



ENGINEERING  
PLANNING  
ARCHITECTURE

301 West 14th Street  
Greenville NC 27834

252.757.1096  
fax 252.757.3221

Fac/Perm/Co ID #	Date	Doc ID#
3301	12/9/09	DIN 9009

DW

January 14, 2004

Mr. James Barber  
Branch Head, Permitting Branch  
NCDENR – Division of Waste Management  
1646 Mail Service Center  
Raleigh, NC 27699-1646

Re: Transfer Station Permit Renewal  
Permit No. 33-01T  
Edgecombe County ~~Transfer Station~~ CID  
Edgecombe County, NC Landfill  
TWC Project No. 2488-DB



Dear Mr. Barber:

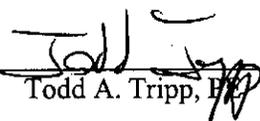
On behalf of the County, we request a renewal of the referenced permit to operate the County's existing Construction and Demolition Landfill. As background for review of this permit, we have attached the following documents:

1. Summary of Tonnage received versus airspace expended with gross waste density calculation for determination of future airspace needs. The previous average tonnage was used to predict the future demand. This is thought to be reasonable and conservative since the record includes the massive storm debris receipts from Hurricane Floyd.
2. One set of draft plans showing the grades predicted for the year ending in July 2004 and the grades predicted for the year ending 2008. The plans also include the construction details for the cap.
3. Permit 33-01T for the Transfer Facility.
4. CDLF Operations Plan dated December 8, 1997. No changes to the plan are needed with the exception of Article 2.1.4 Limits of Waste should be revised by reference to the attached plans.

We trust that this information will sufficiently address the Audit Report dated October 30, 2003 (attached). Please let us know if there are any questions. Thank you for your assistance in this matter.

Sincerely,

THE WOOTEN COMPANY

By   
Todd A. Tripp, EITP

C: Lorenzo Carmon, County Manager  
Danny Bagley, Solid Waste Manager  
Ben Barnes, Solid Waste Section Raleigh Regional Office



**Estimate of Density for Use in Predicting the Volume of Future Phases - C&D Landfill**

The Data in this table is based upon a comparison of topographic surveys in 1999 and in 2003	Sum of Average Depths of Fill	Number of Blocks	Average Depth of Fill Per Block	Area of Block	Total Volume in Cubic Feet	Volume in Cubic Yards	Total Area Covered	Estimated Volume of Final Cap
	860.3	130	6.618	10,000	8,603,000	318,630	1,300,000	144,444
	15.2	9	1.689	10,000	152,000	5,630	90,000	10,000
						324,259	1,390,000	154,444
				Net and Gross Density		1.732		1.173 Lbs/CY
		Summation of Waste Volume and Predicted Cap Volume				478,704		1.173 Lbs/CY
			Elapsed Years	Predicted Volume Based Upon Density for the Previous 4 Years				
Year Ending		Assumption of Yearly Tonnage From Previous 4 years of Record						
Jul-04		54,254	1	92,512				
Jul-08		54,254	4	370,048				



**EDGECOMBE COUNTY CDLF  
AMENDMENT 15  
TRANSITION PLAN  
OPERATIONS PLAN  
EDGECOMBE COUNTY, NC**

**DECEMBER 1997**



*Todd A. Tripp*  
\_\_\_\_\_  
Todd A. Tripp, PE

12/8/97

**The Wooten Company  
Engineering • Planning • Architecture  
Raleigh • Greenville, North Carolina**

## 1.0 BACKGROUND INFORMATION

### 1.1 INTRODUCTION

The following operations plan is presented as an amendment and addition to the Transition Plan to provide the necessary requirements as specified in the Solid Waste Management Rules, Section .1617(d)(1) and the Transition Plan Guidance Document. The purpose of the Operations Plan is to provide details of the facility procedures and policies of the Edgecombe County Construction and Demolition Landfill in a stand alone document for use at the facility. The information contained in this plan will be used to assist Edgecombe County in the day-to-day operations and the periodic maintenance and monitoring requirements during the operation of the C&D Landfill. Included in this plan are sections concerning a description of the landfill components, landfill and site operations and maintenance.

The various components included for the enclosed C&D Landfill Operations Plan are based on information from Mr. Larry Hathaway (Solid Waste Supervisor for Edgecombe County) and, from the requirements of the Solid Waste Management Rules 15A NCAC 13B, Rule .1625 and .1626 and from information provided in the original operations plan developed by S&ME.

### 1.2 PROJECT INFORMATION

The existing Edgecombe County Landfill is located on State Route 1601 (Colonial Road) approximately 4.5 miles south of Tarboro, North Carolina. The existing landfill site is bound to the north by Jerry's Creek, to the east by SR Route 1601 and to the west and south by undeveloped agricultural land. The landfill site is shown on Sheet 2 of 6 of the C&D Landfill Plan.

Based on communication with Edgecombe County personnel the former landfill (located north of the site) was operated prior to 1979 by Edgecombe County and closed in 1979. The surface of the former landfill ranges from 5 to 20 feet higher than pre-landfilling conditions based on comparison of the existing topography to the 1902 U.S.G.S. Map (15 minute Tarboro Quadrangle).

