



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

**UNIT TYPE:**

Lined MSWLF		LCID		YW		Transfer		Compost		SLAS		<b>COUNTY:</b> Jackson <b>PERMIT NO.:</b> 50-01 <b>FILE TYPE:</b> COMPLIANCE
Closed MSWLF	<b>X</b>	HHW		White goods		Incin		T&P		FIRM		
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF		

**Date of Audit:** March 16, 2011

**Date of Last Audit:** November 19, 2008

**FACILITY NAME AND ADDRESS:**

Western Carolina University  
 MSW Landfill  
 Monteith Gap Road (State Road 1336)  
 Cullowhee, NC 28723

**GPS COORDINATES:** N: 35.32510 E: -83.18189

**FACILITY CONTACT NAME AND PHONE NUMBER:**

Roger Turk, Grounds Superintendent  
 828/227-7224  
 828/227-7198 fax

**FACILITY CONTACT ADDRESS:**

Western Carolina University  
 Facilities Management  
 3476 Old Cullowhee Rd.  
 Cullowhee, NC 28723

**AUDIT PARTICIPANTS:**

Troy Harrison, NC Division of Waste Management Solid Waste Section  
 Roger Turk, Western Carolina University

**STATUS OF PERMIT:**

Closure Letter issued on 9/5/95

**PURPOSE OF PERMIT:**

Comprehensive Audit of Closed MSD Landfill

**NOTICE OF VIOLATION(S):**

**Title 15A North Carolina Administrative Code 13B .0510 (c)** states: When a solid waste disposal site has been closed in accordance with the requirements of the Division, future necessary maintenance and water quality monitoring shall be the responsibility of the owner and the operator and shall be specified in the closure letter.

**Condition 8b of the closure letter dated January 30, 1996**, required that “the permittee shall sample the detection monitoring wells and surface water sampling locations at a minimum on a semi-annual basis.”

Western Carolina University is in violation of 15A North Carolina Administrative Code 13B .0510(c) on March 16, 2011, in that no ground or surface water monitoring had been conducted at the Western Carolina University Landfill since July 01, 2004.

In order to achieve compliance, Western Carolina University must:

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1. Within 30 days, begin annual surface and groundwater sampling, and
2. Within 90 days, submit results of surface and groundwater sampling to:

Ms. Jaclynne Drummond, Compliance Hydrogeologist  
NCDENR-DWM - Solid Waste Section  
1646 Mail Service Center  
Raleigh, NC 27699-1646

and

Troy Harrison, Environmental Senior Specialist  
NCDENR-DWM - Solid Waste Section  
2090 US Highway 70  
Swannanoa, NC 28778

Further action may be required by the Division.

**STATUS OF PAST NOTED VIOLATIONS:**

N/A

**AREAS OF CONCERN AND COMMENTS:**

1. All Photographs were taken by Troy Harrison on March 16, 2011.
2. The facility ceased receiving waste on 10/08/1993 and the final soil cover was in place as noted in a 4/21/94 audit report.
3. Vegetation was well established and well maintained on top of the landfill. The slope of the landfill was heavily covered with kudzu with a few dead trees. Groundhog burrows were observed throughout the area where kudzu was growing.

Section II (E) of the Landfill Closure Plan for this landfill (dated 5/17/94) States: "Vegetative cover will be provided upon completion of all cover operations. The seeding, fertilizing and mulching will be in accordance with the vegetative cover specifications on the plans which include native grasses as included in the original operational plans."

15A NCAC 13B .0505 (6)(a) states: "Within six months after final termination of disposal operations at the site or a major part thereof or upon revocation of a permit, the area shall be stabilized with native grasses."

Post Closure Condition 4 states: "The integrity and effectiveness of the final cover system and any permanent erosion control devices must be maintained. This could include making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion or other events."

**It is requested that Western Carolina submit a plan to remove the kudzu and woody vegetation from the slope of the landfill and the area sown with native grasses. The plan must include a plan to remove groundhogs from the slope of the landfill. Please submit this plan to Troy Harrison by July 1, 2011. The plan must also include provisions for the placement of "edge-of waste" markers.**

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Top level of Landfill being well maintained



Second Top level being maintained and unmaintained Eastern slope



Unmaintained Eastern slope with Woody Vegetation



Unmaintained Western slope with Woody Vegetation



Groundhog Burrow



Looking south from the bottom at the Unmaintained Eastern Slope

4. No ponded water was observed on the cap of the landfill.
5. Groundwater monitoring wells were located. There were three down gradient wells (MW-2, MW-3 & MW-4) and one background (MW-1). A letter dated August 30, 2000, from Mr. Mark Poindexter, Environmental Compliance/Solid Waste Section to Mr. Andrew B. Comrie, Director of Physical Plant WCU, stated that the facility may begin annual monitoring at the Western Carolina University Landfill. Solid Waste Section records indicate that the last surface and groundwater sampling event was on July 1, 2004. On November 16, 2004 a letter from Mr. Larry Rose, Solid Waste Section Hydrogeologist to Mr. Joe Walker, Western Carolina University in response to a request to discontinue surface and groundwater sampling. The request was denied due to the presence of cis-1, 2-dichloroethane in the then recent samples. **The Solid Waste Section has no**

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**further records of surface and groundwater sampling at this facility.**

Discoloration in a stream below the landfill was observed. This stream was sampled during the July 1, 2004 sampling event and will need to be included any future sampling activity. Copies of this report will be forwarded to the NC DENR-Division of Water Quality for review.



Stream near Northeastern edge of Landfill

6. Paragraph 1 of the Post Closure Conditions of the Closure Letter states: “the owner shall take the measures necessary to ensure that the closed site shall continue to meet the design standards for landfill gas found in Rule .0503(2) (a).”

15A NCAC 13B .0503(2)(a) states:

“A site shall meet the following design requirements:

- (a) The concentration of explosive gases generated by the site shall not exceed:
  - (i) twenty five percent of the limit for the gases in site structures (excluding gas control or recovery system components); and
  - (ii) the lower explosive limit for the gases at the property boundary.”

Mr. Turk stated that, to his knowledge, landfill gas monitoring has not been conducted at the facility. An investigation should be done to determine to determine compliance with the Closure Condition. A preliminary study should be conducted to determine if the landfill is generating explosive gas within 60 days of receipt of this report. Further action may be required upon receiving results of the study.

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

Phone: (828) 296-4701

Troy Harrison  
 Environmental Senior Specialist  
*Regional Representative*

Mailed on : <u>May 17, 2011</u> by	Hand delivery	X	US Mail to Roger Turk, WCU Grounds Superintendent	X	Certified No. <u>7008 0150 0000 7473 4301</u> to David O. Belcher , WCU Chancellor
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- cc: Deb Aja, Western District Supervisor  
 Donald Herndon, Compliance Officer  
 Mark Poindexter, Field Operations Branch Head  
 Jackie Drummond, Compliance Hydrogeologist  
 Joe Walker, Director, WCU Facilities Management  
 Keith Haynes, NC Division of Water Quality