closure Care

In addition to the closure and post-closure care requirements for the facility, Anson County MSW Landfill Facility shall meet the following requirements if the facility receives ACM materials:

- Within 60 days of the closure of the Anson County MSW Landfill Facility, record with the Anson County Clerk's office a notation on the deed to the facility property or any other document that would normally be examined during a title search that will in perpetuity notify any purchaser of the property that:
- The property has been used for the disposal of ACM;
- The copy of the survey plat and the record of location and quantity of ACM disposed are attached to the notation; and
- The site is subject to regulation by the North Carolina Department of Natural Resources.
- Maintain the access control to include fencing and signs during the post-closure period.

#### 5.4.5 Disturbance of Disposed Waste

Anson County MSW Landfill Facility shall request of the NCDENR in writing, approval to disturb disposed waste at least 45 days prior to excavating or otherwise to disturb any ACM that has been deposited at the Anson County MSW Landfill Facility. The request shall contain the following information:

- Scheduled starting and completion dates; Reasons for disturbing the waste;
- Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated ACM; and

Location of any temporary storage site and the ultimate disposal site.



## **APPENDIX E**

### **SPECIAL WASTE QUALITY ASSURANCE PLAN**





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SPECIAL WASTE QUALITY ASSURANCE PLAN

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GENERATOR SPECIAL WASTE PROFILE SHEET



## INSTRUCTIONS FOR THE COMPLETION OF GENERATOR SPECIAL WASTE PROFILE SHEET

### PURPOSE

The Generator Special Waste Profile Sheet is to be completed to properly identify and characterize the type of special waste that is requested for acceptance. All information provided and certified by the generator of the special waste identified by the Waste Profile Sheet is true, correct, and accurate.

This form is to be used when applying for acceptance approval for a new special waste stream or for the renewal of an existing waste stream.

### WASTE PROFILE SHEET INFORMATION

Waste Profile Number: Leave blank. Company tracking number will be issued by the Environmental Compliance Department of Allied Waste.

Disposal Facility: Enter the name of the proposed landfill facility for the ultimate disposal on the non-hazardous special waste stream.

### I. GENERATOR INFORMATION

Generator Name and Address: Enter the required information including the name, address, telephone number of the company generating the waste stream for disposal. If the address to where correspondence is to be sent is different from the site address, complete the mailing address, otherwise, type "SAME". Also be sure to enter the Generator's Contact Person's Name and telephone number.

Generator State ID Number: Applies only if State Agency issues ID Numbers (i.e. Illinois EPA has a ten digit code assigned to each generator of special waste). If the State Agency does not issue a number enter "n/a".

SIC Code Number: Each industry class is assigned a four-digit code called a Standard Industrial Classification Code. The classification is assigned to the process which generates a specific product.

### II. TRANSPORTATION INFORMATION

Transporter: Enter general information of the licensed special waste hauler who is to transport the waste.



### III WASTE STREAM INFORMATION

**Waste Name:** Provide the common name of the major component or substance that most accurately denotes the special waste.

**Process Description:** Provide a description of the process or operation which generates the waste.

**Pollution Control Waste or Industrial Process Waste:** Check the one category which applies to the special waste stream.

**Pollution Control Waste** means any waste generated as a direct or indirect result of the removal of contaminants from the air, water, or land, which pose a present or potential threat to human health or to the environment or with the inherent properties which make the disposal of such waste in a landfill difficult to manage by normal means. "Pollution Control Waste" includes, but is not limited to water and wastewater treatment plant sludge, baghouse dusts, landfill wastes, scrubber sludges, and chemical cleaning.

**Industrial Process Waste** means any waste generated as a direct or indirect result of the manufacturer of the product or the performance of a service, which would pose a present or potential threat to human health or to the environment or with inherent properties which make the disposal of such waste in a landfill difficult to manage by normal means. "Industrial Process Waste" includes, but is not limited to, spent pickling liquors, cutting oils, chemical catalyst, distillation bottoms, etching acids, equipment cleaning, paint sludge, incinerator ashes (including but not limited to ash resulting from the incineration of potentially infectious medical waste), core sands, metallic dust sweepings, asbestos dust, and off-specification, contaminated or recalled wholesale or retail products.

