



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

UNIT TYPE:											
Lined MSWLF		LCID		YW		Transfer		Compost		SLAS	<b>COUNTY: McDowell</b> <b>PERMIT NO.: 56 - 01</b> <b>FILE TYPE: COMPLIANCE</b>
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: 3/05/14                      Date of Last Audit: 2/11/11

**FACILITY NAME AND ADDRESS**

McDowell MSW – Closed October 7, 1994  
 2849 NC Hwy 226 S.  
 Marion, NC 28752

**GPS COORDINATES: (Decimal Degrees) N: 35.65758      E: -81.95465**

**FACILITY CONTACT NAME AND PHONE NUMBER:**

Mike Gladden – Public Works Director (828) 659-25211

**FACILITY CONTACT ADDRESS (IF DIFFERENT):**

Charles Abernathy (828) 652-7121  
 McDowell County Manager  
 60 East Court St.  
 Marion, NC 28752

**AUDIT PARTICIPANTS:**

Bill Wagner, Environmental Sr. Specialist – Solid Waste Section

**STATUS OF PERMIT:**

Site closed in accordance with 15A NCAC 13B .0510: Waste Last Received 4/08/94  
 Original Permit to Operate Issued 10/02/90

**PURPOSE OF AUDIT:**

Comprehensive Audit.

**NOTICE OF VIOLATION(S):**

15A NCAC .0510(a) requires that the disposal site be *closed in accordance with rule .0505*. Rule .0505(1)(b) states the “Specified monitoring and reporting requirements shall be met.”

1. The December 13, 1995 letter, titled “*Closure of the McDowell County Landfill, Permit #56-01*” states that “*MANAGEMENT OF LANFILL GAS: 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 .0503(2)(a) requires that “*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.*”

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**McDowell County has failed to show that the closed municipal solid waste (MSW) landfill, Permit #56-01 meets the requirement for landfill gas as required by 15A NCAC .0503(2)(a).**

- The December 13, 1995 letter, titled “*Closure of the McDowell County Landfill, Permit #56-01*” states that “*the permittee shall maintain a record of all monitoring events and analytical data. Reports of the sampling events and analytical data shall be submitted to the Section in a timely manner. 15A NCAC .0505(1)(b) requires that “Specified monitoring and reporting requirements shall be met.”*”

**McDowell County has failed to submit reports of water quality (ground water and surface water) events and analytical data for the closed municipal solid waste (MSW) landfill (Permit #56-01) as required by 15A NCAC .0505(1)(b).**

You are hereby advised that, pursuant to N.C.G.S. 130A-22, an administrative penalty of up to \$15,000 per day may be assessed for each violation of the Solid Waste Statute or Regulations. If the violation(s) noted here continue, you may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

**STATUS OF PAST NOTED VIOLATIONS (List all noted last audit):**

None.



Figure #1. McDowell County GIS aerial. (Approximate limits of Waste disposal areas and monitoring well locations.)

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**SITE HISTORY and BACKGROUND:**

- The closed McDowell County municipal solid waste (MSW) landfill consists of two separate areas: “Discrete Category I Landfill” and “Discrete Category II Landfill”. (Figure 1)
- Category I landfills are MSW landfills that did not receive solid waste after 10/9/93, and were closed in accordance with their Permit, the Conditions of their Permit, and 15A NCAC 13B .0510.
- Category II landfills are MSW landfills that continued to receive solid waste after 10/9/91, but stopped receiving waste before 10/9/93, and were closed in accordance with their Permit, the Conditions of their Permit, and 15A NCAC 13B .0510; and the cap system had to be installed within 6-months of the last receipt of wastes and meet the criteria of set forth in 15A NCAC 13B .1627(c)(1).
- On 4/08/94 the NCDEHNR approved McDowell County’s request for a “Temporary Solid Waste Transfer Facility”.
- On 9/30/94 McDowell County’s consultant (Jensen Engineering) requested approval for the “temporary receiving and stockpiling for future C&D waste during the interim period between 10/9/94 and the eventual approval of the C&D landfill site.” (A records search failed to find any documentation showing that McDowell County’s request was either denied or approved by the NCDEHNR.)
- On 12/13/95 the NCDEHNR confirmed, in a “Closure Letter” titled “*Closure of the McDowell County Landfill, Permit # 56-01*”, to the McDowell County Manager (Charles Abernathy) that the McDowell County MSW Landfill (Permit #56-01) had been closed in accordance with the applicable requirements.
- The “Closure Letter” detailed the specific “post closure conditions” requirements for the closed landfill.
- On 9/16/99 a Memorandum was written from Al Hetzell (Waste Management Specialist, Solid Waste Section) to Phil Prete (Field Operations Supervisor - SWS) with the subject of “McDowell County C&D Stockpile/Temporary Storage Area Closure – McDowell County, Non-Facility”.

