

OPERATIONS PLAN

**CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL AND LARGE
TYPE 1 SOLID WASTE COMPOST AND REPROCESSING FACILITY
NO. 92-30-CDLF**

Prepared For:

**GREENWAY WASTE SOLUTIONS OF APEX, LLC.
APEX, NC**

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ATTACHMENTS

Attachment 1 - Facility Operations Plan

Attachment 2 - Large Type 1 Composting Operations Plan

1.0 INTRODUCTION

This document is the Operations Plan for the Greenway Waste Solutions of Apex, LLC facility (Facility), located in Apex, Wake County, North Carolina. The Plan serves as a guide to the landfill operator with respect to routine landfill operations, environmental monitoring, and record-keeping. The Facility is permitted to operate as a construction and demolition (C&D) landfill in accordance with North Carolina Department of Environment and Natural Resources (NCDENR), Division of Waste Management Permit Number 92-30. The facility is also permitted as a Large Type 1 Solid waste Compost and Reprocessing Facility. The Facility is expected to have a maximum operational waste acceptance rate of 200,000 tons per year and is expected to be in operation for a minimum of 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 waste acceptance rates at the Facility.

1.1 PURPOSE

The Operations Plan is intended to serve as a site reference. 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 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
- Recycling operations
- Composting operations
- Equipment requirements
- Operation and maintenance of environmental controls
- Contingency and emergency procedures
- Safety practices and plan implementation

This Operations Plan has been prepared in accordance with North Carolina Administrative Code (NCAC) Title 15A Section 13B .0542. Furthermore, the plan is based on engineering judgment and reflects generally accepted solid waste landfilling techniques.

1.2 REFERENCE DOCUMENTS

This Operations Plan constitutes a portion of the Greenway Waste Solutions of Apex, LLC facility Permit to Construct Application prepared by BP Barber. 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 and post-closure care. Other documents pertinent to facility operations and site development include:

1. Report - Site Application - *Highway 55 C&D Landfill and Recycling Center* - prepared for Highway 55 C&D Landfill, LLC Construction & Demolition Landfill - Wake County, North Carolina; application dated 19 April 2002 and received 24 April 2002 from Enviro-Pro, P.C.
2. Response to Comment dated 19 March 2002 - Site Suitability Permit Application, response received 24 April 2002 and 8 May 2002 from Enviro-Pro for information dated 19 April 2002 and 7 May 2002.
3. Second Response to Comment letter dated 3 July 2002 - Site Suitability Permit Application - response dated 11 July 2002 "Revised Site Plan Application Report" from Enviro-Pro.
4. Certified minutes from Wake County dated 3 December 2001 and 19 November 2001 indicating the vote of the Wake County Commissioners in approving the franchise for Highway 55 C&D Landfill, LLC, received in the Revised Site Suitability application dated April 2002 received 24 April 2002.
5. Special Use Permit recorded in Deed Book: 9099 and Pages: 1039 thru 1044, as part of the Site Suitability application dated April 2002 received 24 April 2002.
6. Deed description for re-combination of properties consisting of Book: 9099 and Pages: 1039 - 1044 representing 116.333 acres and Book: 9488 and Pages: 0922 - 0923 representing 0.963 acres.
7. Reprocessing facility application dated December 17, 2002, signed by design engineer on December 18, 2002, received by the Solid Waste Section on December 19, 2002.
8. *Phase II Construction Plan Application, Phase I Closure Update, and Composting Permit*. Prepared for: Highway 55 C&D Landfill, LLC. Prepared by: BP Barber. August 2007. Revised June 26, 2008. As Amended February 5, 2009 and February 19, 2009. DIN 5054.

1.3 REGULATIONS

Solid Waste Management Rules 15A NCAC 13B .0500 and all conditions of the operating permit granted by the NCDENR Division of Waste Management, 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 Division of Waste Management. The Facility supervisory staff should be familiar with the State Solid Waste Management Rules and the Facility permit(s).

1.4 LOCATION

The Greenway Waste Solutions of Apex, LLC facility (Facility) is currently operating under Solid Waste Facility Permit Number 92-30. The Facility is located on Old Smithfield Road, in Apex, North Carolina. Currently, landfilling operations are on-going in Phase 1 and 2 of the Facility.

