

Scanned By	Date	DOC ID	Permit
Backus	6/25/2012	16808	5901-CDLF-1995



June 18, 2012

Ms. Patricia Backus, P.E.  
Environmental Engineer  
NC DENR - Division of Waste Management  
1646 Mail Service Center  
Raleigh, NC 27699-1646

**RE: Martin County C&D Landfill (Permit No. 59-01)  
Response to Technical Review Comments**

Dear Ms. Backus:

On behalf of Martin County, Richardson Smith Gardner & Associates, Inc. (RSG) would like to respond to the comments in your letter dated May 21, 2012 (attached). Each comment is repeated below in *italics* followed by our response in **bold**.

- 1. Section 1.7.1, Open Burning – 15A NCAC 13B .0542((i)(2) requires that there also be approval from the Section prior to open burning. The permittee must also document the date of approval and the name of the person that approved in the facility's operating record. Please read the rule and modify accordingly.*

**Section 1.7.1 has been revised to reflect that DWM approval is also required. Approval for open burning has also been added to the list of records in Section 1.13. Please refer to the attached revised Operations Manual.**

- 2. Section 1.7.6, Notification – I would suggest that you include and reference the Solid Waste Management Facility Fire Occurrence Notification found on our portal site, <http://portal.ncdenr.org/web/wm/sw/forms>. It is in the appropriate format and can be completed online, printed, and mailed.*

**Section 1.7.6 has been revised to reflect use of the DWM's form. A copy of the form has been included as Appendix B.**

- 3. Below are items that I found with either an incorrect definition rule/stature reference or incorrect reference to a section of the operations plan.*
  - a. Section 2.2.1 – The correct reference for Land Clearing and Inert Debris Landfill is 15A NCAC 13B .0101(22).*
  - b. Section 2.2.1 – The correct reference for Land Clearing Waste is 15A NCAC 13B .0101(23).*
  - c. Section 2.2.1 – The correct reference for the description of the special waste management of asbestos is Section 2.5.3.*

*Please check the document to ensure other references are correct.*

**The above references have been corrected.**

4. *Please be more specific about what is meant by “clean wood waste” which is used Section 2.2.2 and Section 2.3.2 and “acceptable wood and yard wastes” in Section 2.6. A document that may help is the Land Clearing Debris Treatment and Processing Notification Guidance found at <http://portal.ncdemr.org/web/wm/sw/landpnotifications>. The first section states what can be ground or chipped into mulch and/or boiler fuel.*

**Section 2.2.2 has been revised to reflect the language in the referenced information.**

5. *Section 2.3.2 – Clean wood is not defined in Section 2.2.3. It is a statement of what clean wood wastes includes. It does not indicate what isn't included. Since there isn't a regulatory definition, I would prefer something more specific as noted in comment 4.*

**Section 2.3.2 has been revised to reference Section 2.2.2.**

6. Section 2.6 states that the mulch is “primarily” hauled offsite for use as boiler fuel. I’m assuming this means most of the time rather than all of the time. When specifying what will be accepted for wood waste processing, please consider that engineered wood product may be used for boiler fuel but not for mulch.

**Section 2.6 has been revised to note that mulch from engineered wood products will be used for boiler fuel or will be disposed of in the C&D landfill and that other mulch may also be used on-site for erosion control, at other County facilities, or provided to the public.**

7. Section 2.4.1 Waste Receiving and Inspection states that vehicles will be selected for screening a minimum of three times per quarter. While the rules do not define random sampling, the compliance staff says the normal inspection rate is 1% of the loads or a minimum of one per week.

**Section 2.4.1 has been revised to stipulate that inspections will occur at a minimum of once per week or 1% by weight of the waste stream.**

Please contact me at your earliest convenience with any questions or comments on this submittal or if you require any additional information at this time.

Sincerely,  
Richardson Smith Gardner & Associates, Inc.



Pieter K. Scheer, P.E.  
Principal, Senior Engineer  
[pieter@rsgengineers.com](mailto:pieter@rsgengineers.com)



Attachments: DWM Comment Letter  
Revised Operations Manual

cc: David Bone, Martin County  
Maurice Robinson, Martin County



North Carolina Department of Environment and Natural Resources  
Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

May 21, 2012

Mr. Pieter Scheer, P.E.  
Principal, Project Manager  
Richardson Smith Gardner & Associates  
14 N. Boylan Avenue  
Raleigh, NC 27603

Re: Application Amendment Application Review  
Martin County Construction and Demolition Landfill  
Permit No. 59-01, Martin County, Document ID No. 16657

Dear Mr. Scheer:

The Division of Waste Management, Solid Waste Section (Section) has reviewed the permit application you submitted on behalf of Martin County for the Martin County Construction and Demolition Landfill (Permit No. 59-01) in January (DIN 15892). The following are comments and questions about the application. Please make changes to the application as appropriate.

1. Section 1.7.1, Open Burning – 15A NCAC 13B .0542((i)(2) requires that there also be approval from the Section prior to open burning. The permittee must also document the date of approval and the name of the person that approved in the facility's operating record. Please read the rule and modify accordingly.
2. Section 1.7.6, Notification – I would suggest that you include and reference the Solid Waste Management Facility Fire Occurrence Notification found on our portal site, <http://portal.ncdenr.org/web/wm/sw/forms>. It is in the appropriate format and can be completed online, printed, and mailed.
3. Below are item that I found with either an incorrect definition rule/stature reference or incorrect reference to a section of the operations plan.
  - a. Section 2.2.1 – The correct reference for Land Clearing and Inert Debris Landfill is 15A NCAC 13B .0101(22).
  - b. Section 2.2.1 – The correct reference for Land Clearing Waste is 15A NCAC 13B .0101(23).
  - c. Section 2.2.1 – The correct reference for the description of the special waste management of asbestos is Section 2.5.3.

