



**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.:</b> <b>FILE TYPE: COMPLIANCE</b>
Closed MSWLF		HHW		White goods		Incin		T&P		FIRM		
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF		

**Date of Audit:** 9/22/14**Date of Last Audit:** 3/05/14**FACILITY NAME AND ADDRESS:**

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

**GPS COORDINATES:** N: 35.65758    E: -81.95465**FACILITY CONTACT NAME AND PHONE NUMBER:**

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

**FACILITY CONTACT ADDRESS:**

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

**AUDIT PARTICIPANTS:**

Bill Wagner, Environmental Sr. Specialist – Solid Waste Section  
 Jaelynne Drummond, Compliance Hydrogeologist – 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):**

1. **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.*”
  - a) The December 13, 1995 letter, titled “*Closure of the McDowell County Landfill, Permit #56-01*” states in part that “*The integrity and effectiveness of the final cover system and any permanent erosion control devices be maintained. This could include making repairs to the cover as necessary to correct the effects of settlement, erosion or other events.*”

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McDowell County has failed to maintain the final cover system in accordance with the December 13, 1995 letter, titled “*Closure of the McDowell County Landfill, Permit #56-01*”. Specifically, trees and woody vegetation have become established on both the *Discrete Category I* and the *Discrete Category II*, closed landfill units. The root systems of this vegetation can compromise the integrity of the cap systems which can lead to increased erosion of the cap as well as increased surface water infiltration.

**It is recommended that McDowell County develop and implement a written maintenance plan for the landfill. At a minimum this plan should include a schedule for routine inspections and implementation of the following actions:**

- Ensure that vegetation on the cap is mowed sufficiently to allow for inspection of the cap;
- Ensure that trees and woody vegetation are prevented from becoming established on the cap;
- Ensure that any surface erosion is repaired and re-seeded as necessary;
- Ensure that erosion is controlled and repaired to so that no silt or sediment leaves the site;
- Ensure that any leachate seeps in the cap are repaired;
- Ensure that any areas of bare soil are reseeded to establish a vegetative cover;
- Ensure that any areas of subsidence of the cap are repaired, re-sloped and reseeded as necessary to ensure the controlled shedding of surface water from the cap;
- Ensure that “edge-of-waste” markers are maintained in good repair;
- Ensure that property line markers are installed and maintained in good repair; and
- Ensure that the groundwater monitoring wells are maintained in good repair.

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be 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 Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may also 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:**

1. 15A NCAC .0503(2)(a) and 15A NCAC 13B .0505(1)(b): The facility was issued a Notice of Violation on March 12, 2014 based on a March 5, 2014 inspection that revealed that the facility had not been monitoring for groundwater and landfill gas as required in the .0503(2)(a) and .0505(1)(b). As of the September 22 inspection, it has been determined that regular groundwater monitoring is occurring although there remain problems with the wells themselves and the reporting to the Section. There is no evidence that the facility has commenced landfill gas monitoring as required by law. Therefore these violations remain unresolved.

**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).

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- 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. (Figure 2)
- 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 the "Discrete Category II Landfill". (Figure 2)
- There are no records of the installation of the three proposed methane extraction wells on the "Discrete Category II Landfill".
- Only one of the three proposed methane extraction wells, believed to be MDW-3, was observed during this inspection. (Figure #2 and Photo #13). It is believed that proposed methane extraction wells MDW-1 and 2 were never installed. The odor of landfill gas was present in the area of MDW-3, suggesting that this well was passively venting landfill gas.
- At some unknown time (believed to be in early 2009) the approved methane extraction project on the "Discrete Category II Landfill" was abandoned.
- 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)