2.0 OPERATIONAL DRAWINGS

Appendix A of the Facility Plan prepared by BP Barber consists of drawings which illustrate the site development prepared on topographical maps representative of existing site conditions. These drawings are consistent with the requirements of Subparagraph (d)(1) of Rule .0537 of 15A NCAC 13B. Appendix A consists of drawings as they relate to long-term operations of the facility consistent with Subparagraph (d)(2) of Rule .0537 15A NCAC 13B. In addition to these drawings, the Facility Operations Plan (Figure 1) is attached to this Operations Plan that indicates processing storage areas for recyclables.

3.0 WASTE ACCEPTANCE AND DISPOSAL REQUIREMENTS

The Facility will accept only those solid wastes it is permitted to receive. The landfill owner or operator must notify the Division within 24 hours of attempted disposal of any waste the C&DLF is not permitted to receive, including waste from outside the area the landfill is permitted to serve.

3.1 ASBESTOS WASTE

Friable asbestos waste must be managed in accordance with 40 CFR 61, which is hereby incorporated by reference including any subsequent amendments and additions. Copies of 40 CFR 61 are available for inspection at the Department of Environment and Natural Resources, Division of Waste Management. The regulated asbestos waste must be covered immediately with soil in a manner that will not cause airborne conditions and must be disposed of separate and apart from other solid wastes, as shown on Operation drawings:

1. In a defined isolated area within the footprint of the landfill, or
2. In an area not contiguous with other disposal areas. Separate areas must be designated so that asbestos is not exposed by future land-disturbing activities.

Non-friable asbestos may be accepted consistent with normal operating procedures as set forth in a following section.

3.2 WASTE EXCLUSIONS

The Facility will accept all types of wastes generated within approved service area except those prohibited by 15A NCAC 13B .0542 (e). Specifically, the following types of wastes will not be accepted:

1. Containers such as tubes, drums, barrels, tanks, cans, and bottles unless they are empty and perforated to ensure that no liquid, hazardous or municipal solid waste is contained therein,
2. Garbage as defined in G.S. 130A-290(a)(7),
3. Hazardous waste as defined in G.S. 130A-290(a)(8), to also include hazardous waste from conditionally exempt small quantity generators,

4. Industrial solid waste unless a demonstration has been made and approved by the Division that the landfill meets the requirements of Rule .0503(2)(d)(ii)(A),
5. Liquid wastes,
6. Medical waste as defined in G.S. 130A-290(a)(18),
7. Municipal solid waste as defined in G.S. 130A-290(a)(18a),
8. Polychlorinated biphenyls (PCB) wastes as defined in 40 CFR 761,
9. Radioactive waste as defined in G.S. 104E-5(14),
10. Septage as defined in G.S. 130A-290(a)(32),
11. Sludge as defined in G.S. 130A-290(a)(34),
12. Special wastes as defined in G.S. 130A-290(a)(40),
13. White goods as defined in G.S. 130A-290(a)(44), and
14. The following wastes cannot be received if separate from C&DLF waste: lamps or bulbs including but not limited to halogen, incandescent, neon or fluorescent; lighting ballast or fixtures; thermostats and light switches; batteries including but not limited to those from exit and emergency lights and smoke detectors; lead pipes; lead roof flashing; transformers; capacitors; and copper chrome arsenate (CCA) and creosote treated woods.
15. Waste accepted for disposal in a C&DLF unit must be readily identifiable as C&D waste and must not have been shredded, pulverized, or processed to such an extent that the composition of the original waste cannot be readily ascertained except as specified in Subparagraph (17) of this Paragraph.
16. C&D waste that has been shredded, pulverized or otherwise processed may be accepted for disposal from a facility that has received a permit from an authorized regulatory authority which specifies such activities are inspected by the authority, and whose primary purpose is recycling and reuse of the C&D material. A waste screening plan and waste acceptance plan must be made available to the Division upon request.
17. The owner or operator of a C&DLF must not knowingly dispose any type or form of C&D waste that is generated within the boundaries of a unit of local government that by ordinance:
 1. Prohibits generators or collectors of C&D waste from disposing that type or form of C&D waste.
 2. Requires generators or collectors of C&D waste to recycle that type or form of C&D waste.