Please check the document to ensure other references are correct.

4. Please be more specific about what is meant by “clean wood waste” which is used Section 2.2.2 and Section 2.3.2 and “acceptable wood and yard wastes” in Section 2.6. A document that may help is the Land Clearing Debris Treatment and Processing Notification Guidance found at <http://portal.ncdenr.org/web/wm/sw/tandpnotifications>. The first section states what can be ground or chipped into mulch and/or boiler fuel.
5. Section 2.3.2 – Clean wood is not defined in Section 2.2.3. It is a statement of what clean wood wastes includes. It does not indicate what isn’t included. Since there isn’t a regulatory definition, I would prefer something more specific as noted in comment 4.
6. Section 2.6 states that the mulch is “primarily” hauled offsite for use as boiler fuel. I’m assuming this means most of the time rather than all of the time. When specifying what will be accepted for wood waste processing, please consider that engineered wood product may be used for boiler fuel but not for mulch.
7. Section 2.4.1 Waste Receiving and Inspection states that vehicles will be selected for screening a minimum of three times per quarter. While the rules do not define random sampling, the compliance staff says the normal inspection rate is 1% of the loads or a minimum of one per week.

After you have addresses these, please send a complete paper copy of the application along with the electronic copy.

If you have any questions regarding this matter, please contact me at (919) 707-8257 or by email at [pat.backus@ncdenr.gov](mailto:pat.backus@ncdenr.gov).

Sincerely,



Patricia Backus, P.E.  
Environmental Engineer  
Solid Waste Section

cc: Maurice Robinson, Martin County C&DLF Manager  
David Bone, Martin County Manager  
Joan Smyth, RSG  
Ed Mussler, P.E., Permitting Branch Head  
Dennis Shackelford, Eastern District Supervisor  
Ben Barnes, Environmental Senior Specialist

# **Operations Manual**

## **Martin County Landfill Facility Williamston, North Carolina**

Prepared for:

**Martin County Solid Waste Management Department  
Williamston, North Carolina**

**January 2012**

**Revised: June 2012**



14 N. BOYLAN AVENUE  
RALEIGH, NORTH CAROLINA 27603  
NC LIC. NO. C-0828 (ENGINEERING)

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# MARTIN COUNTY LANDFILL FACILITY

## OPERATIONS MANUAL

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**FIGURES**

Figure 1	Existing and Proposed Landfill Units and Solid Waste Management Activities
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**APPENDICES**

Appendix A Waste Screening Form

Appendix B Fire Occurrence Notification Form

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## **SECTION 1.0 GENERAL FACILITY OPERATIONS**

### **1.1 OVERVIEW**

This Operations Manual was prepared for operations of the Martin County Landfill facility (Permit No. 59-01) located in Williamston. This document discusses the operation of the following landfill units and other solid waste management activities:

- C&D Landfill;
- Wood Waste Processing Area;
- White Goods Handling Area;
- Used Tire Storage Area; and
- Used Pesticide Container Storage Building.

Refer to **Figure 1** for the location of existing and proposed landfill units and other solid waste management activities.

The information contained herein was prepared to provide landfill personnel with a clear understanding of how the Design Engineer assumed that the completed facility would be operated. While deviations from the operations outlined here may be acceptable, they should be reviewed and approved by the Design Engineer. Please refer to the appropriate permit application for a detailed discussion and calculations for the individual components of each landfill unit, including phasing plans.

### **1.2 CONTACT INFORMATION**

All correspondence and questions concerning the operation of the Martin County Landfill should be directed to the appropriate County and State personnel listed below. For fire or police emergencies dial 911.

#### **1.2.1 Martin County**

Martin County Solid Waste Management Department  
1445 Landfill Road  
Williamston, NC 27892  
Phone: (252) 792-1240

Contact: Maurice Robinson, Director

### **1.2.2 North Carolina Department of Environment and Natural Resources**

North Carolina DENR - Fayetteville Regional Office (FRO)  
225 Green Street, Suite 714  
Fayetteville, NC 28301  
Phone: (910) 486-1541  
Fax: (910) 486-0707

North Carolina DENR - Raleigh Central Office (RCO)  
1646 Mail Service Center  
Raleigh, NC 27699-1646  
217 West Jones Street  
Raleigh, NC 27603  
Phone: (919) 707-8200

North Carolina DENR - Washington Regional Office (WRO)  
943 Washington Square Mall  
Washington, NC 27889  
Phone: (252) 946-6481  
Fax: (252) 975-3716

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

Field Operations Branch Head:	Mark Poindexter (RCO)
Eastern District Supervisor:	Dennis Shackelford (FRO)
Waste Management Specialist:	Ben Barnes ((252) 459-4502)

#### **Division of Land Resources - Land Quality Section:**

Regional Engineer:	Pat McClain, P.E. (WRO)
--------------------	-------------------------

### **1.3 FACILITY OPERATING HOURS**

Normal hours of operation will be 8:00 A.M. to 4:30 P.M. Monday to Friday and 8:00 A.M. to 12:00 noon on Saturday. The facility will be closed on Sunday.

The County may elect to modify these hours from time to time.

### **1.4 ACCESS CONTROL**

Limiting access to the landfill facility is important for the following reasons:

- Unauthorized and illegal dumping of waste materials is prevented.
- Trespassing, and injury resulting therefrom, is discouraged.
- The risk of vandalism is greatly reduced.