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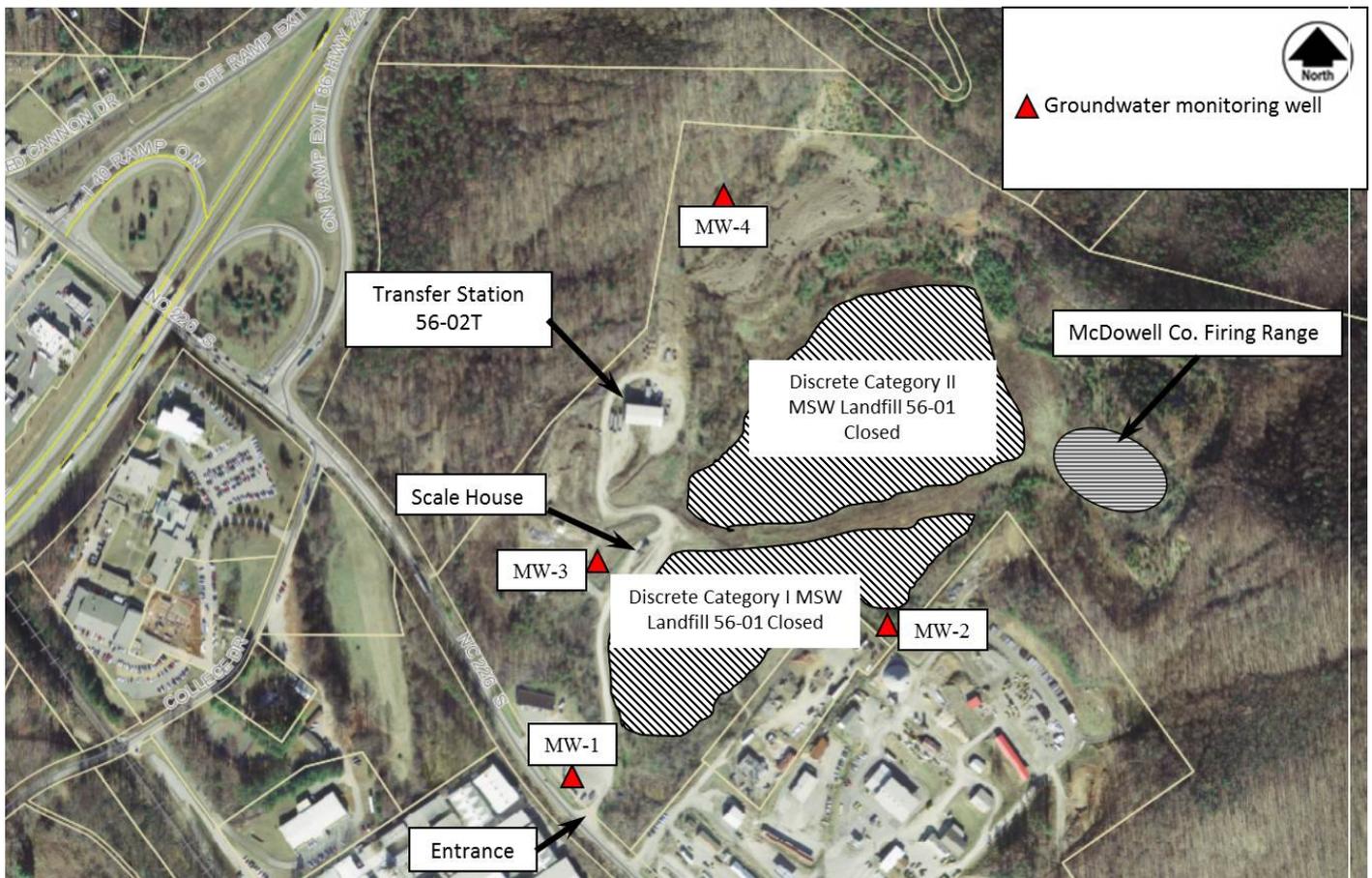


Figure 1: McDowell Co. GIS Site Map – Approximate Location of Closed MSW Landfill 56-01

**AREAS OF CONCERN AND COMMENTS:**

1. The “Discrete Category I” landfill was well maintained – mowed and free of surface erosion and subsidence. However, as the limits of waste are not marked, it appears that the northeast quadrant of this landfill may be covered with mature trees. (Photo #7) **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. (See the enclosed May 29, 2009 Memorandum “*Permanent Edge-of-Waste Markers at Construction and Demolition Debris Landfills, Industrial Solid Waste Landfills and Municipal Solid Waste Landfills*”)
2. Inspection of the four groundwater monitoring wells (Figure 1, and photos #8 through #12) found multiple instances where the wells failed to comply with the North Carolina *Well Construction Standards* (15A NCAC 2C). These possible violations have been referred to the Division of Water Resources’ Asheville Regional Office (828-296-4500).
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 #8 through #12).

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1. Looking (E) down the access road to the gun range at multiple trees near the northeast edge of the "Discrete Category II" landfill.