3.3 RECYCLING

Incoming C&D waste will be recycled as much as is practical. A C&D recycling area will be located near, but clearly segregated from the working face as indicated on the attached drawing. However, the area will move based on the location of the working face. Incoming waste with recyclables will be unloaded at the recycling area near the working face.

3.3.1 Metals

Metals pulled from the load will be placed in the on-site metal recycling container.

3.3.2 Inert Debris

Inert debris such as brick, concrete, concrete block, rock, etc. will be removed and transported to the reprocessing/material storage area for crushing see attached Site Plan. The inert debris will be stockpiled in a pile not to exceed 500 tons for periodic crushing.

3.3.3 Cardboard

Clean cardboard will be removed for baling.

3.3.4 Wood Waste

Clean wood and pallets will be removed and stockpiled for grinding. The stockpile of wood waste will not exceed 500 tons. The ground wood may be incorporated into Greenway Waste at Apex's composting operation as a bulking agent or sold as boiler fuel. Ground mulch, wood waste or compost may be stockpiled in the mulch storage area or in other material storage areas as depicted in Figure 1.

3.3.5 Shingles

Shingles will be accepted using best practices for acceptance and sorting to remove tear-off shingles from the waste stream as outlined by Carolina Asphalt Pavement Association.

3.3.5.1 Waste Acceptance

Materials from flat and built-up roofing systems are disposed rather accepted for recycling due to higher use of asbestos roofing materials in those systems. Roofers are instructed to separate tear-off shingles into either a dedicated trailer or to layer their waste when loading so that the shingles can be easily separated from unacceptable debris.

The shingle suppliers are required to complete a supplier certification form. The handling and disposal of asbestos during demolition and renovation is regulated under the National Emissions Standards for Hazardous Air Pollution (NESHAP). Suppliers of shingles from a NESHAP regulated facility must present documentation that the shingles do not contain greater than 1% asbestos. The documentation is a letter from an accredited asbestos inspector or roofing supervisor that sampled the shingles and analytical test results. A copy of the documentation is kept with the supplier certification form.

Shingles from single family homes or residential building containing four or fewer dwelling units are generally not regulated under NESHAP. Only the source of the shingles is required for these shingles.

3.3.5.2 Flow and Management of Shingles

Loads are visually inspected as they enter the facility. The roofer is asked to fill out a supplier certification form. Suppliers of shingles from a NESHAP regulated facility that contain greater than 1% asbestos are directed to the disposal area, others are directed to the stockpile area. Non-NESHAP regulated shingles are directed to the stockpile area.

The stockpile of shingles will not exceed 500 tons. The ground shingles will be transported off-site to a properly permitted third party end-user. Shingles will not be ground without acquiring all required Air Quality permits. A copy of the permit will be kept with the Operating Record.

3.3.5.3 Record Keeping

Records are kept of shingles entering the facility and stockpiled. These records are kept with the Operating Record for the facility.

3.3.5.4 Testing Requirements

Shingles will not be ground without acquiring all required Air Quality permits. Asbestos sampling is required prior to grinding shingles. The testing frequency and protocols are set by NCDENR-DAQ and NCDOT. The current frequency testing requirement is to sample each 100 tons of shingles (September 2011).

3.4 MOBILE HOME DECONSTRUCTION

The Mobile Home Deconstruction Area is strictly for the deconstruction of mobile homes in order to recycle materials from the mobile homes. The Facility plans to recycle as many varieties of materials as possible as end users are available. Initially, scrap metal recycling will be conducted. Once an end-user of another material (i.e. glass) is located, these other materials may be recycled. Any non-recyclable material will be disposed of appropriately by the Facility upon completion of the deconstruction process.

The information contained herein was prepared to provide landfill personnel with a clear understanding of how the facility would be operated. While deviations from the operations outlined here may be acceptable, they should be reviewed and approved by the Design Engineer and the Facility Solid Waste Manager.

3.4.1 CONTACT INFORMATION

All correspondence and questions concerning the operation of the Facility Mobile Home Deconstruction Area should be directed to the appropriate County and State personnel listed below. For fire or police emergencies dial 911.