The Edgecombe County Landfill currently disposes of about 250 tons of municipal solid waste per day at the site. Other disposal activities currently conducted at the site include: 1) yard waste disposed of and composted east of SR 1601 on facility property (some disposed in landfill); 2) tires collected for shipment to Carolina Tire, Inc.; 3) white goods collected and shipped to Tarts, Inc.; 4) a convenience center is operation adjacent to and east of SR 1601; 5) a municipal solid waste transfer station is under construction behind the existing convenience center.

The equipment currently in use at the landfill include a tracked front-end loader dozer, two tractor-scrappers (articulated pans), two landfill compactors and an all-purpose farm tractor. Five employees (total) work at the landfill including one scale operator/office administrator.

Two unused water supply wells exist at the site. One is located on the west slope of the large excavation located east of the landfill and is planned to be abandoned. The other is located across SR 1601 from the landfill site and is planned to be used in the future for washdown water at the new waste transfer facility.

Just east of the active (western) section of the landfill lies a landfill section which was closed prior to 1991. This area has received a 2' cap in accordance with Solid Waste Management

Rules at the time of closure. This eastern section of the current landfill is proposed to receive the new C&D Landfill.

Prior to operations of the eastern section of the current landfill, the south end of the base was excavated to depths of 15 feet and the north end was filled with 15 to 25 feet of compacted structural fill (according to 1979 design drawings by Brown, Edwards and Miller, Inc. for the Edgecombe County Landfill expansion). The base of the landfill's eastern section at the north side has an elevation of about 70 feet NGVD. The elevation of the landfill base at the south side should be in the range of 76 and 82 feet NGVD based on slopes of 0.5 and 1.0 percent, respectively. This area encompasses approximately 30 acres and has been filled to the approximate final contours as shown on Sheet 2 of 6 of the CDLF plans.

The base of the active (western) section of the landfill was excavated to depths of 10 to 15 feet at the south side of the active section. The north side of the active section was constructed with 15 to 20 feet of structural fill above the surrounding topography. Based on the topographic map (1994), the base of the landfill has an elevation of about 58 feet NGVD at the north end. The elevation of the base at the south side is about 70 feet NGVD. The active area of the landfill is approximately 35 acres. On or before December 31, 1997, the filling operations in the active area will cease. Edgecombe County is not proposing to utilize the western landfill section for the CDLF at this time. Before such C&D waste disposal could occur, the western unit will be required to receive a Subtitle D cap. The cap construction is scheduled for the spring season of 1998.

Prior to excavating the active landfill cell, a drainage trench was excavated around the south and west perimeters of the landfill. The depth of the perimeter trench ranges from about 8 feet to 28 feet and was intended to lower the former water table (pre-1979) to about 2 to 4 feet below the planned excavation limits. This feature will continue to be of some service in prevention of saturation of the existing municipal solid waste fill which shall be the subgrade of the C&D Landfill.

It should be noted that the site elevation used in 1979 appear to be about 8 to 10 feet lower than the site elevations surveyed in 1994 and care should be taken when comparing the 1979 and 1994 topographic maps.

## 2.0 OPERATIONS PLAN

The Operations Manager of the Edgecombe County Landfill shall maintain and operate the facility in accordance with this Operations Plan. This plan describes the components and procedures for the landfill development.

The Operations Manager shall maintain landfill records in accordance with .1616(10) which is copied for reference as follows:

.1626(10) - Record Keeping Requirements.

- (a) The owner or operator of a MSWLF unit must record and retain at the facility, or an alternative location near the facility approved by the Division, in an operation record the following information as it becomes available:
  - (i) Inspection records, waste determination records, and training procedures required in Item (1) of this Rule;
  - (ii) Amounts by weight of solid waste received at the facility to include source or generation;

- (iii) Gas monitoring results and any remediation plans required by Item (4) of this Rule;
  - (iv) Any demonstration, certification, finding, monitoring, testing, or analytical data required by Rules .1630 through .1637 of this Section;
  - (v) Any monitoring, testing, or analytical data as required by Rule .1627 of this Section; and
  - (vi) Any cost estimates and financial assurance documentation required by Rule .1628 of this Section.
- (iv) Any demonstration, certification, finding, monitoring, testing, or analytical data required by Rules .1630 through .1637 of this Section;
- (b) All information contained in the operating record must be furnished upon request to the Division or be made available at all reasonable times for inspection by the Division.
  - (c) The owner or operator must maintain a copy of the operation plan required by Rule .1625 of this Section at the facility.

## **2.1 DESCRIPTION OF LANDFILL COMPONENTS**

The description of the landfill components is provided for clarification of the design used for the existing cell and sets the basis for operating parameters used in the Plan.

The Edgecombe County Landfill began landfilling operations at the existing site in 1979. The existing active landfill area was constructed prior to EPA Subtitle D design criteria. Future landfill development will be limited to non-municipal solid waste management and waste transfer to lined facilities which comply with Subtitle D. The proposed C&D Landfill will receive solid waste generated through construction and demolition activities only. Placement of material shall be upon the closed out eastern section of the landfill adjacent to and just west of SR 1601. Waste is to be dumped, spread and thoroughly compacted by the County's landfill compactors and periodically covered with soil. Based upon estimated tonnage delivered and estimated volume utilized at the landfill as determined in 1994, the compaction of municipal solid waste is believed to be approximately 1100 to 1300 tons per cubic yard. The goal of the County staff will be to equal or closely approach this figure in their compaction efforts despite the lesser applications of temporary soil covers required for C&D Waste as opposed to municipal waste. Slopes of the new C&D Landfill will be maintained between 5% and 4:1 as required by Solid Waste Rules. The existing drainage features of the site will be retained as described below.