Specifically excluded are uncontaminated packaging material, uncontaminated machinery components, general household waste, landscape waste, and construction and demolition debris.

**Physical State:** Circle one of the choices listed. Give the most accurate phase of the waste.

**Method of Shipment:** Circle one of the choices listed. Describe the planned method of transportation to the disposal site.

**Estimated Annual Volume:** List the estimate annual volume in cubic yards or tons. If other, explain (i.e., drums).

**Frequency:** Circle one of the choices listed. Approximately how often disposal of the special waste is to occur.

**Special Handling Instructions:** Indicate any specific instructions.



#### IV. REPRESENTATIVE SAMPLE CERTIFICATION

Collection of Representative Sample: Indicate "Yes" or "No" that a representative sample was collected to prepare the profile sheet and laboratory analytical report in accordance with USEPA guideline or equivalent rule. Enter date sample taken. Indicate by circling whether this is a Composite Sample or a Grab Sample. Enter sampler's employer company name. Type or print Sampler's name and also have the sampler sign where indicated.

#### V. PHYSICAL CHARACTERISTICS OF WASTE:

Characteristic Components: Furnish the inorganic and organic substances and their relative percentages that comprise the waste. These components can have generic or chemical names. The total percentage must equal 100 percent.

Color: Describe the color of the waste. If the color is variable, provide the most dominating color.

Odor: If an odor from the waste is detected, give the most accurate description of that odor including what kind of odor and if it is slight, mild, or strong. If no odor is detected, indicate "none".

Free Liquids: Determine if there are free liquids in the waste. (Paint Filter Test) Mark "NO" if the waste passes the test (no free liquids present). Mark "YES" if the waste fails the test (detecting the presence of free liquids).

Percent Solids: Determine the amount of solids present in the waste; provide as a percentage of the waste as a whole.

pH: Indicate the pH of the waste (corrosivity).

Flash Point: Indicate the temperature at which the waste ignites.

Phenol: The EPA limit for Phenol concentration in any non-hazardous special waste is 1,000 total ppm. List the total ppm of phenol present.

Attach Analytical Report

Eight RCRA TCLP Metals, Cyanide Total/Reactive, Sulfide Total/Reactive, Flash Point, Paint Filter, pH, Phenol, PCBs, EOX, TCLP Organics (TCLP Volatiles, TCLP Semi-Volatiles), Pesticides/Herbicides are parameters required to be tested for the majority of special waste streams for approval. When performing metals and organics analysis, Total or TCLP procedure may be utilized, but any constituent whose total concentration exceeds the TCLP limit must be analyzed using the TCLP test and result reported. Where parameters are not tested, include historical background and/or Material Safety Data Sheets. Analytical used to complete this form MUST be less than one (1) year old.



Pesticides and/or Herbicides: Indicate "Yes" or "No". Sulfide or Cyanide: Indicate "Yes" or "No". PCBs: Indicate "Yes" or "No".

PCBs are generally used in electric capacitors, transformers, and vacuum pumps. PCBs are not to be present in non-hazardous special waste. An alternate name commonly used by laboratories for PCB is "Arochlor" followed by a number defining the special PCB tested. If PCBs are tested and separated into the Arochlor compounds, the highest detection limit is the parameter to be reported.

Non-Hazardous Waste Classification Certification: Indicate "Yes" or "No". Dioxins: Indicate "Yes" or "No".

Toxic Material: Indicate "Yes" or "No". Radioactive Waste: Indicate "Yes" or "No".

Medical or Infectious Waste: Indicate "Yes" or "No". Federal Superfund Site: Indicate "Yes" or "No".

## VI. GENERATOR CERTIFICATION

Certification requires generator name, title, date, and signature. If a generator employee does not sign the Waste Profile sheet, a letter from the generator authorizing the person (Contractor/Hauler) to sign the form on their behalf, must accompany the Waste Profile Sheet.