North Carolina Department of Environment and Natural Resources:

North Carolina Department of Environment and Natural Resources
217 W Jones Street
Raleigh, North Carolina 27603

Phone: (919) 707-8200

Division of Waste Management (DWM) - Solid Waste Section:

Eastern Area Supervisor: Dennis Shackelford

Permitting Engineer: John Murray, PE
Waste Management Specialist: Shawn McKee

Town of Apex:

Environmental Programs Manager: Mike Deaton, PE

3.4.2 Mobile Home Deconstruction Process

Mobile homes will be deconstructed using the following processes.

3.4.2.1 Access

Mobile home owners seeking disposal will contact the Landfill and be placed on a waiting list. No more than TWO (2) mobile homes will be allowed on-site for deconstruction at one time. Once space is available for a mobile home, the scale operator at the landfill will contact the next owner on the waiting list. The owner will have a 48 hour window in which to contact the Landfill with information regarding the delivery date and hauler. If owner cannot arrange delivery within this initial 48 hour period, the owner may make alternate arrangements for delivery and must notify the Landfill a minimum of 48 hours prior to planned delivery. The delivered mobile home will not be weighed on the scales at time of delivery, but the owner will be charged based upon the size and dimensions of the mobile home.

If delivery is not made within 48 hours of the scheduled delivery date, the owners name will be placed on the waiting list and the owner will be notified. If an owner has more than one mobile home, they will be rotated with others on the waiting list.

3.4.2.2 Waste Disposal

All mobile homes must be free of garbage, household hazardous waste, and all other non-construction and demolition waste prior to acceptance by the landfill.

3.4.2.3 White Goods

White goods will be accepted with the mobile home. White Goods will be removed using a track-hoe and handled in accordance with all State and Federal regulations. Any White Goods

containing CFC's will be managed properly prior to removal of the White Goods, and deconstruction of the mobile home.

3.4.2.4 Asbestos

Since asbestos may be located in the building materials of mobile homes constructed prior to 1983, all mobile homes built before January 1, 1983 will be thoroughly sprayed with water (both interior and exterior) to minimize dust. Upon demolition of a mobile home constructed prior to 1983, the waste generated will be placed in the C&D landfill and covered with six inches of soil or approved alternate daily cover.

3.4.2.5 Deconstruction

Once accepted, the mobile home will be placed in the mobile home deconstruction area. Mobile home deconstruction will be dependent upon weather conditions and manpower availability and will ONLY take place in the deconstruction area. Prior to deconstruction, mobile homes constructed before 1983 will be thoroughly sprayed with water to minimize dust (as noted above). The home will then be deconstructed using a track-hoe. The track-hoe will tear the trailer apart and lay the pieces on the ground to be separated by landfill personnel. The personnel will separate the non-recyclable materials from the recyclable materials. Initially, scrap metal is planned for recycling. As other end-users for other materials are available, other materials may be separated for recycling. All material not planned for recycling will be placed in the C&D landfill before the end of the day in which the deconstruction takes place. Material from mobile homes constructed prior to 1983 will be covered prior to the end of the day. All recyclable materials will be stockpiled in the deconstruction area for future recycling. **NO OPEN FLAMES OR CUTTING WITH TORCHES WILL BE ALLOWED WITHIN 100 FEET OF THE C&D LANDFILL.**

3.4.2.6 Holding Time

All mobile homes must be deconstructed within 45 days from acceptance into the deconstruction area. Upon receipt at the landfill, the date shall be painted on the side or end of the mobile home, or on the frame, for identification purposes for Solid Waste Section personnel.

3.4.2.7 Record Keeping

The Facility shall maintain the following records related to the Mobile Home Deconstruction in an operating record at the landfill:

1. Mobile Home Acceptance records including dates and description;
2. Owner and hauler information for each mobile home;
3. Date of deconstruction for each mobile home and materials to be recycled;
4. Date and disposal information for all recycled materials tons include location and vendor of recipient of recycled materials; and
5. Date and certification of CFC's removed.

The operating record will be kept up to date by the Landfill Manager or his designee. It will be presented upon request to DWM for inspection. A copy of this Operations Manual will be kept at the landfill and will be available for use at all times.