### **2.1.1 Compacted Subgrade**

A compacted structural fill subgrade at the downgradient (north) end of the existing landfill was constructed to provide support of the municipal solid waste and to provide a "level" (less than one percent slope) platform for better landfilling operations. The depth of the fill along the northern end of the landfill ranges from 15 to 25 feet (based on 1979 design drawings by Brown, Edwards and Miller, Inc. for the Edgecombe County Landfill Expansion and the recent (1994) topographic map of the landfill). The southern end of the landfill was apparently excavated to depths of 15 feet below original grades during construction of the landfill. The southern end of the eastern section of the municipal waste landfill now lies approximately 35 feet above surrounding natural grade. Existing approximate fill depth at the southern of the proposed landfill is thus believed to be 50 feet (maximum). The northern end of the section was filled approximately 20 feet higher than surrounding terrain. The eastern section was completed prior to 1991 and has remained apparently stable. There have been no episodes of slumping and no large settlements or apparent changes to the filled area topography.

### 2.1.2 Surface Water Collection and Removal System

A surface water collection system was constructed for the active western section of the landfill. The surface water run-off of the central portions of the active and eastern sections of the landfill is directed by a drainage ditch at the center of the landfill toward a sediment basin located at the north central portion of the site. This ditch will be maintained and will receive a large portion of the run-off from the C&D Landfill. Another sediment basin located at the northeast corner of the site provides surface water collection from the eastern sections of the landfill adjacent to SR 1601. From the sediment basins the surface water flows to ditches that flow to Jerry's Creek.

### 2.1.3 Temporary Soil Cover

The municipal landfill was cease operation on December 31, 1997. The C&D Landfill shown on the C&D Landfill plans will commence operation on or about January 1, 1998. Temporary cover will consist of weekly applications of 6" thick layers of soil unless nuisance conditions develop or unless otherwise directed by the Solid Waste Section. In such cases cover will be placed as frequently as indicated or directed. In addition, landfill staff shall limit the area of uncovered construction and demolition waste to no more than 1/4-acre.

An intermediate cover is an approximately 12-inch thick layer of native soil that is placed over a waste lift for vehicular access or on areas where waste placement will be inactive for 12 months or more. The intermediate cover will be placed at frequencies suitable for specific waste management operations.

### 2.1.4 Limits of Waste

Waste shall not be placed outside the existing MSWLF boundaries as shown on Sheet 2 of 6 of the CDLF plans. C&D waste shall not be placed west of the Eastern Section/Western Section boundary line as shown on the plans. C&D waste shall not be placed in the area noted on the plans as requiring additional soil cover until approval by the Division.

## 2.2 LANDFILL OPERATIONS AND MAINTENANCE

The Edgecombe County Landfill is owned and operated by Edgecombe County. Operation and maintenance of the landfill is the responsibility of ~~Mr. Larry Hathaway~~, Solid Waste Supervisor. Mr. Hathaway also provides overall management and administration for the landfill. Operation of the landfill expansion (current landfill area south of Jerry's Creek and west of S.R. 1601) began in 1979. Mr. Hathaway will also provide management of the C&D Landfill operations and will manage the transfer facility for the County. The transfer facility will be operated by Waste Industries through Edgecombe's operation permit. Waste Industries shall obtain and manage and train the transfer facility staff, nevertheless, County staff will monitor performance of transfer facility management tasks that are contracted to third parties such as Waste Industries.

### 2.2.1 Landfilling Sequence

The development of the current landfill has been in two sections consisting of an eastern section (currently closed) and a western section (active). The active area of the landfill consists of about 35 acres. Landfilling operations generally proceed from the upgradient (south) end towards the downgradient (north) end of the active section.

At this time, the municipal solid waste landfill is being prepared for closure and the County is preparing to receive waste at its proposed C&D site on top of the footprint of the eastern section of the landfill. Development of the landfill would generally proceed from southeast to northwest

with drainage to the existing drainage feature to the west and the existing abandoned waste area adjacent to SR 1601 to the east. Both of these features drain northward through sediment basins to Jerry's Creek. Landfill operations would proceed in such a manner as to allow closure within a few weeks of any direction to do so. The C&D Landfill will receive a Subtitle D cap.

Note that closure documentation reveals an area in the southwest portion of the proposed C&D landfill which received a thinner than standard cover. This area is about 100' by 400' and is scheduled to receive additional soil cover as soon as weather permits. This area will not receive any waste until additional cap material is placed and the depths verified in a follow up closure document. Refer to the location of this area on Sheet 2 of 6 of the plans.

### 2.2.2 Surface Water Collection and Removal System

The majority of surface water from the active portion of the landfill drains into a sediment basin located at the north central area of the landfill (located between active and inactive sections of the landfill). A drainage feature at the center of the active area collects the surface water run-off and directs the flow to the sediment basin. The sediment basin was constructed in the former drainage feature located in the area of the currently active section of the landfill (see Water Quality Monitoring Plan, dated May, 1994 for description of former drainage feature).