Access to active areas of the landfill will be controlled by a combination of fences and natural barriers, and strictly enforced operating hours. A landfill attendant will be on duty at all times when the facility is open for public use to enforce access restrictions (see also **Section 1.3**).

#### **1.4.1 Physical Restraints**

The site will be accessed by the existing entrance on Landfill Road. A scale and a scale house are provided at the entrance. All waste will have been weighed prior to being placed in the landfill. The entrance has a gate which will be securely locked during non-operating hours.

#### **1.4.2 Security**

Frequent inspections of gates and fences will be performed by landfill personnel. The County will arrange for a random security patrol of the main gate to further discourage trespassing. Evidence of trespassing, vandalism, or illegal operation will be reported to the County Solid Waste Director.

### **1.5 SIGNAGE**

A prominent sign(s) containing the information required by the DWM will be placed at the landfill entrance. This sign(s) will provide information on operating hours, operating procedures, and acceptable wastes. Additional signage will be provided as necessary within the landfill complex to distinctly distinguish the roadway to the active landfill unit(s). Service and maintenance roads for use by operations personnel will be clearly marked and barriers (e.g., traffic cones, barrels, etc.) will be provided as required.

### **1.6 COMMUNICATIONS**

Two way radio communication will be maintained between the active landfill unit and the landfill scale house and office. The scale house and office have telephones in case of emergency and for the conduct of day-to-day business. Emergency telephone numbers are displayed in the scale house and office.

### **1.7 FIRE CONTROL**

The possibility of fire within the landfill or a piece of equipment must be anticipated in the daily operation of the landfill. Potential fire hazards include both surface conditions and subsurface conditions. Surface conditions include equipment operations and newly placed waste. Subsurface conditions include existing waste previously landfilled.

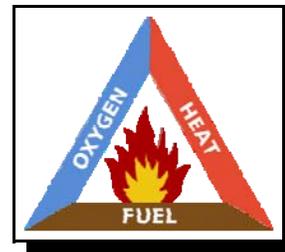
#### **1.7.1 Open Burning**

With the exception of the controlled burning of land clearing debris generated on-site or from emergency clean-up operations, no opening burning is allowed at the facility. Controlled burning will occur only if permitted or approval by the DWM and the local

Fire Marshal. Approvals for controlled burning will be documented in the operating record.

### **1.7.2 Fire Triangle**

The “triangle” illustrates the rule that in order to ignite and burn, a fire requires three (3) elements: heat, fuel, and oxygen. A fire is prevented or extinguished by “removing” any one of them. A fire naturally occurs when the elements are combined in the right mixture (e.g., more heat needed for igniting some fuels, unless there is concentrated oxygen). These principles are integral in the prevention and management of potential fire situations.



### **1.7.3 Equipment**

A combination of factory installed fire suppression systems and/or portable fire extinguishers will be operational on all pieces of heavy equipment at all times. Potential fire hazards are created from the build-up of fine, dry dust particles on and around operational motors and control panels. The presence of these build-ups can cause overheating and potential fire if periodic equipment cleaning and maintenance are not practiced. Portable fire extinguishers should be maintained in a state of readiness on each piece of moving equipment and equipment should be cleaned periodically.

### **1.7.4 General Fire Management Strategies**

Each fire situation is site specific; however, general strategies for active fire management include the following (in no particular order):

- Accelerated high temperature combustion (displacing fuel);
- Covering of the landfill burn area with soil (reduce oxygen);
- Covering of the burn area with foams (reduce oxygen);
- Flooding the burn area with water (reduce heat);
- Injecting an inert gas such as CO<sub>2</sub> (reduce oxygen); and
- Excavating the burning material (displacing fuel) and then extinguishing it in small controlled areas.

### **1.7.5 Fires Within Disposal Areas**

Fires within the landfill disposal areas will be limited by the use of daily/periodic cover as a fire break and control of "hot" loads entering the landfill. Landfill personnel at the scale house will turn away all trucks containing waste that is suspected to be hot. If a hot load is placed on the working face, then the load will be spread as thin as possible and daily cover soil will be immediately placed on the waste to extinguish the fire.

In general, fires that break out close to the surface of the disposal area should be

excavated and smothered with cover material. Deep fires should be smothered out by placing moist soil on the surface and by constructing soil barriers around the fire. Where the smothering technique fails, the burning material must be excavated and smothered or quenched with water once the burning material is brought to the surface. Water is usually not effective unless it can be directly applied to the burning material.

#### **1.7.6 Notification**

The County will verbally notify the DWM (see **Section 1.2.2**) within 24 hours of discovery of a fire within any landfill disposal area. In addition, written documentation describing the fire, the actions carried out to extinguish the fire, and a strategy for preventing future occurrences (see form provided in **Appendix B**) will be provided to the DWM within 15 days following any such occurrence.

#### **1.7.7 Coordination With Local Fire Department**

A copy of this Operations Manual will be filed with the local fire department including all contact information for the facility.

### **1.8 SEVERE WEATHER CONDITIONS**

Unusual weather conditions can directly affect the operation of the landfill facility. Some of these weather conditions and recommended operational responses are as follows.

#### **1.8.1 Ice Storms**

An ice storm can make access to the landfill dangerous, prevent movement or placement of daily cover, and, thus, may require closure of the landfill until the ice is removed or has melted.

#### **1.8.2 Heavy Rains**

Exposed soil surfaces can create a muddy situation in some portions of the landfill during rainy periods. The control of drainage and use of crushed stone on unpaved roads should provide all-weather access for the site and promote drainage away from critical areas. In areas where the aggregate surface is washed away or otherwise damaged, new aggregate should be used for repair.