**APPENDIX F**  
**SITE COMPOSTING APPLICATION**



**NORTH CAROLINA DEPARTMENT OF ENVIRONMENT  
AND NATURAL RESOURCES DIVISION OF WASTE MANAGEMENT**

**ANSON COUNTY MUNICIPAL SOLID WASTE LANDFILL  
COMPOSTING FACILITY PERMIT APPLICATION**

**Prepared For:**

**WASTE CONNECTIONS OF THE CAROLINAS, INC.  
375 DOZER DRIVE  
POLKTON, NORTH CAROLINA 28135**

**Prepared By:**

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.  
CHARLOTTE, NORTH CAROLINA**

**CEC PROJECT 122-381**

**DECEMBER 2012**

**Civil & Environmental Consultants, Inc.**

<b>Charlotte</b>	2030 S. Tryon Street   Suite 3E Charlotte, North Carolina 28203 Ph: 980/224-8104 / Fx: 980/224-8172 Toll Free: 855/859-9932 charlotte@cecinc.com <a href="http://www.cecinc.com">www.cecinc.com</a>	<b>Austin</b>	855/365-2324	<b>Columbus</b>	888/598-6808	<b>North Central PA</b>	877/321-2324
		<b>Boston</b>	866/312-2024	<b>Detroit</b>	866/380-2324	<b>Phoenix</b>	877/231-2324
		<b>Chicago</b>	877/963-6026	<b>Export</b>	800/899-3610	<b>Pittsburgh</b>	800/365/2324
		<b>Cincinnati</b>	800/759-5674	<b>Indianapolis</b>	877/746-0749	<b>St. Louis</b>	866/250-3679
		<b>Cleveland</b>	866/507-2324	<b>Nashville</b>	800/763-2326	<b>Toledo</b>	888/598-6808





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Site Operations Plan – Figure 1



## 1.0 GENERAL PROVISIONS

### 1.1 PROJECT DESCRIPTION

This Application for a Type 1 Composting Facility permit for the Anson County Municipal Solid Waste Landfill is being submitted by Civil & Environmental Consultants, Inc. on behalf of Waste Connections of the Carolinas Inc. This application meets the composting facility design parameters, contraction requirements, and design drawing requirements found in Section .1400 of 15A NCAC 13B of the North Carolina Department of Environment and Natural Resources (NCDENR) Solid Waste Management Rules. This application package includes information regarding the site design, construction and operation.

Project Title:	Anson County Municipal Solid Waste Landfill Composting Facility
Owner:	Waste Connections of the Carolinas, Inc. 375 Dozer Drive Polkton, NC 28135 (704) 694-6900
Owner's Representative:	Timothy J. Fadul, Division Vice President
Consulting Engineer:	Civil & Environmental Consultants, Inc. 2030 South Tryon Street Suite 3E Charlotte, NC 28203
Consulting Engineer's Representative:	Scott L. Brown, P.E.
Proposed Site Operator:	Waste Connections of the Carolinas, Inc. 375 Dozer Drive Polkton, NC 28135 (704) 694-6900
Operator's Representative:	Travis Ricker, Assistant District Manager



The Anson County Municipal Solid Waste Landfill Composting Facility is located at 375 Dozer Drive, in Polkton, NC. A Type 1 Composting Permit is being sought. The composting facility will be located as shown on the Site Operations Plan, Figure 1 in Appendix A, and consists of land totaling approximately 14.5 acres. Access to the site is provided via Dozer Drive. The property is owned by Chambers Development of North Carolina, Inc., a wholly owned subsidiary of Waste Connections of the Carolinas, Inc. and will be operated by Waste Connections of the Carolinas Inc. Mr. Travis Ricker, Assistant District Manager (Telephone (704) 694-6900) will be responsible for daily operations.

## **1.2 SITE REQUIREMENTS**

The composting facility will not be located over a closed-out disposal facility. This can be confirmed by viewing the Site Plan in Appendix A. The surrounding area consists of woods and vegetation. Existing ground surface elevations of the proposed composting area range from 310 to 330 feet, mean sea level (MSL). The property surrounding the composting area is owned by the Chambers Development of North Carolina, Inc. or Waste Connections of the Carolinas, Inc. and others. The applicable buffer requirements are met (see Site Development section 2.1 below) where the composting facility is surrounded by others.