Another sediment basin located in the northeast corner of the site collects surface water run-off from an area at the eastern side of the CDLF. The sediment basin is located downgradient and north of the abandoned, unfilled pit adjacent to SR1601. From the sediment basins, surface water flows into drainage ditches that flows into Jerry's Creek and eventually to the Tar River.

The construction of the C&D Landfill will not change the existing drainage pattern.

### 2.2.3 Placement of Waste and Cover Material

As discussed previously, placement of the C&D waste will progress from the upgradient end toward the downgradient end of the landfill. The solid waste shall be compacted as densely as practical using landfill compactors and dozers. The working face of the waste shall be restricted to the smallest area feasible for operations (not to exceed what will be covered with weekly cover for one week). The exposed area of the working surface will not be allowed to exceed 1/4-acre. Initially the C&D waste shall be placed from upgradient to downgradient, but as higher waste elevations are achieved, the waste may be placed from downgradient to upgradient on the active face slope as long as landfill surfaces are graded to allow proper drainage.

All cover material is to be obtained from on-site stockpiles or borrow areas. C&D waste will be covered at least weekly, more often if odor, vector control, windblown debris, or other nuisance conditions demand more frequent coverage. An intermediate cover shall be placed on areas where waste placements will be inactive for 12 months or more. The intermediate covers will be placed at frequencies suitable for specific waste management operations. The final cover system shall be placed in accordance with the Closure/Post Closure Plan.

### 2.2.4 Waste Acceptance, Disposal and Screening Requirements

After December 31, 1997 only construction and demolition waste will be landfilled at the site. Such waste includes all non-hazardous, non-biological, non-municipal solid waste which results from the construction or demolition of structures including debris, concrete block, wood framing and sheeting, roofing, flooring and floor coverings, electrical components from buildings and structures (excluding transformers or other components containing liquids). Metal ~~sheetings~~ and

Sheetings  
TAT

C&D Landfill Operations Plan  
Edgecombe County, North Carolina  
December 7, 1997

flashings and other building and demolition debris. Refer to the attached checklist for items not accepted.

The procedure for waste acceptance at the Edgecombe County Landfill will be generally unchanged except in regards to the wastes actually permitted to be recieved. Special waste shall be handled in accordance with local, state and federal guidelines.

Friable asbestos waste that is packaged in accordance with 40 CFR 61 generated by demolition is accepted for landfilling at the Edgecombe County Landfill. The asbestos waste is disposed of at the bottom of the working face and covered immediately with soil in a manner that will not cause an airborne condition.

Friable Asbestos not included in 40CFR 61 may be commingled with other waste and disposed of at the landfill, however; non-friable asbestos will be disposed of at the bottom of the working face and immediately covered if such asbestos is identified by the Landfill Screening program and arrives separated from other wastes.

The County conducts a screening program at the facility for detecting and preventing disposal of hazardous and liquid waste. This same screening process will be modified and expanded to prevent diposal of municipal wastes as well as wastes previously not permitted for disposal at this site. The program consists of random inspections of incoming loads. One inspection is performed on a minimum weekly basis for commercial and industrial waste. The selection of the vehicle that will have its load inspected is the responsibility of the Operations Manager or a person he designates. The selection is made at the scales. The hauler is required to sign the Pre-Acceptance Agreement as shown in the Appendix. The Scale Technician notifies the landfill facility's Screening Inspector (chosen by Operations Manager and adequately trained) to meet the designated hauler at an area specifically set aside for conducting screening inspections away from the working face and any on-going landfill operations. The hauler dumps the load of waste, then the Screening Inspector sorts through the waste using a loader or other similar equipment for handling bulky materials and by hand with a rake or shovel. Once the waste is spread thin enough to observe the entire load, the inspector records the information required on the Detailed Screening Report and Waste Screening Checklist as shown in the Appendix. If liquid, hazardous, municial or other non-allowed wastes are not found in the inspected load, then the waste is disposed of on the working face in the cell immediately after completion of the inspection.

If hazardous or liquid wastes are identified in the load, the Screening Inspector shall immediately notify the Operations Manager. If hazardous waste is identified, the hazardous materials emergency response team for Edgecombe County shall also be notified. If liquid waste is discovered, it shall be contained on the pad temporarily until an absorbent can be placed or until proper containers are available for pumping. The saturated absorbent or containers will then be disposed of at an appropriate facility. The hazardous waste shall be contained in the same manner as the liquid waste and will be disposed of at a suitable facility for hazardous waste as determined by the emergency response team or a qualified environmental/hazardous waste consultant. The County staff will record the identity of the hauler and generator of the hazardous waste.

In the future the area used for dumping the waste to be inspected will consist of a pad enclosed by a soil berm of sufficient height to contain liquid waste (if any). The inspection pad may consist of either an asphalt or a concrete pad.

In addition, the scale personnel and operators will be educated to recognize probable violations to the acceptable waste guidelines and will halt the disposal and have the wastes removed by the

responsible party if non-hazardous. If the suspicious waste is thought to be hazardous, the staff will react as described above. If the presence of non-allowed wastes is discovered only after spreading and compaction has commenced, the compactor operator will contact the scale operator to establish the person responsible for the load so that the responsible party can be corrected on future loads and inspected more carefully. The County will have a container readily available near the working face for disposal of inadvertently dumped, non-permitted waste. The County's tracked loader will be available for removal of such waste.