Intense rains can affect newly constructed drainage structures such as swales, diversions, cover soils, and vegetation. After such a rain event, inspection by landfill personnel will be initiated and corrective measures taken to repair any damage found before the next rainfall.

#### **1.8.3 Electrical Storms**

The open area of a landfill is susceptible to the hazards of an electrical storm. If

necessary, landfilling activities will be temporarily suspended during such an event. Refuge will be taken as necessary in the on-site buildings or in rubber-tired vehicles.

#### **1.8.4 Windy Conditions**

Landfill operations during a particularly windy period may require that the working face be temporarily shifted to a more sheltered area. When this is done, the previously exposed face will be immediately covered with daily cover.

#### **1.8.5 Violent Storms**

In the event of hurricane, tornado, or severe winter storm warning issued by the National Weather Service, landfill operations may be temporarily suspended until the warning is lifted. Daily cover will be placed on exposed waste and buildings and equipment will be properly secured.

### **1.9 EQUIPMENT REQUIREMENTS**

The County will maintain on-site equipment required to perform the necessary landfill activities. Periodic maintenance of all landfilling equipment, and minor and major repair work will be performed at designated maintenance zones outside of the landfill.

### **1.10 PERSONNEL REQUIREMENTS**

At least one member of the landfill supervisory staff will be certified as a Manager of Landfill Operations (MOLO) by the Solid Waste Association of North America (SWANA). Each landfill employee will go through an annual training course (led by supervisory staff) and is certified by SWANA as Landfill Operations personnel. As part of this training, personnel learn to recognize loads which may contain prohibited wastes.

### **1.11 HEALTH AND SAFETY**

All aspects of the landfill facility operations were developed with the health and safety of the operating staff, customers, and neighbors in mind. Prior to commencement of operations of the facility, a member of the operating staff will be designated site safety officer. This individual, together with the facility's management will modify the site safety and emergency response program to remain consistent with SWANA and Occupational Safety and Health Administration (OSHA) guidance.

Safety equipment provided includes equipment rollover protective cabs, seat belts, audible reverse warning devices, hard hats, safety shoes, and first aid kits. Facility personnel will be encouraged to complete the American Red Cross Basic First Aid Course. Other safety requirements as designated by the County will also be implemented.

Facility employees will be routinely trained in health and safety by supervisory staff. All training will be documented. The following are some general recommendations for the health

and safety of workers:

### **1.11.1 Personal Hygiene**

The following items are recommended as a minimum of practice:

- Wash hands before eating, drinking, or smoking.
- Wear personal protective equipment as described in **Section 1.11.2**.
- Wash, disinfect, and bandage ANY cut, no matter how small it is. Any break in the skin can become a source of infection.
- Keep fingernails closely trimmed and clean (dirty nails can harbor pathogens).

### **1.11.2 Personal Protective Equipment**

Personal Protective Equipment (PPE) must be evaluated as to the level of protection necessary for particular operating conditions and then made available to facility employees. The list below includes the PPE typically used and/or required in a solid waste management facility workplace.

- Safety shoes with steel toes.
- Noise reduction protection should be used in areas where extended exposure to continuous high decibel levels are expected.
- Disposable rubber latex or chemical resistant gloves for handling and/or sampling of waste materials.
- Dust filter masks.

Following use, PPE's should be disposed of or adequately cleaned, dried, or readied for reuse.

### **1.11.3 Mechanical Equipment Hazard Prevention**

All equipment should be operated with care and caution. All safety equipment such as horns, backup alarms, and lights should be functional. A Lockout-Tagout program will be used to identify equipment in need or under repair and insure that operation is "off-limits" prior to maintenance or repair. All operators will be trained in the proper operation of equipment.

### **1.11.4 Employee Health and Safety**

Some general safety rules are:

- Consider safety first when planning and conducting activities.
- Review the equipment O&M manual(s) prior to attempting repairs/changes.
- Remember the buddy system for repair of mechanical equipment.
- Post emergency contact phone numbers.
- Provide easy and visible access to the Right to Know materials.

- Provide easy and visible access to first aid kits and fire extinguishers.

### **1.11.5 Physical Exposure**

Facility personnel may come in contact with the fluids, solids, and airborne constituents found at the facility. Routine training should be conducted regarding the individual and collective materials used at the facility and their associated hazards. Training concerning safe work practices around these potential exposures should cover the use of equipment and proper disposal procedures.

### **1.11.6 Material Safety Data Sheets**

Material Safety Data Sheets (MSDS) will be collected on every waste (if available) that enters the facility. Information will also be made available for all chemicals stored on site for use at the facility. MSDS sheets will be stored in a location with all other Right to Know information for the site.

## **1.12 UTILITIES**

Electrical power, water, telephone, and restrooms will be provided at the landfill scale house and office.

## **1.13 RECORD KEEPING PROGRAM**

The County will maintain the following records in an operating record at the landfill:

- A. Current permit(s) (Permit to Construct, Permit to Operate, etc.);
- B. Current operations manual/plan and engineering plan for each landfill unit;
- C. Inspection reports;
- D. Audit and compliance records;
- E. Annual landfill reports;
- F. Waste inspection records (see **Section 2.4**);
- G. Daily tonnage records - including source of generation;
- H. Waste determination records;
- I. Quantity, location of disposal, generator, and special handling procedures for all special wastes disposed of at the site;
- J. List of generators and haulers that have attempted to dispose of restricted wastes;
- K. Employee training procedures and records of training completed;
- L. All ground water monitoring and surface water quality information (See the current **Water Quality Monitoring Plan**) including:
  1. Monitoring well construction records;
  2. Sampling dates and results;
  3. Statistical analyses; and
  4. Results of inspections, repairs, etc.
- M. LFG monitoring results and remedial measures as required (see the current **LFG Monitoring Plan**);

- N. All closure and post-closure information, where applicable, including:
  - 1. Notification of intent to close;
  - 2. Testing;
  - 3. Certification; and
  - 4. Recording.
- O. Cost estimates or financial assurance documentation;
- P. A notation of the date and time of cover placement; and
- Q. Approval(s) for open burning of land clearing debris.

