

FACILITY COMPLIANCE AUDIT REPORT
Division of Waste Management
Solid Waste Section

UNIT TYPE:

Lined MSWLF		LCID		YW		Transfer		Compost		SLAS		COUNTY: MADISON PERMIT NO.: 58-02 FILE TYPE: COMPLIANCE
Closed MSWLF	X	HHW		White goods		Incin		T&P		FIRM		
CDFL		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF		

Date of Audit: 09/17/10, 05/03/11

Date of Last Audit on file: 10/12/09

FACILITY NAME AND ADDRESS:

Madison County Municipal Solid Waste Landfill
 389 Long Branch Road
 Marshall, NC 28753

GPS COORDINATES: **N:** 35.80182 **E:** -82.65050

FACILITY CONTACT NAME AND PHONE NUMBER:

Jim Huff, Madison County Solid Waste Director
 Telephone: 828-649-2311

FACILITY CONTACT ADDRESS:

Madison County Solid Waste Department
 271 Craig Rudisill Road
 Marshall, NC 28753

AUDIT PARTICIPANTS:

Andrea Keller – NCDENR Solid Waste Section
 Jim Huff – Madison Co. SW Director (5/3/11)
 Larry Wright, Madison Co. SW Dept. (5/3/11)

STATUS OF PERMIT:

CLOSED: One Category I MSWLF cell and Two Category II MSWLF cells per the 10/19/1994 Landfill Closure Plan drawing no. 93131.
 Closure Letter dated: 12/21/95

PURPOSE OF AUDIT:

Comprehensive Audit

NOTICE OF VIOLATION(S): NONE

STATUS OF PAST NOTED VIOLATIONS: NONE

AREAS OF CONCERN AND COMMENTS:

September 17, 2010

1. During the previous inspection (10/12/09) it was noted that the access road to the landfill had multiple gates/locks, including one for the county animal control shelter located within the property boundary of the landfill. Additionally, the final two gates across the access road were part of a corral system for the county animal shelter's horse rescue program. Direct access to the landfill had been resolved and the primary gate is controlled by a multiple-lock system (SW Dept., USFS, French Broad Electric Co., and the maintenance contractor).

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2. The closed landfill caps (three units) had been recently mowed/maintained. Edge-of-Waste (EOW) markers were in place around the perimeter of the mowed portion of the cell. Further maintenance was scheduled (per J. Huff) for the sloped edges of the cap systems.

09/17/10



Be aware that woody/tree growth can encroach upon the cap system. As these types of root systems will most likely extend beyond the erosion layer into the impermeable layer of the cap (thus destroying the integrity of the cap system and creating a path for water into the landfill), and as trees both inhibit the proper mowing and necessary maintenance of the cap while impeding on the ability to visually inspect the cap integrity, this woody shrub/tree growth must be eliminated. Any stumps and root systems of larger trees must be removed and the cap system repaired.

The previous audit report (10/12/09) discussed Post Closure Condition requirements regarding the monitoring of Landfill Gas (LFG) at the facility. The facility submitted a LFG Monitoring Plan (dated 4/20/10) which was approved by the Section on April 27, 2010. The LFG Monitoring Plan contained a site map (Figure 1) which contained a new "Facility Boundary" designation which differed from the previously approved Facility Boundary (which matched the existing Property Line as depicted in Figure 1). **Please note that changes to facility boundaries require a Permit Modification with the Section.** Contact Allen Gaither (828-296-4703; allen.gaither@ncdenr.gov), permit engineer for Madison Co., to discuss further.

May 3, 2011

1. On site to conduct comprehensive landfill audit and to document actions the County has taken in response to LFG exceedances at the property boundary. Weather conditions: ~69 °F, partly cloudy, 70% humidity.
2. Mowing/maintenance of the cap was being conducted at the facility during the inspection (Larry Wright). The placement of the edge-of-waste (EOW) markers around the perimeter portions of the three waste cells was discussed during the site inspection. It was stated (J. Huff) that previous employees of the MSWLF were involved in determining the historical EOW.
3. The Landfill Gas Plan (LFG) and sampling data from the March 24, 2011 event was reviewed. Both verbal and written notification was received by the Section regarding the exceedance of 100% LEL for Methane at two property boundary LFG wells (GP-5 and GP-6). The sampling event was the first scheduled quarterly event for the newly installed LFG well system. The County documented their response to the exceedance in an emailed dated April 4, 2011 (site structures, off-site structures, risk assessment, began consultation on corrective action plan). It appeared as though the County was compliant with the approved LFG plan in their response to the LFG exceedances at the property boundary.