## **2.3 SITE OPERATIONS AND MAINTENANCE**

### **2.3.1 Erosion/Sedimentation Control Maintenance**

Existing erosion/sedimentation control structures include sediment basins, check dams, and diversion ditches. Sedimentation basins shall be checked after periods of significant run-off. Sediment shall be removed from the basin to its original dimensions when sediment accumulates to one half of the design depth. The sedimentation basins, embankments, spillways and outlets shall also be inspected for erosion damage. All necessary repairs shall be made immediately any trash or debris within the sedimentation basin riser pipe shall be removed.

Existing check dams and diversion ditches shall be inspected for damage after each rainfall event. Any sediment accumulated behind the dams shall be removed. Check dams, riprap-lined channels and outlet protection used to prevent damage to channel vegetation shall be inspected for wash-outs. Ripraps shall be added to these areas as needed to maintain integrity of the structure. Siltation that has accumulated in diversion ditches shall be removed periodically to maintain adequate flow capacity.

Embankment slopes shall be periodically inspected for erosion. The embankment slopes shall be mowed at least once a year. The embankment slopes shall be refertilized in the second year unless vegetation growth is fully adequate. The damaged areas shall be reseeded, fertilized and mulched immediately. Seeding, fertilizing, and mulching shall be in accordance with the North Carolina Erosion and Sedimentation Control Guidelines.

Control of the borrow area with respect to erosion and sedimentation issues will conform to the approved Sedimentation and Erosion Control Plan, Sheet 16 of 16 of the Transition Plan.

### **2.3.2 Access and Security Requirements**

The east and southeast portions of the site are currently enclosed by fencing. Access from the south and west is prevented by dense wooded areas and the deep drainage trench. Access to the entrances to the site is controlled by means of gates. A security check station and weigh scales are located at the landfill entrance to evaluate the incoming waste for proper disposal. An attendant will be on duty at the site at all times while the landfill is open for public use to insure compliance with operational requirements. Access roads to the site shall be of all weather construction and maintained in good condition.

### **2.3.3 Dust, Litter, Odors and Vectors**

Dust generated due to landfill activities will be controlled through the application of water by truck. Additionally, any areas to be left undisturbed for periods of more than 30 days will be seeded to control dust.

Fencing will be utilized to control windblown litter and contain it on-site should it occur. In addition, the C&D waste will receive temporary cover weekly as a minimum, more often when

this proves necessary to prevent windblown litter. The landfill area will be policed when necessary to gather windblown litter.

Odor should not be a significant problem due to the procription of household, food service and other pungent decomposing wastes of high biological content. Should odor problems occur the most likely culprit would be landfill gases venting up through the underlying municipal solid waste landfill. Odors originating in this matter will be addressed in accordance with the transition plan. Measures discussed in the transition plan include soil cover on the area from which the odor originates or the application of masking agents. In the unlikely event that the C&D Waste is the source of odor soil cover will be applied to the decomposing waste to alleviate the problem.

Control of vectors should not become an issue with the C&D Landfill since C&D waste is largely without food value for vectors and should not attract flies, rodents or other carriers of disease. The method of control for any problems which may occur is to cover the waste to deny vectors access to the waste.

#### **2.3.4 Landfill Signs**

Signs listing disposal procedures, the hours the site is open for public use, the permit number, and statements prohibiting non-construction and demolition waste will be posted at all times at the landfill entrance. Traffic signs and markers will be erected and maintained as necessary to promote orderly and safe traffic flow and to assist in eliminating unauthorized and unobserved dumping within the landfill.

#### **2.3.5 Fire Control**

No open burning will be permitted at the Edgecombe County Construction and Demolition Landfill. Equipment and soil stockpiles are readily availabel to control accidental fires. Edgecombe County has an Emergency Plan which is attached to the Transition Plan and is also attached to this Amendment. Any fire which occurs within the landfill will be reported to the Division within 24 hours with a follow-up written report to be submitted to the Division within 5 days of the fire written by the Operations Manager.

#### **2.3.6 Grounwater Control**

As is evident in the plans for this C&D Landfill, the entire filling operation is located upon an existing, closed-out municipal landfill. Pre-existing fill depths vary with location, but in no case will any of the filling activites be situated at or below the native soils. This fact in itself will prevent the placement of any C&D wastes within the groundwater. The preexisting features of the landfill which were used to control groundwater at the time the eastern unit was originally filled will be maintained during the life of the C&D Landfill. These existing features are decribed in detail in the Transition Plan, but are generally decribed herein. An existing trench located along the southwest perimeter of the landfill appears to have lowered the groundwater table by up to 12 feet from the original groundwater. An existing drainage swale which lies just to the west of the C&D unit channels runoff northward to an existing sediment basin and also tends to lower groundwater locally. Adjacent to the C&D lying just east of the unit and between the unit and SR 1601 is an area which was excavated in preparation for use as part of the landfill but which has not been filled. This area is approximately 12 to 14 feet below the foot of the closed out eastern municipal waste unit upon which the C&D waste will be placed. This lowered area drains northward to Jerry's Creek and would prevent buildup of groundwater to even the base of the municipal waste along the eastern limits of the C&D waste unit. Thus it is highly

improbable that ambient groundwater would ever rise to the level of the planned C&D waste unit.