## **2.0 FACILITY DESIGN**

### **2.1 SITE DEVELOPMENT**

The site is not currently located within an existing flood plain, nor shall the proposed design result in washout of solid waste such as to pose a hazard to human life, wildlife, land or water resources. The composting facility will be located, as required, a minimum of fifty (50) feet from any property boundary delineating parcels of land not owned by Chambers Development of North Carolina, Inc. or Waste Connections of the Carolinas, Inc. A two hundred (200) foot minimum buffer between compost areas and residences or dwellings not owned or occupied by the permittee will be maintained at all times. A fifty (50) foot buffer zone will be maintained between the composting area and perennial streams/rivers. A twenty-five (25) foot minimum buffer will be maintained between compost areas and swales or berms to allow for adequate access of firefighting equipment.

The composting facility shall be located in accordance with 15A NCAC 2B .0200, Classification and Water Quality Standards Applicable to Surface Waters in North Carolina. The site will not cause a discharge of materials or fill materials into waters of the State that would be in violation of Section(s) 404, and 402 of the Clean water Act, or in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES). The site will not cause non-point source pollution of waters of the state that violates assigned water quality standards.

The site shall not contravene groundwater standards as established under 15A NCAC 2L. The portion of the site designated for active composting will have a soil texture finer than loamy sand, and a depth to the seasonal high water table shall be maintained of at least twelve (12) inches, (Type 1 facility).



## **3.0 DESIGN REPORT**

### **3.1 DESIGN CAPACITY**

The design capacity of the facility is approximately 50,000 cubic yards per year.

### **3.2 MATERIAL PROCESSING**

This section provides general material processing information. Detailed operations are illustrated on the flow diagram on Page 13 of this report.

#### Compost (grass clippings and loose leaves)

Grass clippings generated by the Anson County or City of Polkton will be received for at a set tipping fee, unless other agreements are made. All material shall be transported through the scales for weighing verification. The material will then be transported to the drop-off area for unloading. The grass clippings and leaves will be segregated in compost windrows. Product mixing will include some soil and mulch fines to enhance nitrification. The compost produced will be available to the Anson County governmental agencies and residents as applicable.

#### Land-clearing debris (tree limbs, tree stumps, etc.)

Land-clearing debris will be transported in bulk loads and weighed at the scale house. Land-clearing debris generated on site will not be weighed. The material will then be transported to the drop-off area. The debris will be routed to temporary stockpiles in the reprocessing area. This debris material will also be stored in windrows or static piles for proper management. The material will be scheduled for grinding when windrow storage capacity reaches 6,000 cubic yards. A tub grinder will be utilized to produce mulch from the material. The mulch products will then be placed in the windrows for storage. The mulch produced will be used on-site to supplement erosion control measures. As with the compost produced, the mulch material will be offered to the residents of Anson County governmental agencies and residents as applicable.



### Soil from land-clearing debris

Topsoil from root balls of stumps will be removed prior to grinding and stockpiled separately. The fines from mulch screening will be mixed with the topsoil removed from the root balls, and power screened to refine the product type. The material will then be windrowed for storage. This material will be used to improve cover soils for hydro-seeding. Also, some of the topsoil products will be offered to the Anson County governmental agencies and residents as applicable.

### **3.3 TEMPERATURE MONITORING**

The compost is monitored on a monthly basis for temperature. For compost windrows that have been in storage for thirty (30) days or longer, the temperature is to be monitored on a weekly basis. The temperature probes will be placed in the compost to document and measure temperature generations. The recorded temperature will be used to ensure that the minimum temperature of 131° F for three (3) days is maintained for the compost. Should the recorded temperature fall below the 131° F temperature specified, pathogen testing will be performed to ensure pathogen levels are in the required range.

The procedure utilized for temperature recording is random testing of all stored compost in windrows at the frequencies mentioned above. Each composting windrow will be monitored with a compost thermometer, which has a 48-inch probe to ensure that all areas inside the windrow can be measured. Each probe measurement will be obtained at fifty (50) foot intervals utilizing the full length of the probe. Each probe will be monitored for a period of approximately five minutes, or until the temperature reading has stabilized. Each monitoring event will be recorded on a monitoring chart. The probe will be verified twice daily at the same location for temperature recordation. If necessary, additional windrow turning will be performed for the compost to bring the temperature up to the required 131° F for three days.

### **3.4 TEMPERATURE CONTROL**

Windrow turning is performed on the compost once to twice monthly. The compost is turned using a front-end loader or windrow turner. If temperatures for the compost windrows fall below the 131° F required for three days, additional windrow turning will be performed.