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

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## SECTION 2.0 WASTE HANDLING OPERATIONS

### 2.1 OVERVIEW

This section describes the required waste handling operations for the Martin County Landfill facility. In addition to the C&D waste disposed of at this facility, the County also handles white goods, used tires, and used pesticide containers. These materials are stored at the landfill facility until there are sufficient quantities for pick up by various recycling contractors. The County also operates a wood waste processing area.

### 2.2 ACCEPTABLE WASTES

#### 2.2.1 C&D Landfill Unit

Only the following wastes generated within the approved service area may be disposed of in the C&D landfill unit:

- Land Clearing and Inert Debris Landfill: as defined in 15A NCAC 13B.0101(22) means a facility for the disposal of land-clearing waste, concrete, brick, concrete block, uncontaminated soil, gravel and rock, untreated and unpainted wood, and yard trash.
- Land Clearing Waste: as defined in 15A NCAC 13B.0101(23) means solid waste which is generated solely from land-clearing activities, limited to stumps, trees, limbs, brush, grass, and other naturally occurring vegetative material.
- Asphalt: in accordance with NCGS 130A-294(m).
- Construction and Demolition Debris: as defined in NCGS 130A-290(a)(4) means solid waste resulting solely from construction, remodeling, repair, or demolition operations on pavement, buildings, or other structures, but does not include inert debris, land-clearing debris, or yard debris.
- Industrial solid waste that is generated by mobile or modular home manufacturers and asphalt shingle manufacturers in Martin County. The waste must be separated at the manufacturing site to exclude municipal solid waste, hazardous waste, and other waste prohibited from disposal in a Construction and Demolition Landfill.
- Other Wastes as Approved by the Solid Waste Section of the Division of Waste Management.

In addition, the special wastes (asbestos only) described in **Section 2.5.3** may also be disposed of in the C&D landfill units.

#### 2.2.2 Wood Waste Processing Area

The following materials may be accepted for processing within the facility's wood waste processing area (see **Section 2.6**):

- Land clearing debris;
- Untreated and unpainted wood waste such as pallets or new construction wood waste;
- Certain engineered wood products such as plywood or particleboard; and
- Yard waste.

## **2.3 PROHIBITED WASTES**

### **2.3.1 C&D Landfill Unit**

Only wastes, as defined in **Section 2.2.1** above may be accepted for disposal in the C&D landfill unit. No other wastes may be accepted.

### **2.3.2 Wood Waste Processing Area**

Only the materials as listed in **Section 2.2.2** above may be accepted. No other wastes may be accepted. Unacceptable wastes found in this area, if not otherwise prohibited, are disposed of within the active C&D landfill unit.

## **2.4 WASTE SCREENING PROGRAMS**

In order to assure that prohibited wastes are not entering the landfill facility, screening programs have been implemented at the landfill. Waste received at both the scale house entrance and waste taken to the working face is inspected by trained personnel. These individuals have been trained to spot indications of suspicious wastes, including: hazardous placarding or markings, liquids, powders or dusts, sludges, bright or unusual colors, drums or commercial size containers, and "chemical" odors. Screening programs for visual and olfactory characteristics of prohibited wastes are an ongoing part of the landfill operation.

### **2.4.1 Waste Receiving and Inspection**

All vehicles must stop at the scale house located at the entrance of the facility and visitors are required to sign-in. All waste transportation vehicles are weighed and the content of the load assessed. The scale attendant(s) requests from the driver of the vehicle a description of the waste it is carrying to ensure that unacceptable waste is not allowed into the landfill. The attendant(s) then visually checks the vehicle as it crosses the scale. Signs informing users of the acceptable and unacceptable types of waste are posted at the scale house. Once passing the scales, the vehicles are routed to the appropriate landfill unit or other area (white goods handling area, etc.) as appropriate.

Vehicles are randomly selected for screening on a regular basis, depending on personnel available. At least one vehicle per week, but not less than 1% by weight of the waste stream entering the landfill (based on the previous week's total), will be randomly selected by inspection personnel. A random truck number and time will be selected (e.g., the tenth load after 10:00 a.m.) on the day of inspections. However, if something looks suspicious is spotted in any waste load, that load is inspected further.

Vehicles selected for inspection are directed to an area of intermediate cover adjacent to the working face where the vehicle will be unloaded. Waste is carefully spread using suitable equipment. An attendant trained to identify wastes that are unacceptable at the landfill inspects the waste discharged at the screening site. If unacceptable waste is found, including wastes generated from outside of the service area, the load will be isolated and secured by berming off the area. For unacceptable wastes that are non-hazardous, the Solid Waste Director will then notify officials of the DWM (see **Section 1.2.2**) within 24 hours of attempted disposal of any waste the landfill is not permitted to receive in order to determine the proper course of action. For unacceptable wastes that are hazardous, the Hazardous Waste Contingency Plan outlined in **Section 2.4.2** will be followed. The hauler is responsible for removing unacceptable waste from the landfill property.

If no unacceptable waste is found, the load will be pushed to the working face and incorporated into the daily waste cell. All random waste inspections will be documented by landfill staff using the waste screening form provided in **Appendix A**.

In addition to random waste screening described above, waste unloaded on the active face will be inspected by the equipment operators, trained to spot unacceptable wastes, before and during spreading and compaction. Any suspicious looking waste is reported immediately to the designated primary inspector for further evaluation.