Given the above, the primary means of groundwater control is to maintain the existing drainage features to prevent ponding, to periodically clean out the sediment basins located north of the western side drainage swale and north of the eastern excavated area, and maintain the surface of the filling operations such that positive surface drainage occurs at all times.

### **2.3.7 Training of Facility Personnel**

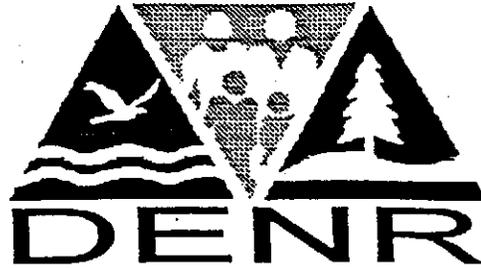
Landfill personnel should be adequately trained for the following critical tasks:

- Identification of non-permitted wastes
- Handling and Notification for Hazardous and non-permitted wastes
- Dealing with customers and the general public
- Response to fires and other emergencies
- Routine inspections and reports
- Accurate record keeping for waste types, quantities, and inspections
- Maintenance of drainage, and sedimentation control features
- Methane gas monitoring and reporting in accordance with SWM Rules, Section .1626(4)(b)
- Equipment, traffic, and overall safety

The Operations Manager will have a good general knowledge of the above topics and will insure that the various members of the landfill staff receive periodic ongoing training related to the tasks above and to their specific duties. Training programs are offered by the State and by organizations like SWANA.

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

James B. Hunt, Jr., Governor  
Wayne McDevitt, Secretary  
William L. Meyer, Director



December 30, 1997

Mr. Joseph K. Durham, County Manager  
County of Edgecombe  
201 St. Andrews Street  
Tarboro, North Carolina 27886

Subject: Edgecombe County MSWLF Facility Transition Plan Modification for Permit #33-01

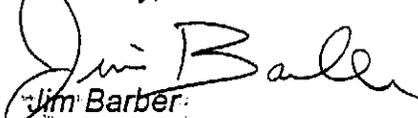
Dear Mr. Durham:

The Solid Waste Section hereby approves the modification of the referenced MSWLF Facility permit to allow the construction and operation of a CONSTRUCTION & DEMOLITION LANDFILL UNIT, Phase 1 (in accordance with sheet 3 of 6 of the approved plans) at the Edgecombe County landfill. The operation of Phase 1 is effective 30 December 1997 and the operational permit for the facility will be reviewed every five years, on or before 29 December 2002 (see Condition Number 2, Page 1).

Please note operational conditions outlined on pages one thru five for the facility. The Waste Management Specialist for this facility is Mr. Ben Barnes and he can be reached in our Raleigh Regional Office at (919) 571-4700.

If you have any questions about this approval letter, please contact me at (910) 486-1191 or James C. Coffey at (919) 733-0692 Ext. 255.

Sincerely,

A handwritten signature in black ink that reads "Jim Barber". The signature is written in a cursive style with a large initial "J".

Jim Barber  
Eastern Area Engineer  
Solid Waste Section

cc: Jim Coffey

Terry Dover

Ben Barnes

Raleigh Central Office: Edgecombe County MSW Facility Transition Plan  
Permit # 33-01

PERMIT NO. 33-01

Modification dated: 12-30-97

STATE OF NORTH CAROLINA

DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES

DIVISION OF SOLID WASTE MANAGEMENT

P.O. BOX 27687 RALEIGH, NC 27611

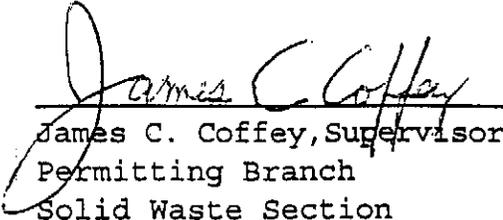
SOLID WASTE PERMIT

COUNTY OF EDGECOMBE

is hereby issued a permit to operate PHASE 1 of a

Construction and Demolition Landfill Unit

located on S.R. 1601 (Colonial Road), at the Edgecombe County Landfill, Tarboro, Edgecombe County in accordance with Article 9, Chapter 130A, of the General Statutes of North Carolina and all rules promulgated thereunder and subject to the conditions set forth in this permit.

  
James C. Coffey, Supervisor  
Permitting Branch  
Solid Waste Section

PERMIT NO. 33-01  
MODIFICATION DATED: 12-30-97

SOLID WASTE PERMIT  
Permit to Operate  
Edgecombe County Landfill  
Construction and Demolition Debris Landfill Unit

CONDITIONS OF PERMIT:

GENERAL

1. When this property is sold, leased, conveyed or transferred, the deed or other instrument of transfer shall contain in the description section in no smaller type than that used in the body of the deed or instrument, a statement that the property has been used as a sanitary landfill.
2. This permit will be subject to review every five years, on or before 30 December 2002, as per 15A NCAC 13B .0201(c) or sooner, according to the issuance date of this permit. Modifications to the facility may be required in accordance with rules in effect at the time of review.
3. The approved plan is described by Attachment 1, "List of Documents for Approved Plan". Where discrepancies may exist, the most recent submittal and the Conditions of Permit shall govern. Some components of the approved plan are reiterated in the Conditions of Permit.
4. This permit is not transferable.
5. The Financial Assurance Instrument (FAI) for this facility shall be amended when Closure Certification has been complete and the Closure/Post-Closure Care portion of the instrument is amended. The FAI shall be reviewed and updated annually for this facility once closure of the MSW unit is complete.
6. If during the operational life of the C&D unit it becomes apparent that the operations at the facility are impacting ground water adversely; the Solid Waste Section will require landfilling activities to cease and closure of the operating unit.