2. Multiple trees on the northeast segment of the cap of the "Discrete Category II" landfill.

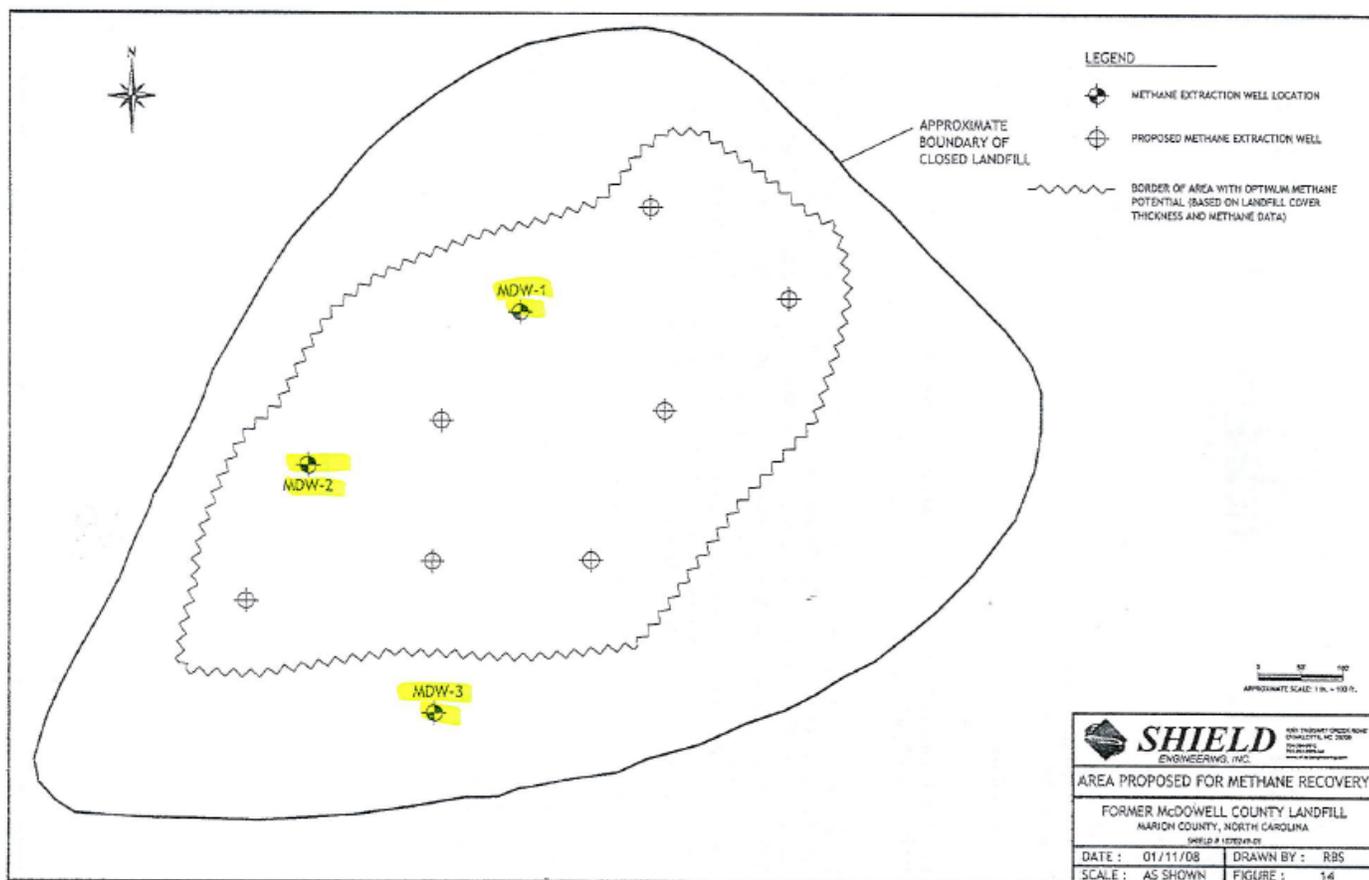


Figure 2: Proposed Location of Three Landfill Gas Recovery Wells on Discrete Category II Closed MSW Landfill (1-11-08)

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7. Looking NE across the “Discrete Category I” landfill.



8. “Flush mount” ground water monitoring well (MW-1) without a cover. (Located in the convenience center collection area at the entrance.)



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



10. Ground water monitoring well MW-3. (Note the well is does not have the required steel outer casing.)



11. Ground water monitoring well MW-4 (white PVC casing) located north of the transfer station. (Note the original steel out casing to the well in the background that has broken off.)



12. Looking down the PVC 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.)

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13. Six inch diameter white PVC methane extraction well (believed to be MDW-3) located near the center of “Discrete Category II Landfill”. Note that the well is not capped.

5. During the inspection, what appeared to be one of the three methane extraction wells that were approved for installation by the SWS on 12/06/07 was located. These wells are not, and never have been put into use. (Photo #13)
6. There was no evidence of any leachate breakouts or seeps on the landfill.
7. Groundwater sampling of four monitoring wells (MW-1 through MW-4) last conducted on 8/21/14 by *Pace Analytical*.
  - The analytical results of the samples collected from MW-2 showed multiple constituents in exceedance of the groundwater (2L) standards.
  - The analytical results of the samples collected from MW-3 showed constituents that are indicative of possible landfill gas migration.
8. While access roads to the groundwater monitoring wells, the road to MW-4 is badly rutted and in need of grading.

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

*Bill Wagner: Regional Representative*

Phone: 828-298-4705

Delivered on : <u>10/07/14</u> by		hand delivery		US Mail	<b>X</b>	Certified No. <u>7014 0510 0000 4466 1360</u>
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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, Field Operations Branch Supervisor – Solid Waste Section  
 Sarah Rice, Compliance Officer – Solid Waste Section  
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