

Permit No.	Date	Document ID No.
53-01	September 02, 2009	8543

RECEIVED
September 2, 2009 via e-mail
Solid Waste Section
Raleigh Central Office

Post-Closure Plan

Lee County C&D Landfill
Lee County, North Carolina

Prepared for:
Lee County
Sanford, North Carolina

September 2009



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

LEE COUNTY C&D LANDFILL

POST-CLOSURE PLAN

TABLE OF CONTENTS

	<u>Page</u>
1.0 Overview	1
2.0 Post-Closure Contact	1
3.0 Post-Closure Use	1
4.0 Maintenance	2
4.1 Repair of Security Control Devices	2
4.2 Erosion Damage Repair and Vegetation	2
4.3 Correction of Settlement, Subsidence, and Displacement	2
4.4 Repair of Run-On/Run-Off Control Structures	2
4.5 Leachate Seeps	2
4.6 Groundwater Monitoring Wells	3
5.0 Monitoring Plan	3
5.1 Inspection Frequencies	3
5.2 Inspection Activities	3
5.3 Record Keeping	4

LEE COUNTY C&D LANDFILL

POST-CLOSURE PLAN

1.0 OVERVIEW

This Post-Closure Plan has been developed to outline steps to be taken to ensure the integrity of the landfill during its post-closure care period. The post-closure care period will be as specified by the NC Division of Waste Management and, at a minimum, will consist of the following:

- Maintaining the integrity and effectiveness of final cover system;
- Performing groundwater and surface water monitoring;
- Maintaining run-on/run-off controls.

No wastes will remain exposed after closure of the landfill. Access to the closed site by the public will not pose a health hazard.

2.0 POST-CLOSURE CONTACT

All correspondence and questions concerning the post-closure care of the landfill should be directed to:

Mr. Joseph T. Cherry
Solid Waste Superintendent
Lee County General Services
805 South Fifth Street
Sanford, NC 27331
Phone: (919) 718-4622.

3.0 POST-CLOSURE USE

During post-closure, the landfill will be maintained as a grassy hill. Lee County will maintain control of the property and prevent public access to it during the post-closure period.

There may be (an) access road(s) on the final cover to allow proper maintenance during post-closure. Precise location of the access road(s) will be determined by the County. Low ground pressure and rubber tire vehicles will be used for maintenance. Additionally, the County will maintain access to all site monitoring locations through the post-closure period.

4.0 MAINTENANCE

4.1 Repair of Security Control Devices

All security control devices will be inspected and maintained as necessary to ensure access to the site is controlled. Locks, vehicular gates, and fencing will be replaced if functioning improperly. Warning signs will be kept legible at all times and will be replaced if damaged by inclement weather or vandalism.

4.2 Erosion Damage Repair and Vegetation

If erosion of the final cover occurs during post-closure, the affected area will be repaired and reseeded as necessary. If necessary, rolled erosion control products (RECPs) will be used to expedite rapid revegetation of slopes and to secure topsoil in place. Revegetation (including fertilization and seeding) will be performed in accordance with the most recently approved erosion and sedimentation control plan and the North Carolina Erosion and Sediment Control Planning and Design Manual.

Mowing of the final cover surfaces will occur approximately once per year in order to help maintain a healthy stand of grasses and to cut down saplings and woody-stemmed plants.

4.3 Correction of Settlement, Subsidence, and Displacement

Slopes will be maintained after settlement in order to prevent ponding and allow for proper drainage without infiltration. If vertical or horizontal displacement occurs due to differential settlement, cracks will be filled with appropriate material and final cover will be reestablished. Excessive vertical displacement is not anticipated.

4.4 Repair of Run-On/Run-Off Control Structures

All drainage swales, ditches, and perimeter channels will be repaired, cleaned, or realigned in order to maintain their original condition. Any culverts that are damaged will be repaired or replaced. Sediment basins/traps will be cleaned out if sediment reaches design cleanout levels.

4.5 Leachate Seeps

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.
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.

4.6 Groundwater Monitoring Wells

Procedures outlined in the current Water Quality Monitoring (WQM) Plan or subsequent revision will take precedence; however, a brief description follows. All groundwater monitoring wells have been installed with concrete pads and protective casings to prevent accidental damage by vehicles and equipment. The wells are also equipped with a locking cap to discourage vandalism. Groundwater wells will be inspected regularly (at the time of sampling) to ensure integrity. Persons inspecting a well should look at the overall condition of the well, for signs of well tampering, and cracking or degradation of the concrete pad. Should a well require replacement, the defective well should be abandoned in accordance with specifications provided in the WQM Plan and a new well installed at a location that is approved by the DWM.

5.0 MONITORING PLAN

Inspections of the closed landfill will be scheduled to ensure the integrity and effectiveness of the final cover system, surface water systems, groundwater monitoring system, and to protect human health and the environment.

5.1 Inspection Frequencies

Inspections to be conducted by the County during the post-closure care period will occur regularly as shown in **Table 1**.

5.2 Inspection Activities

Inspections will include examination of the security control devices for signs of deterioration or vandalism to ensure access to the site is limited to authorized persons. The closed landfill will be checked to ensure the integrity of the final cover system is maintained, erosion damage is repaired, vegetative cover persists, and that cover settlement, subsidence, and displacement are minimal.

A report of findings will be made to the responsible party, including recommendations for actions deemed necessary to ensure the site continues to meet the closure performance standard.

5.3 Record Keeping

Records of inspections will be kept on file by the County throughout the post-closure period.

TABLE 1: POST-CLOSURE INSPECTION FREQUENCIES

INSPECTION ACTIVITY	FREQUENCY
Security Control Devices	Quarterly
Vegetative Cover Condition	Quarterly ¹
Surface Water Systems	Quarterly ¹
Erosion Damage	Quarterly ¹
Cover Settlement, Subsidence, and Displacement	Semi-Annually
Groundwater Monitoring System	Semi-Annually ²

Notes:

1. These items will be inspected after each large storm event (i.e. ≥ 1 inch in any 24 hours).
2. Or in accordance with groundwater monitoring schedule described in the current Water Quality Monitoring Plan.