In the Memo it was stated that “*After having reviewed the existing records and information in regards to the area used by McDowell County to store their C&D waste, while a permit was in process, Julian Foscue (Area Supervisor – SWS) and I after discussing the situation, feel we can best handle this closure in the field. The County is no longer using this site and wants to close it. A new site proposed for their C&D cannot be permitted so McDowell is currently separating and shipping their C&D waste that can’t be recycled. A closure date of April 1, 2000 has been discussed with the Solid Waste Director who is in Agreement.*” (A records search failed to find any other documentation relating to the temporary receiving and stockpiling of C&D waste by McDowell County.)

- In a letter dated 10/31/07 the Solid Waste Section Regional Engineer (Larry Frost) approved a “Methane Investigation at the McDowell County MSW Landfill (Permit #56-01). The purpose of the investigation was “*to execute an assessment of the methane potential at the former McDowell County Landfill.*”
- On 10/20/07 McDowell County’s consultant (Shield Engineering) requested that NCDER approve the installation of three methane extraction wells at the McDowell County MSW Landfill.
- On 12/06/07, the Permitting Branch Supervisor (Ed Mussler) of the Solid Waste Section (SWS) approved the Shield Engineering’s request to install three methane extraction wells.
- On 1/16/09 the SWS approved McDowell County’s request to construct a *Qualifying Firing Range* adjacent to the closed MSW landfill. (Figure 1)

**AREAS OF CONCERN AND COMMENTS:**

1. Rule 15A NCAC 13B .0510(c) requires that “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.”

The December 13, 1995 Closure Letter states in the Post Closure Conditions:

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- Post Closure Condition #4 Final Cover System: *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.*

The “Discrete Category II” landfill’s cap had been recently mowed. Inspection of the mowed area found multiple areas of woody vegetation concentrated in the northern and western areas. (Photos #1 and #2)



1. Small tree near the northern edge of the “Discrete Category II” landfill. (Note the 4 ½” x 7 ½” yellow field book in the tree for scale.)



2. Woody vegetation on the northern segment of the cap of the “Discrete Category II” landfill.

2. The “Discrete Category I” landfill was well maintained – mowed and free of surface erosion and subsidence. However, it appears that the northeast quadrant of this landfill may be covered with mature trees. The waste boundaries must be determined and marked to confirm that the cap is free of trees and woody vegetation to ensure that the integrity and effectiveness of the final cover system is not compromised.
3. Permanent waste boundary and property line markers must be installed at both the “Discrete Category I” landfill and the “Discrete Category II” landfill. (See the attached May 29, 2009 Memo: *Permanent Edge-of-Waste Markers at Construction and Demolition Debris Landfills, Industrial Solid Waste Landfills and Municipal Solid Waste Landfills*)
4. During the audit, four groundwater monitoring wells were located. (Figure 1 and Photos #7 through #13).



7. “Flush mount” ground water monitoring well in the convenience center collection area at the entrance.



8. Close-up of the “flush mount” ground water monitoring well. Note the absence of the required “flush mount” cover.

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9. Ground water monitoring well MW-2 located off the SE quadrant of "Discrete Category I"



10. Well tag on ground water monitoring well MW-2 in photo #9.



11. Ground water monitoring well MW-4 located north of the transfer station.



12. Looking down the outer casing to MW-4 located north of the transfer station at the cap to the well. (Note that the well is not properly secured with a lock.)