3.5 EMERGENCY/DISASTER VEGETATIVE AND LAND CLEARING DEBRIS

The site has been identified as an Emergency/Disaster Debris Site for tornado, hurricane, or ice storm debris and grinding services that will be hauled from the Wake County Convenience sites. Storm debris will be ground for use as mulch, compost bulking agent, or industrial boiler fuel. To produce a wood chip that is suitable for mulch or fuel, *chip size and absence of contaminants are critical*. Debris will be separated prior to grinding, and only tree waste and untreated and unpainted lumber shall be included in the chipping. All activities will adhere to the following guidelines:

- The chipping/grinding and storage area is located outside of identifiable or known floodplain and flood prone areas.
- The storage areas for incoming debris and processed material will be at a minimum 50 feet from all surface waters of the state. "Waters of the state" includes but is not limited to small creeks, streams, watercourses, ditches that maintain seasonal groundwater levels, ponds, wetlands, etc.
- The Storage area for incoming debris and processed material will be at least 100 feet from the site property boundaries and on-site buildings/structures.
- Management of processed material will be in accordance with "GUIDELINES FOR REDUCING THE POTENTIAL FOR SPONTANEOUS COMBUSTION IN COMPOST/MULCH PILES".
- The storage areas for incoming debris will be located at least 100 feet from residential dwellings, commercial or public structures, potable water supply wells, and septic tanks with leach fields.
- All activities will avoid identified wetlands should be avoided.
- The site will adhere to the approved erosion control measures, set forth by the Town of Apex.
- Dust control measures will be implemented when necessary to prevent dust from moving off-site or causing visibility problems.
- The Site will have an attendant(s) during operating hours to minimize the acceptance of unapproved materials and to provide directions to haulers and private citizens bringing in debris.
- The operator will manage the temporary debris management site to minimize the risk of fire. Any occurrence of fire, excluding authorized controlled burning, will be reported within 24 hours to the Solid Waste Section Environmental Senior Specialist.
- The site will be secure after operating hours to prevent unauthorized access to the site.
- Grinding of clean wood waste such as pallets and segregated non-painted/non-treated dimensional lumber is allowed.

3.6 WASTE SCREENING

The landfill operator shall be responsible for screening wastes to ensure that hazardous or unacceptable wastes are not disposed in the landfill. Screening of wastes (load inspections) shall be accomplished as follows:

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 Facility and 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:

- Facility Entrance – Only authorized vehicles and material will be allowed beyond the scales. The scale 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.

3.7 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 previously. 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 random 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 minimum of one percent of the vehicles entering the facility.

The inspections also will 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 liquid 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 liquid waste, a regulated hazardous waste, a regulated medical waste, or a regulated toxic waste, site personnel will safely identify the nature of the unauthorized waste. Wastes within these categories are not to be handled by landfill staff. Upon assessment of the waste, qualified contractors will be contacted to provide direction for temporary handling, isolation, and security. Within 24 hours of discovery, the Facility will orally inform NCDENR Division of Waste Management (Division) of the incident and make every effort to contact a waste contractor for the proper packaging, removal, and disposal of the unauthorized waste. The Division will be informed in writing of the incident and steps taken to properly dispose of the unauthorized waste.

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.

3.8 COVER, SPREADING, AND COMPACTING

The working face will be restricted to the smallest area feasible and compacted as densely as feasible. Any area that exceeds one-half (1/2) acre or more on a weekly basis may be covered with six (6) inches of earthen material. Cover will be placed at more frequent intervals to control disease, vectors, fires, odors, blowing litter, and scavenging if necessary.

Areas where additional waste will not receive waste for three (3) months, but will receive additional waste in the future will be covered and stabilized with vegetative cover or other stabilizing material.

Appropriate methods including fencing and diking will be used to confine windblown solid waste. At the end of each day, windblown waste will be collected and disposed of in the landfill.

3.9 AIR CRITERIA AND FIRE CONTROL

No open burning of waste will be permitted on site. The Division will be notified verbally within 24 hours and in writing with 15 days of any fire and/or explosion at the facility.

If a fire occurs at the landfill, the Wake County Fire Department will be notified. Hot loads that are brought to the facility will be immediately dumped away from the landfill and the fire department notified. The hot load will be sprayed down with water until extinguished. The load is then to be reloaded for disposal in the landfill.

3.10 ACCESS AND SAFETY

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 expansion area. The same entrance will be used for access to the expansion area, and will remain gated. Access to the expansion area is restricted to the entrance gate only. Fencing and wooded buffer prevents access to the site from all other areas. 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, recycling/processing area, 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.