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4. During the site inspection, field calibration was verified and G-4, 5, 6, and 7 were sampled for LFG. Results as follows:

Well ID	% Methane by Volume	% LEL
GP-4	0	0
GP-5	42	>100%
GP-6	50	>100%
GP-7	0	0

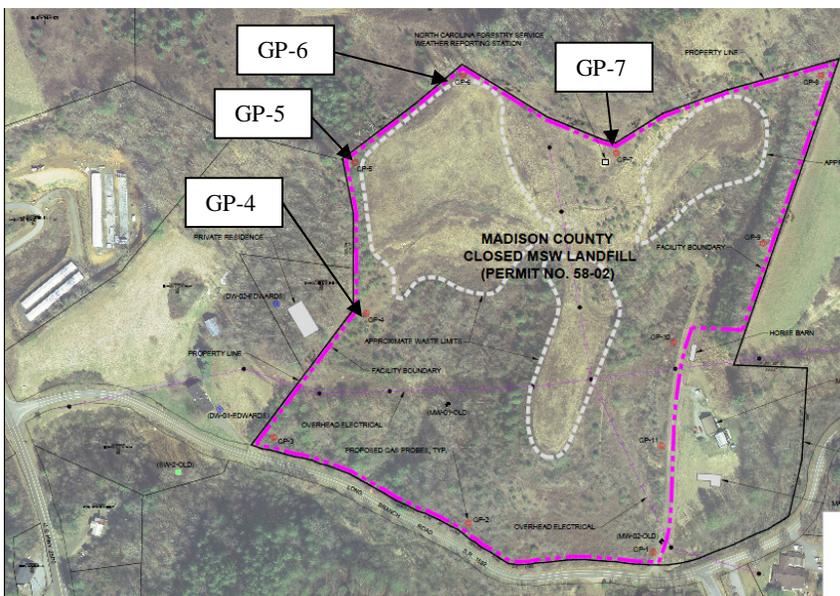
The County planned to complete the monitoring event (collection from all required locations and additional screenings, as needed) later in the day. It was recommended that the sampling frequency be increased as part of the assessment of LFG migration at the facility.



05/03/11

All newly installed GP wells were locked, labeled, and constructed with sampling ports.

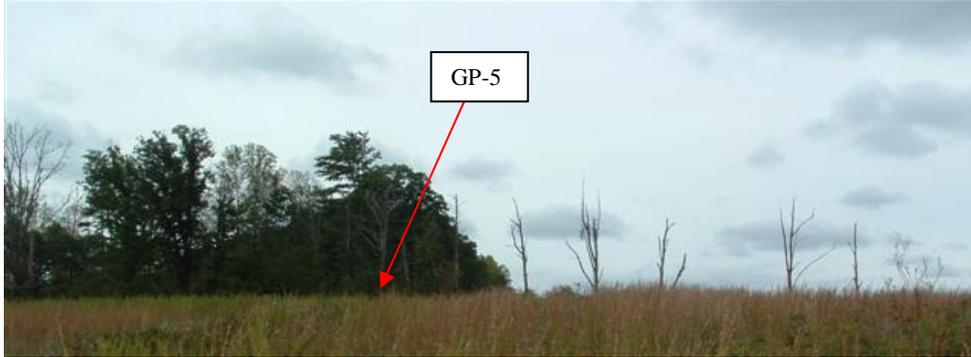
5. Figure 1 below (from the approved LFG Plan) indicates the location of the LFG monitoring points:



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Note: the region between GP-5 and GP-6 has historically indicated potential methane gas presence (dead trees, noted in previous inspection dated 05/25/06).



6. The approved LFG Plan states that the County, within 60 days of detection, must *prepare and implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the Division of Solid Waste Management that the plan has been implemented. The plan will describe the nature and extent of the problem and the proposed remedy.* In order to achieve compliance, with the **15A NCAC 13B .0503 (2)(a)ii** Rule regarding exceedances of the LEL for the gases at the property boundary, the County must implement measures to addresses LFG exceedances. While these measures do not require approval from the **Section, notification of actions taken to address the potential health and safety risks should continue to be communicated in writing** (to A. Keller, and Jaclynne Drummond).

Jaclynne Drummond
 Compliance Hydrogeologist
 NC Department of Environment and Natural Resources
 Division of Waste Management – Solid Waste Section
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 Raleigh, NC 27699-1646
 919-508-8500, Fax 919-733-4810

It is recommended that precautionary measures include increased site monitoring and/or supplementing monitoring of on site structures, and to conduct and document risk assessment of potential receptors to include any residences and other structures within 500-feet of the waste boundary. **Note that the 60-day period to prepare and implement a remediation plan sets a deadline of May 23, 2011.**

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

 Andrea Keller
 Environmental Senior Specialist
Regional Representative

Phone: (828) 296-4700

Mailed on : <u>05/16/11</u> by		Hand delivery	US Mail	Certified No. []
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ec: Deb Aja, Western District Supervisor
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