



**FACILITY COMPLIANCE AUDIT REPORT**  
**Division of Waste Management**  
**Solid Waste Section**

<b>UNIT TYPE:</b>											
Lined MSWLF		LCID		YW		Transfer		Compost		SLAS	<b>COUNTY:</b> Haywood <b>PERMIT NO.:</b> 44-03 <b>FILE TYPE:</b> COMPLIANCE
Closed MSWLF	<b>X</b>	HHW		White goods		Incin		T&P		FIRM	
Closed CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF	

**Dates of Audit:** 11/20/09, 06/30/09, 06/23/09

**Date of Last Audit:** 05/15/07

**FACILITY NAME AND ADDRESS:**

Haywood County Municipal Solid Waste Landfill  
 Francis Farm Road  
 Waynesville, N. C. 28786

**GPS COORDINATES:** N: 35.50298 W: -82.95964

**FACILITY CONTACT NAME AND PHONE NUMBER:**

Stephen King, Haywood County Solid Waste Director  
 Telephone 828-627-8042

**FACILITY CONTACT ADDRESS:**

Stephen King, Director  
 Haywood County Solid Waste Department  
 278 Recycle Drive  
 Clyde, N. C. 28721

**AUDIT PARTICIPANTS:**

Andrea Keller, NCDENR, Division of Waste Management (DWM), Solid Waste Section (SWS)  
 Allen Gaither, NCDENR, DWM, SWS (06/23/09)  
 Stephen King, Haywood County Solid Waste Director  
 David Cotton, Haywood County Manager (11/20/09)  
 David Francis, Haywood County Tax Administration Director (11/20/09)  
 Mark Shumpert, Haywood County Engineer (11/20/09)

**STATUS OF PERMIT:**

Closure Permit dated December 13, 1995  
 Modification to Closure Permit dated May 23, 2006

**PURPOSE OF AUDIT:**

Comprehensive Audit

**STATUS OF PAST NOTED VIOLATIONS:** None

**AREAS OF CONCERN AND COMMENTS:**

June 23, 2009

1. Comprehensive inspection of closed MSWLF conducted with S. King, A. Gaither, and A. Keller.

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2. Closed MSWLF cap needs mowing. Good vegetation noted on majority of cap. One area (on top) needs attention (seeing/vegetation). S. King noted that this area receives extra soil when available, difficult to maintain vegetation.
3. Groundwater and methane monitoring records were available for review and current. Unable to access all wells during site inspection as access roads require mowing/maintenance.

Well ID /Monitoring Locations	Notes	Issues
MM-7	Methane Monitoring well, pvc 1.5-inch diameter	No well tag
MM-1	Noted in LFG assessment plan	Not installed
MM-2	Methane monitoring well (perimeter)	No well cap
MM-3	Methane monitoring well (perimeter)	No well cap
BMW-4	Listed on LFG monitoring plan	No data available
MW-1A	GW well	No well tag
MW-5	GW well	Pad cracked
MW-8	Location of well doesn't match location on map	No well casing
MV-1	Methane vents along school maintenance building. 2 noted in plan, 3 installed	Required to be monitored in LFG assessment plan
MV-2		
MV-3		
Water Valve	In-ground outside building.	Required to be monitored in LFG assessment plan
Main building	Continuous methane monitoring in three locations: hallway, carpenter shop, bus garage.	Results not recorded. System not managed by County

Note: wells should be **accessible** (maintain pathways to monitoring wells), **labeled**, all buildings should be noted in LFG monitoring plan and monitored, all cracked pads should be fixed.

4. The Modification to Closure Permit (dated May 23, 2006) approved the construction of a gravel parking lot (for school buses) on top of the closed landfill. Note that Condition #2 and Condition #6 of the closure permit require that the cap integrity and effectiveness of the cap system (including making repairs to cover settlement, subsidence erosion, or other events, and to prevent surface water from impoundment over waste) must be maintained.

June 30, 2009

1. Follow-up to closed MSWLF comprehensive inspection (S. King and A. Keller on site).
2. Identified equipment manual for current methane monitoring equipment. Determined that the equipment had not been calibrated recently, no calibration gas available. Additionally, meter recorded in %Vol (data had been incorrectly recorded as %LEL without conversion). S. King will convert all historical data, update monitoring records, and either order calibration gas or update monitoring equipment.

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3. Records review noted the following:

- a. LFG Assessment Plan (June 7, 2000 submittal to the Section) was not completed. Several well (methane monitoring) were not installed and there is no record that item #3 (daily monitoring for three weeks) had been completed, therefore there is no approved LFG monitoring plan in place.
  - b. Facility Structures: school bus maintenance building monitored (but require monitoring by county as well, and record retention) with continuous monitoring equipment but two other structures exist at facility and had not historically been monitored. Implement monitoring and complete assessment activities.
  - c. Groundwater assessment requirements (August 23, 2004 letter from the Section) not completed. Compliance hydrogeologist notified for GW monitoring records review.
4. Conducted methane monitoring (with existing equipment). Readings varied from 0-4% Vol. However, at two locations no accurate reading was taken (meter was not responding to high-range readings >5% Vol) and calibration of the equipment was discussed. In order to properly complete original assessment requirements an evaluation of equipment accuracy was recommended.

November 20, 2009

1. Comprehensive inspection of closed MSWLF conducted with A. Keller, D. Cotton, D. Francis, and M. Shumpert.
2. Haywood County reported on meeting with McGill & Associates regarding both the LFG assessment and the GW assessment/mitigation activities. Contract discussions with BLE for management of the LFG extraction system have been underway.
3. County is requesting conference call with all involved Section personnel to discuss steps taken to date by county regarding both LFG and GW monitoring/assessment.
4. LFG wells caps have been retrofitted to meet industry standards (for LFG monitoring).



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5. New LFG monitoring equipment was purchased by the county along with calibration standards.
6. Methane monitoring results were reviewed. Recommendations for data collection sheet: clarify continuous monitoring outputs (in school bus maintenance main building, 3 locations), include name of LFG collector, only place one day's worth of data per sheet, indicate if % Volume or % LEL was read vs. calculated, ensure that site map nomenclature matches data sheet.

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- 7. LFG wells #3 and #6 (according to data sheet) indicated 100% LEL on 11/2 and 11/13. This information was previously communicated to the Section (A. Keller).
- 8. Cap integrity was discussed. Some settlement had occurred (repairs to this area were evident) on top of the landfill. Please note that maintaining the cap integrity and effectiveness of the cap system are part of the approved post-closure conditions and will require ongoing attention.



11/20/09

Please contact me if you have any questions or concerns regarding this audit report.

Phone: 828-296-4700

*Andrea Keller*

Environmental Senior Specialist  
**Regional Representative**

Mailed on : <u>11/30/09</u> by		hand delivery		US Mail		Certified No. <u>  </u>
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ec: Mark Poindexter, Field Operations Branch Supervisor  
Deb Aja, Western District Supervisor  
Donald Herndon, Compliance Officer