#### CONSTRUCTION AND OPERATION

1. This permit is for development of the Edgecombe County Landfill Construction and Demolition Unit, Phase 1 in accordance with the approved plan, sheet 3 of 6; with the exception of a one acre area in the southwest corner of the phase as shown on sheet 2 of 6. This one acre area requires additional soil cover and will be repaired in the future.
  
2. This solid waste management facility is permitted to receive the following waste types:
  - a. Land-clearing debris as defined in G.S. 130A-290, specifically, solid waste which is generated solely from land-clearing activities, such as stumps, trees, etc.;
  - b. Inert debris defined as solid waste which consists solely of material that is virtually inert, such as brick, concrete, rock and clean soil; and
  - c. Asphalt in accordance with G.S. 130-294(m).
  - d. Construction and demolition debris defined as solid waste resulting solely from construction, remodeling, repair or demolition operations on pavement, buildings, or other structures.
  - e. C&D like waste that are similar to wastes typically found in the land clearing-inert debris and C&D waste streams consisting of wastes at this time: roofing shingle waste from the manufacturer, waste building materials from mobile home/modular home manufacturer and wooden pallets. Other wastes **MAY** be approved by the Division upon receipt of a written request with the specific waste type, how its generated, how much is generated; along with any additional information the Division may request to render a final decision on the disposal options for the waste.
  

Yard trash as defined in G.S. 130A-290, shall not be disposed in the landfill area. However, yard trash, along with land-clearing debris, may be accepted for processing in the Yard Waste Composting Area.

3. All sedimentation/erosion control activities will be conducted in accordance with the Sedimentation Control Act codified at 15 NCAC 4. Native vegetation shall be established on the completed landfill.

4. The following requirements shall be met prior to operation of Phase 1 at this facility:
  - a. Site preparation and or closure of that area of the MSW unit shall be in accordance with the construction plans(dated December 1997).
  - b. Signs shall be posted at the facility in accordance with the Access and Safety Requirements under Operation Condition No. 5 listed below.
  - c. The existing groundwater monitoring system will be utilized for ground water monitoring for the C&D unit(s) in accordance with .1630 thru .1633. Assessment monitoring shall continue in accordance with Solid Waste Management Rules and any additional requirements set forth by Solid Waste Section Hydrogeologist.
  - d. Closure certification and documentation shall be submitted to the Solid Waste Section and a approved by the Section prior to receiving C&D waste in the proposed unit(s).Partial closure of units will be accepted with certification and documentation of partial unit closure submitted for approval. Seeding and stabilization of cover soils shall be performed prior to receiving C&D waste.
  
5. Operation of the C&D landfill units shall conform to the operating procedures described in the approved plan, in accordance with Section .1626 of the Solid Waste Management Rules, and in accordance with the following requirements:

Waste Acceptance and Disposal

- a. The facility shall accept only those solid wastes which it is permitted to receive.
- b. No municipal solid waste, hazardous waste, industrial waste, liquid waste or waste not charaterized as LCID or C&D shall be accepted for disposal.
- c. The permittee shall implement a program at the facility for detecting and preventing the disposal wastes listed in item "b" of this section. The program shall include, at a minimum:
  - (i) Random inspections of incoming loads or other comparable procedures:
  - (ii) Records of any inspections;

- (iii) Training of personnel to recognize hazardous and liquid wastes;
- (iv) Development of a contingency plan to properly manage any identified wastes listed in item "b" of this section; the plan must address identification, removal, storage, and final disposition of waste.

#### Cover Material Requirements

- a. Operational soil cover of at least six inches shall be placed at least once per week or when the active area reaches 1/2 acre in size or more often as necessitated by the nature of the waste so as to prevent the site from becoming a visual nuisance and to prevent fire, windblown materials, vectors or water infiltration.
- b. Areas which will not have additional waste placed on them for 12 months or more, but where final termination of operations has not occurred, shall be covered with a minimum of one foot of soil cover.
- c. After final termination of disposal operations at the site or major part thereof, or upon revocation of a permit, the fill areas shall be covered with a cap in accordance with .1627(c) or in accordance with the rules at the time of closure.

#### Access and Safety

- a. The facility shall be adequately secured by means of gates, chains, berms, fences, or other security measures approved by the DSWM to prevent unauthorized entry.
- b. An attendant shall be on duty at the site at all times while it is open for public use to ensure compliance with operational requirements.
- c. The access road to the site shall be of all-weather construction and maintained in good condition.
- d. Dust control measures shall be implemented when necessary.
- e. Signs providing information on dumping procedures, the hours of operation, the permit number, and other pertinent information shall be posted at the site entrance.
- f. Signs shall be posted stating that no MSW, hazardous waste or liquid waste can be received.