#### **2.4.2 Hazardous Waste Contingency Plan**

In the event that identifiable hazardous waste or waste of questionable character is detected at the landfill, appropriate equipment, protective gear, personnel, and materials as necessary will be employed to isolate the wastes. The DWM will be notified immediately (see **Section 1.2.2**) that an attempt was made to dispose of hazardous waste at the landfill. If the vehicle attempting disposal of such waste is known, all attempts will be made to prevent that vehicle from leaving the site or, if the vehicle has left the site, immediate notice will be served on the owner of the vehicle that hazardous waste, for which they have responsibility, has been disposed of at the landfill.

The County will assist the DWM as necessary and appropriate in the removal and disposition of the hazardous waste and in the prosecution of responsible parties. If needed, the hazardous waste will be covered with either on-site soils or other tarping material until such time when an appropriate method can be implemented to properly handle the waste. The cost of the removal and disposing of the hazardous waste will be charged to the owner of the vehicle involved. Any vehicle owner or operator who knowingly dumps hazardous waste in the landfill may be barred from using the landfill.

Should an incident where hazardous waste is found at the landfill occur, the event will be documented by landfill staff using the waste screening form provided in **Appendix A**.

Records of information gathered as part of the waste screening programs will be maintained at the landfill site during its active life and as long as required by the County

and the DWM.

## **2.5 WASTE DISPOSAL**

### **2.5.1 Access**

Traffic will be clearly directed to the appropriate active access road. The location of access roads during waste placement will be determined by operations personnel in order to reflect waste placement strategy. Additionally, access will be maintained for site monitoring locations.

### **2.5.2 General Procedures**

For each active landfill unit, waste transportation vehicles will arrive at the working face at random intervals. There may be a number of vehicles unloading waste at the same time, while other vehicles are waiting. In order to maintain control over the unloading of waste, a certain number of vehicles will be allowed on the working face at a time. The actual number will be determined by the truck spotter. This procedure will be used in order to minimize the potential of unloading unacceptable waste and to control disposal activity. Operations at the working face will be conducted in a manner which will encourage the efficient movement of transportation vehicles to and from the working face, and to expedite the unloading of waste.

The approach to the working face will be maintained such that two or more vehicles may safely unload side by side. A vehicle turn-around area large enough to enable vehicles to arrive and turn around safely with reasonable speed will be provided adjacent to the unloading area. The vehicles will back to a vacant area near the working face to unload. Upon completion of the unloading operation, the transportation vehicles will immediately leave the working face area. Personnel will direct traffic necessary to expedite safe movement of vehicles.

Waste unloading at the landfill will be controlled to prevent disposal in locations other than those specified by site management. Such control will also be used to confine the working face to a minimum width, yet allow safe and efficient operations. The width and length of the working face will be maintained as small as practical in order to maintain the appearance of the site, control windblown waste, and minimize the amount of cover required each day. Normally, only one working face will be active on any given day, with all deposited waste in other areas covered by either periodic, intermediate, or final cover, as appropriate.

The procedures for placement and compaction of C&D waste include: unloading of vehicles, spreading of waste into 2 foot lifts, and compaction on relatively flat slopes (i.e. 5H:1V max.) using a landfill compactor and a minimum number of three full passes. For the ash monofill, the ash is spread and tracked in with a bulldozer.

The use of portable signs with directional arrows and portable traffic barricades will

facilitate the unloading of wastes to the designated disposal locations. These signs and barricades will be placed along the access route to the working face of the landfill or other designated areas which may be established.

Appropriate methods such as wind screens and/or diking adjacent to the working face will be used as required to control windblown waste. All windblown waste will be collected and disposed of by landfill staff at the end of each working day.

The removal of solid waste from any landfill unit is prohibited unless an appropriate recycling plan has been approved by the DWM. Regardless, the general public is prohibited from any waste removal activities from any landfill unit.

### **2.5.3 Special Waste Management**

#### **2.5.3.1 Asbestos Management (C&D Landfill Unit)**

The County may dispose of asbestos within the C&D landfill unit. Asbestos will only be accepted if it has been processed and packaged in accordance with State and Federal (40 CFR 61) regulations. Asbestos will arrive at the site in vehicles that contain only the asbestos waste and only after advance notification by the generator.

Once the hauler brings the asbestos to the landfill, the hauler will be directed to the designated asbestos disposal area by operations personnel. The designated disposal area will be prepared by operations personnel by leveling a small area using a dozer or loader. Prior to disposal, the landfill operators will stockpile cover soil near the designated asbestos disposal area. The volume of soil stockpiled will be sufficient to cover the waste and to provide any berms, etc. to maintain temporary separation from other landfill traffic.

Once placed in the prepared area, the asbestos waste will be covered with a minimum of 18 inches of cover soil placed in a single lift. The surface of the cover soil will be compacted and graded using a tracked dozer or loader. The landfill compactor will be prohibited from operating over asbestos disposal areas until at least 18 inches of cover are in-place.

The landfill staff will record the approximate location and elevation of the asbestos waste once cover is in-place. The Solid Waste Director will then review pertinent disposal and location information to assure compliance with regulatory requirements and enter the information into the Operating Record.

Once disposal and recording for asbestos waste is completed, the disposal area may be covered with waste. No excavation into designated asbestos disposal areas will be permitted.

## **2.5.4 Periodic Cover**

### **2.5.4.1 C&D Landfill Unit**

At the completion of waste placement each week, or sooner if the area of exposed waste exceeds one-half acre in size, a 6-inch layer of earthen material or other material as approved by the DWM will be placed over the exposed waste. This periodic cover is intended to control vectors, fire, odors, and blowing debris.