3.11 EROSION AND SEDIMENTATION CONTROL

The Erosion and Sedimentation Control Plan was developed to meet all requirements set forth by the Sedimentation Pollution Control Law (15A NCAC 4), and other requirements set forth by the North Carolina Department of Environment and Natural Resources (NCDENR). All erosion and sedimentation control measures were designed based on a 25-year, 24-hour storm event occurring in Wake County, North Carolina per the NCDENR Division of Waste Management-Solid Waste Program. Temporary measures to be used on the site are sediment basins and silt (sediment) fencing. These, along with permanent ditches and seeding make up all erosion control measures to be utilized on the site.

The sediment basins shall be inspected at minimum weekly, and after each significant rain event (1/2-inch or greater). Sediment shall be removed and the basin restored to original dimensions after sediment has accumulated to one-half (1/2) of design volume indicated by cleanout stripe on riser structure. Removed sediment shall be placed in an area that has sediment controls in place. Sediment basin spillways, baffles, embankments and outlet control structure shall be

inspected at the same time for erosion damage and piping (embankment only). All necessary repairs shall be made immediately to prevent basin failure.

Silt fencing shall be inspected at least once per week and after every rainfall event. Any tears, cracks or overall failure should be repaired and/or replaced immediately. Sediment deposits shall be removed as necessary to ensure proper functioning of fencing. Silt fencing shall remain until final site stabilization has occurred.

Permanent ditches should be seeded and matted immediately after their construction; they should be inspected after all rain events for any failure of the ditch or erosion control matting. All outlet protection measures used to protect from damage to channel vegetation shall be inspected for wash out. All necessary repairs/replacements should be made immediately, and rip rap should be added where necessary.

Embankment and landfill cover slopes shall be periodically inspected for erosion. The slopes shall be mowed no more than twice per year. The embankment slopes shall be re-fertilized in the second year unless vegetation growth is fully adequate. The damaged areas shall be re-seeded (permanent seeding for embankment slopes and temporary seeding for landfill cover slopes), fertilized and mulched immediately. Seeding, fertilizing and mulching shall be in accordance with the Erosion and Sedimentation control plan. Appendix A of the Facility Plan presents all erosion and sedimentation control measures on existing and proposed topography. The Engineering Report includes all relevant calculations and references for erosion and sedimentation control measures design.

3.12 OPERATING RECORD AND RECORDKEEPING

The owner and operator will record and retain at the facility the following information including dates and times:

- Records for random waste inspections, monitoring results, certifications of training, and training procedures.
- Amount of recycled material recovered from in-coming waste. (Weighed as exported from the site).
- Amount of waste received at the facility and county of generation.

- Cost estimates for closure and post-closure.
- Notation of date and time of placement of cover material.
- All audit records, compliance records, and inspection reports.

If records are located at another location, it must be approved by the Solid Waste Section. All information contained in the operating record will be furnished to the Division upon request or made available for inspection by the division. The operating record will also include a copy of all approved permits and Monitoring Plans.