13. MW-3 located southwest of the scale house. (Note that the well is not properly secured with a lock, nor it is not marked with a unique ID / well tag.)

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5. During the inspection, what appeared to be two of the tree methane extraction wells that were approved for installation by the SWS on 12/06/07, were located. These wells are not, and never have been put into use. (Photos #15 & #16)



15. Six inch diameter white PVC methane extraction well located near the center of “Discrete Category II Landfill”. Note that the well is not capped.

16. Two inch diameter white PVC methane extraction well located northern quadrant of “Discrete Category II Landfill”. (Note the 4 ½” x 7 ½” yellow field book in for scale.)

6. There was no evidence of any leachate breakouts or seeps.
7. Groundwater sampling of four monitoring wells last conducted on 2/27/14 by *Pace Analytical*. However, the results of this sampling event was not submitted to the Solid Waste Section as required by 15A NCAC .0505(1)(b).
8. The access roads are well maintained.
9. **Within 60-days of your receipt of this report, please a develop a corrective action plan for review and approval (with a time line for completion of each corrective action) to correct the following issues:**
- a) **Determine and mark the limits of waste in both the “Discrete Category I and II” landfills; and determine and mark the property lines of the landfill(s) in accordance with the attached May 29, 2009 Memo Permanent Edge-of-Waste Markers at Construction and Demolition Debris Landfills, Industrial Solid Waste Landfills and Municipal Solid Waste Landfills” .**
  - b) **Secure all groundwater monitoring wells with locking well caps.**
  - c) **Ensure that all well casings are terminated no less than 12 inches above land surface unless all of the following conditions are met:**
    - (i) **specific conditions directly related to business activities, such as vehicle traffic, would endanger the physical integrity of the well; and**
    - (ii) **the well head is completed in such a manner so as to preclude surficial contaminants from entering the well.**
  - d) **Ensure that all groundwater monitoring wells are equipped with a steel outer well casing or flush-mount cover, set in concrete, and other measures sufficient to protect the well from damage by normal site activities;, and**
  - e) **Ensure that all monitoring wells have a permanently affixed identification plate which can be correlated with an updated site map.**
  - f) **Remove all woody vegetation and trees from the caps of the landfills; repair and re-grade the caps where needed to correct the effects of settlement, subsidence, erosion.**

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Submit the proposed corrective actions for review, to:

Bill Wagner, Environmental Senior Specialist  
NCDENR – DWM  
Asheville Regional Office  
2090 US Hwy 70  
Swannanoa, NC 28778

- g) Submit either a proposal for completing the methane extraction project, or a plan for terminating the project. If the project is to be terminated, please ensure that the landfill gas recovery properly abandoned in accordance with 15A NCAC 2C .0113 (b)(1), entitled “*Abandonment of Wells*”. Please contact Jaclynne Drummond to discuss your proposed course of action for the methane extraction project:

Jaclynne Drummond, Compliance Hydrogeologist  
NCDENR – DWM  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
(919) 707-8294

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



Phone: 828-298-4705

*Bill Wagner: Regional Representative*

<b>Delivered on :</b> <u>3/12/14</u> by		hand delivery		US Mail	<input checked="" type="checkbox"/>	<b>Certified No. <u>7012 1010 0002 1967 9927</u></b>
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enc: May 29, 2009 Memorandum “*Permanent Edge-of-Waste Markers at Construction and Demolition Debris Landfills, Industrial Solid Waste Landfills and Municipal Solid Waste Landfills*”

ec: Jason Watkins, Western District Supervisor – Solid Waste Section  
Sarah Rice, Compliance Officer – Solid Waste Section  
Jaclynne Drummond, Compliance Hydrogeologist – Solid Waste Section  
Mike Gladden, McDowell County Public Works Director ([mike.gladden@mcdowellgov.com](mailto:mike.gladden@mcdowellgov.com))