## **2.5.5 Intermediate Cover**

### **2.5.5.1 C&D Landfill Unit**

A 12 inch layer of soil cover should be placed on all waste surfaces that have not received waste in 30 days but are below final elevation. This intermediate cover should be seeded immediately and graded such that all precipitation run-off is channeled to the surface water systems.

## **2.5.6 Height Monitoring**

Periodically, the landfill staff will monitor landfill top and side slope elevations with a level. When such elevations approach design grades, the final top-of-waste grades will be staked to limit over-placement of waste.

## **2.6 WOOD WASTE PROCESSING AREA**

A wood waste processing area is located to the southeast of the C&D landfill unit (see **Figure 1**). The operation of the wood waste processing area is as follows:

Acceptable wood and yard wastes (see **Section 2.2.2**) are stockpiled to an approximate height of 15 feet over an area of approximately 1 acre (approximate weight of 1,500 to 2,000 lbs.). At that time a contractor is brought in to grind the waste. Once the waste is ground and becomes mulch, it is primarily hauled off-site for use as boiler fuel. With the exception of mulch from engineered wood products, which must only be used as boiler fuel or disposed of in the C&D landfill, mulch may also be used for on-site erosion control, at other County facilities, or provided to the public.

## **2.7 WHITE GOODS HANDLING AREA**

A white goods handling area is located to the north of the landfill office (see **Figure 1**). The operation of the white goods handling area is as follows:

Within the white goods handling area, white goods and scrap metal are stockpiled up to about 10 feet high over an approximate 100 foot by 100 foot area. Once the stockpile reaches capacity (typically every 2 to 3 months), a recycler removes Freon and hauls the white goods and scrap metal off-site to be recycled.

## **2.8 USED TIRE STORAGE AREA**

Used tires are collected at an area near the landfill scale house (see **Figure 1**) and placed in a trailer. Once the trailer is nearly full, the trailer is picked up by a recycling contractor.

## **2.9 USED PESTICIDE CONTAINER STORAGE BUILDING**

A sheltered storage area is located near the site entrance (see **Figure 1**) for used pesticide containers from local agricultural sources. Once approximately 5,000 containers have been collected, a recycling contractor grinds the containers, bags the ground plastic, and transports the plastic for recycling.

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## **SECTION 3.0 ENVIRONMENTAL MANAGEMENT**

### **3.1 OVERVIEW**

This section reviews the overall environmental management tasks required for the successful operation of the landfill facility.

### **3.2 SURFACE WATER CONTROL**

As used herein, the definition of “surface water” is water which results from precipitation or site run-on that has not contacted the waste.

Proper control of surface water at the landfill will accomplish the following goals:

- Prevent the run-on of surface water into the landfill unit(s) or the active face(s);
- Prevent the run-off of surface water that has come into contact with the waste (i.e. leachate);
- Limit the erosion caused by surface waters; and
- Limit sediments carried off-site by surface waters.

Separate erosion and sedimentation control plans have been provided for the various landfill units. These plans describe both short and long term engineered features and practices for preventing erosion and controlling sedimentation at this site. The following is a brief discussion of some of these features and practices, focusing more on the landfill units.

#### **3.2.1 Surface Water Run-On Control**

The perimeter berms and/or perimeter channels around the landfill unit(s) are designed to prevent the run-on of surface water from adjacent land into the landfill. Additional structures such as diversion berms, channels, down pipes, etc. carry surface water away from the landfill units.

#### **3.2.2 Erosion Control**

The serviceability of the landfill relies heavily on soil berms, barrier layers, and agricultural layers that are readily eroded by flowing water. Erosion control provisions incorporated in the landfill include the following:

- The slope of the working face must be no steeper than 5H:1V where practical to limit erosion of the periodic cover.
- Intermediate cover that has been exposed for more than 30 days must be

seeded immediately and repaired when erosion features are identified.

- Drainage breaks (diversion berms, etc.) are provided on the final cover to limit the flow length of run-off.
- Water collected by each drainage break is routed to stormwater drainage channels or down pipes so that the run-off volume does not accumulate going down the slope.
- The vegetative soil layer placed over the final cover must be seeded immediately.

Additional erosion control measures have been taken within the drainage channels and at points of stormwater discharge. All final cover should be inspected regularly for erosion damage and promptly repaired.

### **3.2.3 Sedimentation Control**

Stormwater run-off from the landfill unit(s) is conveyed to one of the on site sediment basins and/or traps. These basins and/or traps should be inspected regularly for sediment build-up or erosion damage. The basins and/or traps should be cleaned out when sediment fills the lower half of the basin.

## **3.3 WATER QUALITY MONITORING**

The monitoring program and procedures outlined in the current Water Quality Monitoring Plan will be followed for the monitoring of site groundwater monitoring wells and surface water monitoring locations. The results of the water quality monitoring program will be placed in the facility operating record as described in **Section 1.13**.

## **3.4 LANDFILL GAS (LFG) MONITORING PLAN**

The County will implement a routine landfill gas (LFG) monitoring program to ensure that methane concentrations do not exceed 25 percent of the lower explosive limit (LEL) (1.25% methane (CH<sub>4</sub>)) in facility structures, or 100 percent of the LEL (5% CH<sub>4</sub>) at property boundaries. LFG monitoring activities and remedial actions for concentrations exceeding these requirements will be in accordance with the site's current landfill gas monitoring plan.

### **3.4.1 Record Keeping**

Results of LFG monitoring and description of any remedial measures will be placed in the facility operating record as described in **Section 1.13**.