In addition to windrow turning, adding a mixture of grass clippings with the wood chips and leaves will increase biodegradation. If additional turning does not bring temperatures to the desired range, ammonium nitrate may be added to improve biodegradation.

### **3.5 SERVICE AREA**

The Anson County Municipal Solid Waste Landfill composting will continue to service Anson County and other counties as approved by franchise.

### **3.6 EQUIPMENT REQUIREMENTS**

The facility will be operated with equipment used by the facility owner to maintain and operate the existing municipal landfill.



#### **4.0 CONTAINMENT AND ENVIRONMENTAL CONTROL SYSTEM**

##### **4.1 GROUNDWATER CONSIDERATIONS**

A minimum of twelve (12) inches will be maintained to the seasonal high water table.

##### **4.2 CONTROLLING NUISANCES AND VECTORS**

Potential nuisances affecting the area surrounding the landfill's composting facility include odor, dust, fires, blowing litter, sedimentation, and vectors. Potential vectors include rodents, birds, and other scavengers.

A water truck will be used to control dust emissions on borrow areas and haul roads and. This equipment will be used on an as-needed basis.

Open burning is not permitted at the landfill. In the event of a fire in the debris, the burning materials will be covered with a soil cover if the fire is deemed manageable. If the fire is determined to be unmanageable for landfill personnel, the local fire department will be notified. Fences will be used to control blowing litter. Routine inspection and policing of the facility will be conducted to ensure that litter will not pose a nuisance or hazard.

Odors and vectors are not expected to be problematic.





## **5.0 ANSON COUNTY MUNICIPAL SOLID WASTE LANDFILL DEVELOPMENT, GENERAL OPERATION AND MAINTENANCE**

### **5.1 PLAN AND PERMIT REQUIREMENTS**

All construction documents and plans of the permit shall be followed. A copy of the plans, permits, and operational reports shall be maintained at the office at all times.

### **5.2 HOURS OF OPERATION**

The Anson County Municipal Solid Waste Landfill and its composting facility will typically maintain operating hours between 6:30 AM and 4:00 PM Monday through Friday. The facility will be closed on the following holidays:

New Year's Day	Labor Day Memorial Day	Thanksgiving Day
Independence Day	Christmas Day	Memorial Day

A sign or signs identifying the owner, operator, telephone number, NCDENR permit number, types of waste accepted and the landfill operating hours will be posted at the entrance to the landfill.

### **5.3 DROP-OFF AREA**

The drop-off area will be located adjacent to the scalehouse at the entrance to the landfill, which is shown on the Site Plan in Appendix A. Waste that does not meet the criteria for the acceptable materials shall be disposed of in an on-site waste container for future disposal at the permitted municipal solid waste landfill.

### **5.4 WINDROW PROCESSING**

The composting process itself takes an extended period. The windrows containing compost are to be turned once to twice monthly. The composting matter is to remain in the windrows for approximately three to six months for aging prior to use.



## **5.5 ADVERSE WEATHER CONDITIONS**

Processing, loading, and storage of mulch and compost are done regardless of the weather conditions.

The drop-off area and entrance have all-weather roadways. The roadways shall be kept clear during periods of snowfall. Tub grinding and screening may be stopped during periods of high winds, should dust become an issue. Dust shall be controlled on the roadways as described in Section 4.2.

## **5.6 FLOW DIAGRAM**

Please refer to the attached Flow Diagram on Page 13 of this report.

## **5.7 CONTINGENCY PLAN**

Should an instance of on-site equipment failure or temporary shutdown of the facility occur, all incoming loads of material shall be stockpiled at the drop-off area.

On-site, no open burning of material is permitted. Should accidental fires occur, equipment and stockpiled soil shall be provided to control them. Any occurrence of fire at the facility shall be reported to the NCDENR Division of Waste Management within 24 hours, and written notification shall be submitted by the Operations Manager within 15 days.

Should a fire occur at the facility, the local fire department (Polkton Fire Department) shall be notified. Loads that are hot shall be removed immediately and placed away from the facility and the fire department shall be notified. Said loads shall be sprayed down with water until the fire and/or combustion is extinguished. The load shall then be reloaded for disposal in the landfill. The Polkton Fire Department is aware of this proposed facility. Should a fire occur they have agreed to respond to the site.