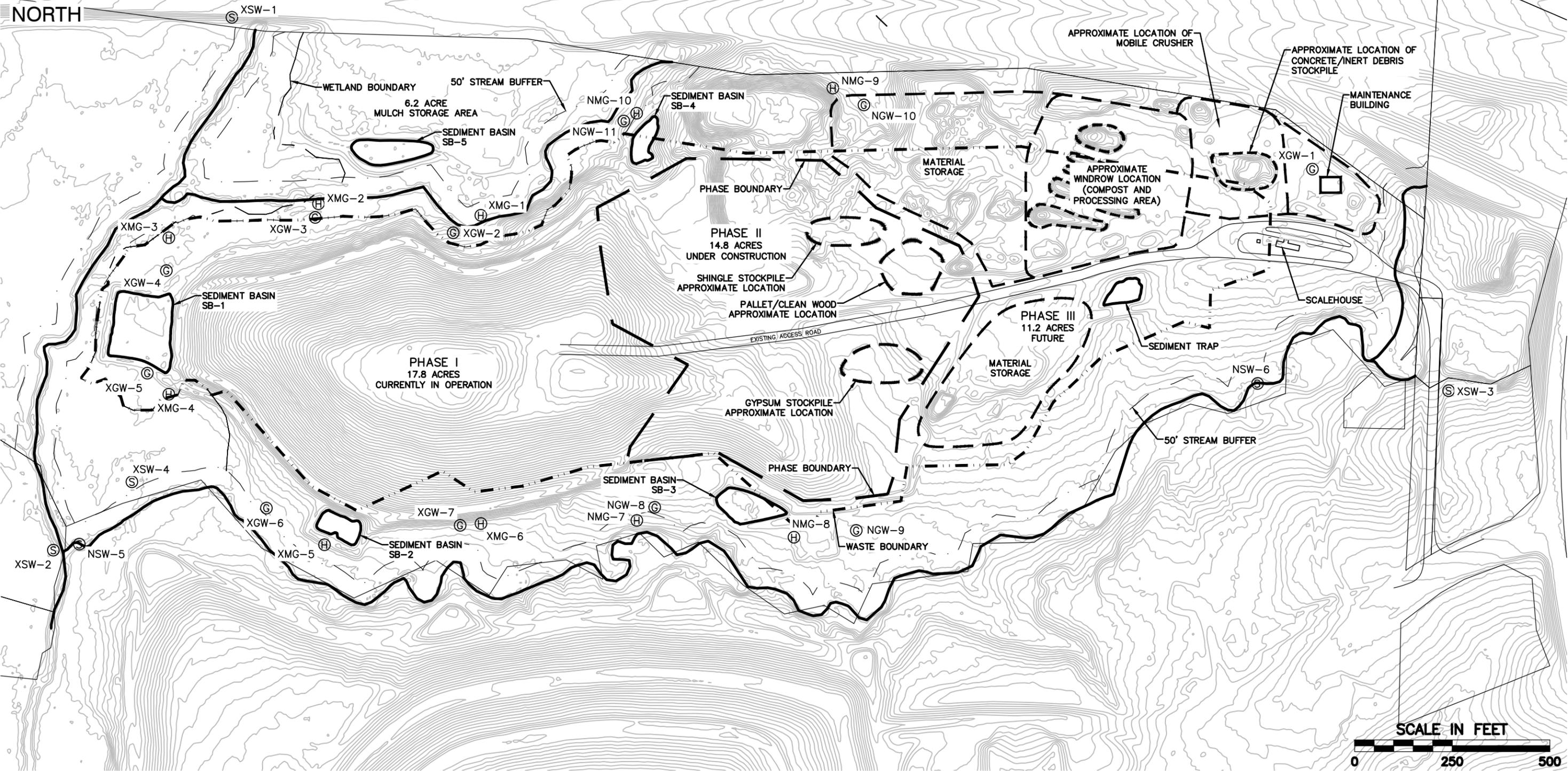
4.0 COMPOST FACILITY

Greenway Waste Solutions of Apex will perform composting activities on site. Please see Attachment 2 for the Type I Composting Design and Operations Plan.

ATTACHMENT 1



NORTH



REFERENCE

1. TOPOGRAPHIC INFORMATION BASED UPON 2013 GIS DATA OBTAINED FROM WAKE COUNTY AT THE FOLLOWING WEB ADDRESS:
<http://www.wakegov.com/gis/services/Pages/data.aspx>



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HIGHWAY 55 C&D LANDFILL
GREENWAY WASTE SOLUTIONS
OF APEX, LLC

FACILITY OPERATIONS PLAN

DRAWN BY:	MTB	CHECKED BY:	TMG	APPROVED BY:	SLB	FIGURE NO.:
DATE:	JUNE 2014	DWG SCALE:	1"=250'	PROJECT NO.:	111-370.003	1

P:\2011\111-370-CADD\003\Draw\Hwy55 Ops Plan.dwg{11X17} LS:(6/12/2014 - mbaron) - LP: 6/12/2014 9:47 AM

ATTACHMENT 2

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

**HIGHWAY 55 C&D LANDFILL
LARGE TYPE 1 SOLID WASTE COMPOST OPERATIONS PLAN**

Prepared For:

**GREENWAY WASTE SOLUTIONS OF APEX, LLC
19109 WEST CATAWBA AVENUE
SUITE 200
CORNELIUS, NC 28031**

Prepared By:

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

CEC PROJECT 111-370.003

JULY 2014



Civil & Environmental Consultants, Inc.