- g. Traffic signs or markers shall be provided as necessary to promote an orderly traffic pattern to and from the discharge area and to maintain efficient operating conditions.
- h. The removal of solid waste from the facility is prohibited unless the owner/operator approves and the removal is not performed on the working face.
- i. Barrels and drums shall not be disposed of unless they are empty and perforated sufficiently to ensure that no liquid or hazardous waste is contained therein, except fiber drums containing asbestos.
- j. Open burning of solid waste is prohibited.
- k. The concentration of explosive gases generated at the facility shall not exceed:
  - i. twenty-five percent of the limit for gases in site structures (excluding gas control or recovery system components; and
  - ii. the lower explosive limit for gases at the facility boundary.

#### Erosion and Sedimentation Control

- a. Adequate sedimentation and erosion control measures shall be practiced to prevent silt from leaving the site.
- b. Adequate sedimentation and erosion control measures shall be practiced to prevent excessive on-site erosion.
- c. Provisions for a vegetative ground cover sufficient to restrain erosion must be accomplished within 30 working days or 120 calendar days upon completion of any phase of C&D landfill development.

#### Drainage Control and Water Protection Requirements

- a. Surface water shall be diverted from the operational area.
- b. Surface water shall not be impounded over or in waste.
- c. A separation distance of at least four feet shall be maintained between waste and the ground-water table.
- d. Solid waste shall not be disposed of in water.
- e. Leachate shall be contained on site or properly treated prior to discharge. An NPDES permit may be required prior to discharge of leachate to surface waters.

All pertinent landfill operating personnel will receive training and supervision necessary to properly operate this landfill.

6. Ground water quality at this facility is subject to the classification and remedial action provisions referenced in Rule .1634 thru .1637 of 15A NCAC 13B.
7. A closure and post-closure plan must be submitted for approval at least 90 days prior to closure or partial closure of any landfill unit. The plan must include all steps and measures necessary to close and maintain the facility in accordance with all rules in effect at that time. At a minimum, the plan shall address the following:
  - a. Design of a final cover system; using the cap requirements outlined in Rule .1627
  - b. Construction and maintenance/operation of the final cover system and erosion control structures;
  - c. Surface water, ground water, and explosive gas monitoring.

#### MONITORING AND REPORTING REQUIREMENTS

1. Ground-water monitoring wells and monitoring requirements for the C&D landfill units shall be in accordance with the monitoring system approved in the TRANSITION PLAN for the facility and these additional conditions:
  - a. Monitoring well design and construction shall conform to the specifications outlined in Attachment 2, "North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities".
  - b. A geologist shall be in the field to supervise well installation, if necessary. The exact locations, screened intervals, and nesting of the wells shall be established after consultation with the SWS Hydrogeologist at the time of well installation for new monitoring wells.
  - c. For each new monitoring well constructed, a well completion record shall be submitted to DSWM within 30 days upon completion.

- d. Sampling equipment, procedures, and parameters shall conform to specifications outlined in the above-referenced guidance document, (Attachment 2), or the current guidelines established by DSWM at the time of sampling and in accordance with the approved TRANSITION PLAN OR ASSESSMENT AND REMEDIATION PLAN.
  - e. In order to determine ground-water flow directions and rates, each monitoring well shall be surveyed, and hydraulic conductivity values and effective porosity values shall be established for the screened intervals for each new monitoring well.
  - f. The permittee shall sample the monitoring wells semi-annually or as directed by the SWS Hydrogeologist.
  - g. A readily accessible unobstructed path shall be initially cleared and maintained so that four-wheel drive vehicles may access the monitoring wells at all times.
2. The permittee shall maintain a record of all monitoring events and analytical data. Reports of the analytical data for each water quality monitoring sampling event shall be submitted to DSWM in a timely manner.
3. The permittee shall maintain a record of the amount of solid waste received at the facility, compiled on a monthly basis. Scales shall be used to weigh the amount of waste received.
4. On or before 01 August 98 ( or an earlier date as requested by the Solid Waste Section), and each year thereafter, the permittee shall report the amount of waste received (in tons) at this facility and disposed of in the landfill to the Solid Waste Section and to all counties from which waste was accepted, on forms prescribed by the Section. This report shall include the following information:
- a. The reporting period shall be for the previous year, beginning 01 July and ending on 30 June;
  - b. The amount of waste received and landfilled in tons, compiled on a monthly basis, according to Condition 6 described above; and
  - c. Documentation that a copy of the report has been forwarded to all counties from which waste was accepted.

5. All records shall be maintained on-site and made available to the SWS upon request.
6. The Post-Closure plan approved in the TRANSITION PLAN shall be implemented and followed upon capping and closing the operating unit(s).

ATTACHMENT LIST

List of Additional Documents for the Approved Transition Plan

1. Site and Construction Transition Plan modification application for the Edgecombe County Landfill, Permit #33-01. Document titled Amendment No. 15 to the Transition Plan for Edgecombe County, North Carolina; dated 8 December 1997.
2. Site plans dated December 1997; Edgecombe County, North Carolina Construction and Demolition Landfill.