## **6.0 FACILITY OPERATION**

### **6.1 TRAINING OF FACILITY PERSONNEL**

The proposed management team and site operations staff are properly trained to execute important tasks such as the following:

1. Monitoring of incoming wastes.
2. Identification of unauthorized wastes.
3. Accurate recording of accepted wastes.
4. Safe equipment operation.

The management team includes Mr. Travis Ricker, Assistant District Manager and Timothy J. Fadul, Division Vice President.

### **6.2 ENTRANCE**

The existing entrance and haul roads for the Anson County Municipal Solid Waste Landfill will be used to access the Anson County Municipal Solid Waste Landfill Composting Facility.

### **6.3 ACCESS AND SECURITY**

The site has controlled access with the use of entrance gates. The entrance gates allow entry to the currently operating landfill located to the west of the composting facility. The same entrance will be used for access to the composting facility, and will remain gated. Access to the composting facility is restricted to the entrance gate only. The currently operating landfill (with fencing and wooded buffer) prevents un-authorized access to the compost area. Access roads are all-weather construction and will be maintained in good condition.

A scalehouse is located at the entrance with an attendant present during operational hours. The attendant is responsible for evaluating loads to assure compliance with operation requirements and to direct the loads to the appropriate location on site—landfill or composting facility. In addition, signs are posted to direct loads to the appropriate area.



Dust is controlled on access roads through the use of a water truck. Signs are posted indicating that liquid, hazardous, and municipal wastes are prohibited.

#### **6.4 SIGNS**

Existing signs are provided at the site entrance and show the contact name, telephone number, permit number, and the landfill operating hours. Information on disposal procedures and wastes that cannot be accepted is also provided. Traffic signs will be provided as needed to direct customers and to promote orderly traffic flow to and from the disposal areas.

#### **6.5 WASTE ACCEPTANCE**

The Anson County Municipal Solid Waste Landfill Compost Facility will accept yard trash as defined in 30A-290(a)(45) (solid waste consisting solely of vegetative matter resulting from landscaping maintenance). All yard trash will be composted. The following waste will be accepted:

1. Grass clippings, loose leaves, etc.
2. Tree limbs, stumps, etc.
3. Soil from land clearing debris.

The Anson County Municipal Solid Waste Landfill Compost Facility cannot accept the following wastes. Further, the following wastes cannot be processed into the compost:

1. Hazardous waste nor asbestos containing waste.
2. Household hazardous waste.
3. Any compost made from solid waste.

The Operations Manager will notify the NCDENR Division of Waste Management within twenty-four (24) hours of an attempt to dispose of any of the forbidden waste products.



## **6.6 DUST, LITTER, ODORS, AND VECTORS**

Dust, litter, odors, and vectors are discussed in Section 4.2. Dust generated by composting operation will be controlled or reduced by:

1. Application of water by using a water truck.
2. Regular removal of mud and dirt from the paved roads.
3. Vegetating of final cover and borrow areas as soon as practical.

Blowing litter will be reduced or controlled by:

1. Limiting the size of the active working area.
2. Utilization of litter fences.
3. Policing of the area.

Odors and vectors are not expected to be problematic.