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1.0 GENERAL PROVISIONS

1.1 PROJECT DESCRIPTION

This Operations Plan for a Type 1 Composting Facility permit for the Highway 55 C&D Landfill is being submitted by Civil & Environmental Consultants, Inc. on behalf of Greenway Waste Solutions of Apex, LLC. This plan meets the composting facility design parameters, construction 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 package includes information regarding the site design, construction and operation.

Project Title: Highway 55 C&D Landfill Composting Facility

Owner: Highway 55 C&D Landfill, LLC
19109 West Catawba Avenue, Suite 200
Cornelius, NC 28031 (704) 895-0329

Owner's Representative: Mr. John Brown, Landfill Manager

Consulting Engineer: Civil & Environmental Consultants, Inc.
1900 Center Park Drive
Suite A
Charlotte, NC 28217

Consulting Engineer's Representative: Scott L. Brown, P.E.

Proposed Site Operator: Greenway Waste Solutions of Apex, LLC
19109 West Catawba Avenue, Suite 200
Cornelius, NC 28031 (704) 895-0329

Operator's Representative: Mr. John Brown, Landfill Manager

The Highway 55 C&D Landfill Composting Facility is located at 5940 Old Smithfield Road, in Apex, NC. The composting facility is located as shown on the Facility Operations Plan, Figure 1 included in the Landfill Operations Plan, and consists of land totaling approximately 2.0 acres. The property is owned by Highway 55 C&D Landfill, LLC and will be operated by Greenway Waste Solutions of Apex, LLC. Mr. John Brown, Landfill Manager (Telephone (919) 795-0599) is responsible for daily operations.

1.2 SITE REQUIREMENTS

The composting facility is not located over a closed-out disposal facility. This can be confirmed by viewing the Facility Operations Plan, Figure 1 in the Landfill Operations Plan. The surrounding area consists of woods and vegetation. Existing ground surface elevations of the proposed composting area range from 340 to 354 feet, mean sea level (MSL). The property surrounding the composting area is owned by Highway 55 C&D Landfill, LLC. 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 does the design result in washout of solid waste such as to pose a hazard to human life, wildlife, land or water resources. The composting facility is to be located, as required, a minimum of fifty (50) feet from any property boundary delineating parcels of land not owned by Highway 55 C&D Landfill, LLC or Greenway Waste Solutions of Apex, LLC. 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 is 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 20,000 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 will be received 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 compost 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 local 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 compost area. Marketable timber may be temporary stockpiled in the mulch storage area or other material storage areas as depicted in the Facility Operations Plan, Figure 1 of the Landfill Operations Plan. 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 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. Excess mulch may be stored in the mulch storage area or other material storage areas as depicted in the Facility Operations Plan, Figure 1 of the Landfill Operations Plan.

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 placed in windrows for storage. This material will be used to improve cover soils for hydro-seeding. The material may be stored outside of the composting operation in material storage areas as depicted in the facility Operations Plan, Figure 1 of the Landfill Operations Plan.

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 Highway 55 C&D Landfill composting site will continue to service Wake 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 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 Highway 55 C&D Landfill and its composting facility will typically maintain operating hours between 7:00 AM and 5:00 PM Monday through Friday and 7:00 AM until 12:00 PM on Saturdays. The facility may be closed on the following holidays:

New Year's Day	Labor 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 Facility Operations Plan, Figure 1 in the Landfill Operations Plan. 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. Finished compost may be stockpiled in the mulch storage area or in other material storage areas as depicted in the Facility Operations Plan, Figure 1 in the Landfill Operations Plan.

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 Landfill Manager within 15 days.

Should a fire occur at the facility, the local fire department (Wake County 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.

6.0 FACILITY OPERATION

6.1 TRAINING OF FACILITY PERSONNEL

The proposed management team and site operations staff is 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. John Brown, the Landfill Manager and Steve Narron, the Assistant Landfill Manager.

6.2 ENTRANCE

The existing entrance and haul roads for the Highway 55 C&D Landfill will be used to access the Highway 55 C&D 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 Highway 55 C&D 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 Highway 55 C&D Landfill Compost Facility cannot accept or process in to compost, the following wastes:

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

The Landfill 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, Greenway Waste Solutions of Apex, LLC 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