### **3.5 VECTOR CONTROL**

Due to the nature of the waste disposed of at this facility, vector control is not anticipated to be of concern. Note that the use of periodic cover in the C&D landfill unit will discourage animals from nesting in the waste.

### **3.6 ODOR CONTROL**

Due to the nature of the waste disposed of at this facility, odor control is not anticipated to be of concern. However, if odor control becomes a problem, additional measures (such as additional cover over wastes such as drywall) will be taken to ensure odor control.

### **3.7 LEACHATE SEEPS**

Leachate seeps can occur due to a variety of circumstances. The goal in dealing with leachate seeps is to prevent seepage from leaving the limits of waste disposal areas and to minimize the potential for reoccurrence. If evidence of leachate seeps is observed, the County will take the following actions. Depending on the circumstances, various combinations of actions may be appropriate.

1. If leachate is observed outside of the limits of waste disposal areas, notify the DWM (see **Section 1.2.2**).
2. Contain the flow of leachate using soil berms and/or excavation.
3. Excavate the area of seepage to attempt to allow flow into the underlying waste (i.e. break-up soil layers that may be causing the seep.).
4. For contained leachate that will not flow into underlying waste, a pump may be required to route the leachate to a tanker truck for proper disposal off-site.
5. The use of soil (particularly clay) to plug the seepage may be successful in the case where flows are minor.
6. Remove and dispose of impacted cover soils accordingly.
7. Repair landfill cover as necessary.

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**Appendix A**

**Waste Screening Form**

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**Martin County Landfill Facility**  
**Permit No. 59-01**  
**(252) 792-1240**

**WASTE SCREENING FORM**

Day / Date: \_\_\_\_\_ Time Weighed in: \_\_\_\_\_  
Truck Owner: \_\_\_\_\_ Driver Name: \_\_\_\_\_  
Truck Type: \_\_\_\_\_ Vehicle ID / Tag No: \_\_\_\_\_  
Weight: \_\_\_\_\_ Tare: \_\_\_\_\_  
Waste Generator / Source: \_\_\_\_\_

---

Reason Load Inspected:    Random Inspection    \_\_\_\_\_    Staff Initials    \_\_\_\_\_  
   Detained at Scales    \_\_\_\_\_    Staff Initials    \_\_\_\_\_  
   Detained by Operating Staff    \_\_\_\_\_    Staff Initials    \_\_\_\_\_

Inspection Location: \_\_\_\_\_

Approved Waste Determination Form Present?    Yes    \_\_\_\_\_    No    \_\_\_\_\_    N/A    \_\_\_\_\_

Description of Load: \_\_\_\_\_

---

Load Accepted (signature)    \_\_\_\_\_    Date    \_\_\_\_\_  
Load Not Accepted (signature)    \_\_\_\_\_    Date    \_\_\_\_\_

---

Reason Load Not Accepted (complete only if load not accepted)

Description of Suspicious Contents:    Color    \_\_\_\_\_    Haz. Waste Markings    \_\_\_\_\_  
   Texture    \_\_\_\_\_  
   Drums Present    \_\_\_\_\_    Smell    \_\_\_\_\_  
   Est. Cu. Yds. Present in Load    \_\_\_\_\_  
   Est. Tons Present in Load    \_\_\_\_\_

Martin County Emergency Management Contacted?    Yes    \_\_\_\_\_    No    \_\_\_\_\_

Company or Authority Contacted? \_\_\_\_\_

Hazardous Materials Present: \_\_\_\_\_

---

Hauler Notified (if waste not accepted)    Phone:    \_\_\_\_\_    Time Contacted:    \_\_\_\_\_  
Other Observations: \_\_\_\_\_

---

Final Disposition  
Signed    \_\_\_\_\_    Date    \_\_\_\_\_  
   Waste Screening Inspector or Solid Waste Director

Attach related correspondence to this form.  
File completed form in Operating Record.

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**Appendix B**

**Fire Occurrence Notification Form**

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**SOLID WASTE MANAGEMENT FACILITY  
 FIRE OCCURRENCE NOTIFICATION  
 NC DENR Division of Waste Management  
 Solid Waste Section**



Notify the Section verbally within 24 hours and submit written notification within 15 days of the occurrence.  
*(If additional space is needed, use back of this form.)*

NAME OF FACILITY: \_\_\_\_\_ PERMIT # \_\_\_\_\_

DATE AND TIME OF FIRE: \_\_\_\_\_ @ \_\_\_\_\_

HOW WAS THE FIRE REPORTED AND BY WHOM:  
 \_\_\_\_\_

LIST ACTIONS TAKEN:  
 \_\_\_\_\_

WHAT WAS THE CAUSE OF THE FIRE:  
 \_\_\_\_\_

DESCRIBE AREA, TYPE, AND AMOUNT OF WASTE INVOLVED:  
 \_\_\_\_\_

WHAT COULD HAVE BEEN DONE TO PREVENT THIS FIRE:  
 \_\_\_\_\_

DESCRIBE PLAN OF ACTIONS TO PREVENT FUTURE INCIDENTS:  
 \_\_\_\_\_

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

\*\*\*\*\*  
 THIS SECTION TO BE COMPLETED BY SOLID WASTE SECTION REGIONAL STAFF  
 DATE RECEIVED \_\_\_\_\_  
 List any factors not listed that might have contributed to the fire or that might prevent occurrence of future fires:  
 \_\_\_\_\_

FOLLOW-UP REQUIRED:  
 NO     PHONE CALL     SUBMITTAL     MEETING     RETURN VISIT    BY: \_\_\_\_\_ (DATE)

ACTIONS TAKEN OR REQUIRED:  
 \_\_\_\_\_

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