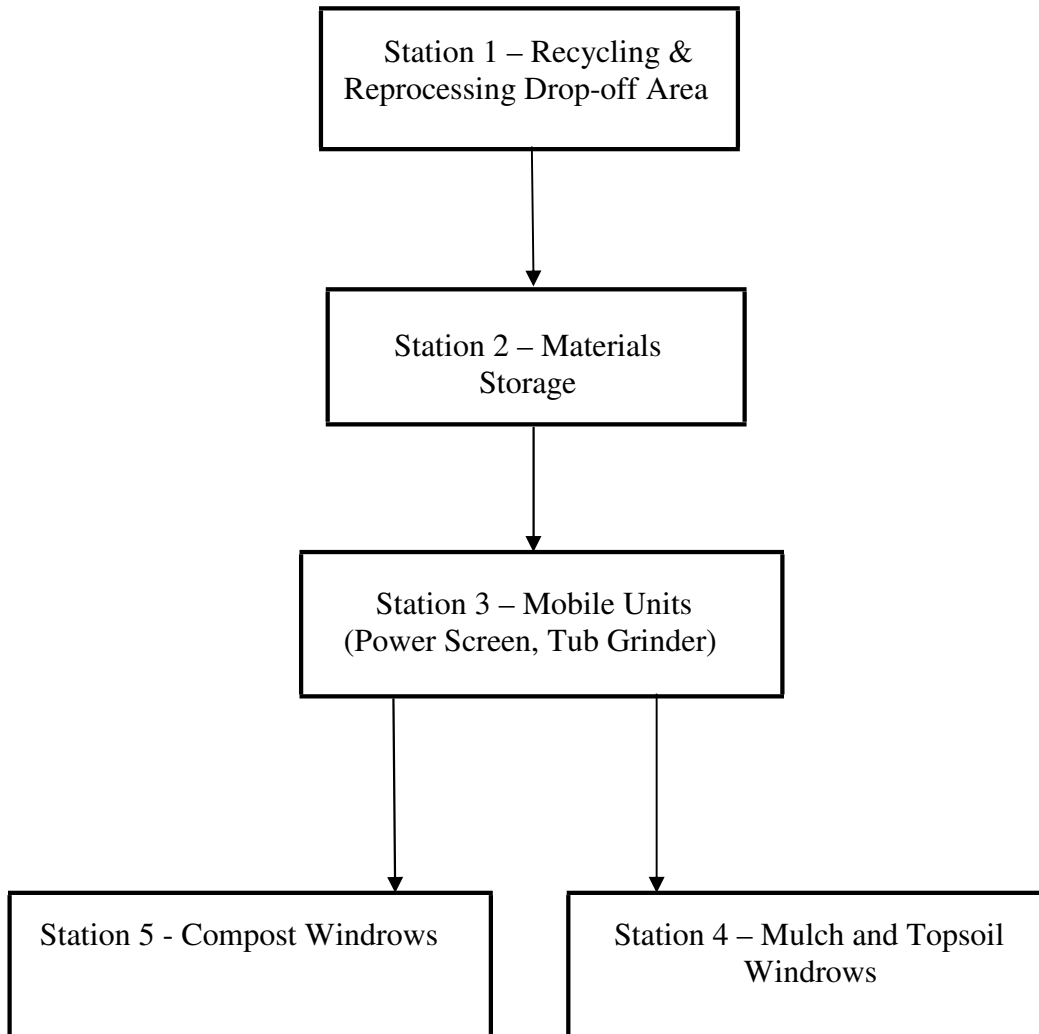
If environmental problems associated with the landfill are detected and confirmed by NCDENR, Waste Connections of the Carolinas, Inc. will submit to NCDENR for review and approval a corrective action plan and a schedule of compliance for implementing the plan.

## **6.7 LANDSCAPING MAINTENANCE**

Landscaping maintenance will include the existing entrance. Grass is mowed as needed and any distressed areas will be fertilized or replanted. Planted shrubbery and trees will be fertilized and mulched as needed.



### Flow Diagram





NORTH



NO	DATE	REVISION RECORD DESCRIPTION

**Civil & Environmental Consultants, Inc.**  
 2030 S. Tyron Street - Suite 9E - Charlotte, NC 28203  
 Ph: 980.224.8104  
 www.ceinc.com

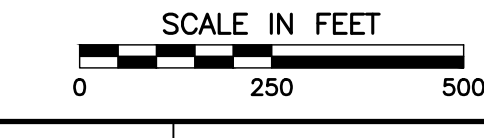
**WASTE CONNECTIONS, INC.**  
**OF NORTH CAROLINA**  
**ANSON COUNTY LANDFILL**  
**POLKTON, NC**

**SITE OPERATIONS PLAN**

DATE:	DEC. 2012	DRAWN BY:	TMG
DWG SCALE:	1"=250'	CHECKED BY:	SLB
PROJECT NO.:	122-381	APPROVED BY:	SLB

FIGURE NO. **1**  
 SHEET 1 OF 1

REFERENCE  
 AERIAL IMAGERY FROM GOOGLE, INC. 2010



A:12/21/12-891-CAD0122-381@polktonwasteplan LS:20/12/2012 - (ignition) - LP: 12/20/2012 4:19 PM