

DENR USE ONLY:

Paper Report

Electronic Data - Email CD (data loaded: Yes / No)

Doc/Event #:

NC DENR

Division of Waste Management - Solid Waste

# Environmental Monitoring Reporting Form

**Notice:** This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

### Instructions:

- Prepare one form for each individually monitored unit.
- Please type or print legibly.
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i)).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

### Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Golder Associates NC, Inc. on behalf of Henderson County

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: David Y. Reedy II

Phone: 336-852-4903

E-mail: dreedy@golder.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Henderson County Closed Landfill	802 Stoney Mountain Road Hendersonville, NC 28791	45-01	.1600/.0500	June 26, 2013

### Environmental Status: (Check all that apply)

- Initial/Background Monitoring     Detection Monitoring     Assessment Monitoring     Corrective Action

### Type of data submitted: (Check all that apply)

- Groundwater monitoring data from monitoring wells     Methane gas monitoring data  
 Groundwater monitoring data from private water supply wells     Corrective action data (specify) \_\_\_\_\_  
 Leachate monitoring data     Other(specify) \_\_\_\_\_  
 Surface water monitoring data

### Notification attached?

- No. No groundwater or surface water standards were exceeded.  
 Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.  
 Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

### Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

David Y. Reedy II, P.G.

Senior Project Hydrogeologist

336-852-4903

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Signature

Date

Affix NC Licensed/ Professional Geologist Seal

Golder Associates NC, Inc., 5B Oak Branch Drive, Greensboro, NC 27407

Facility Representative Address

C-2862

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009





July 2, 2013

083-960612.700

Ms. Jaclynne Drummond  
Compliance Hydrogeologist  
North Carolina Department of Environment and Natural Resources  
Division of Waste Management – Solid Waste Section  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646  
Ph. 919-707-8294

**RE: METHANE MONITORING RESULTS – SECOND QUARTERLY EVENT OF 2013  
CLOSED HENDERSON COUNTY LANDFILL, PERMIT NO. 45-01  
HENDERSON COUNTY, NORTH CAROLINA**

Dear Jackie:

Attached are the results from the June 26, 2013, second quarterly methane monitoring event conducted at the above-referenced facility. This was the first methane event that Golder has performed at the facility. As shown, there were detections of methane noted above the lower explosive limit (LEL) during this event in compliance monitoring points MP-5 and TR-3. Methane was also detected below the LEL in compliance monitoring point MP-6. No methane was detected in the facility structures during this compliance monitoring event. Two compliance monitoring points (MP-2 and TR-2) were not located during this compliance monitoring event. It appears that these two compliance monitoring point may have been destroyed during construction or maintenance activities at the closed landfill in the recent past; the County is currently searching through their records to confirm.

Please allow this letter report to act as the 7-day notification of methane exceedances as required by the North Carolina Solid Waste Management Regulations. It is likely that the methane exceedances at the closed landfill are related to the recent shutdown of the active landfill gas system that was operated at the landfill by Enerdyne until April 2013. The County will submit a Landfill Gas Remediation Plan within 60 days, as required. If you have any questions or concerns, please contact us at 336-852-4903.

Sincerely,  
**GOLDER ASSOCIATES NC, INC.**

A handwritten signature in blue ink, appearing to read "Dusty Reedy".

David "Dusty" Y. Reedy II, P.G.  
Senior Project Hydrogeologist

A handwritten signature in blue ink, appearing to read "Rachel P. Kirkman".

Rachel P. Kirkman, P.G.  
Associate and Senior Geologist

Attachment: Boundary Gas Probe Monitoring Log – June 26, 2013  
Methane Monitoring Location Map

Cc: Marcus A. Jones, P.E., Director of Engineering, Henderson County, 100 North King Street, Hendersonville, North Carolina 28792. 828-694-6560. [majones@hendersoncountync.org](mailto:majones@hendersoncountync.org) (electronic copy)

Natalie J. Berry, P.E., Assistant County Engineer, Henderson County, 100 North King Street, Hendersonville, North Carolina 28792. 828-694-6521. [nberry@hendersoncountync.org](mailto:nberry@hendersoncountync.org)

Greg Wiggins, Operations Manager, Henderson County, 191 Transfer Station Drive, Hendersonville, North Carolina 28791. 828-694-7982. [gwiggins@hendersoncountync.org](mailto:gwiggins@hendersoncountync.org)

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Greensboro, NC. 27407 USA  
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Golder Associates: Operations in Africa, Asia, Australasia, Europe, North America and South America



DATE: 6/25/2013

**BOUNDARY PROBE MONITORING LOG**

Project Name: Henderson County  
 Site Contact: Greg Wiggins

Project Number: 0839650612  
 Technician(s): D. Childress / B. Draper

High Temperature: 79.8° F  
 Starting Barometric Pressure: 30.09" Hg  
 Monitoring Equipment: GEM 2000+

Low Temperature: 74.6° F  
 End Barometric Pressure: 30.05" Hg

Monitoring Point	Time	% Methane (CH <sub>4</sub> )	% Carbon Dioxide (CO <sub>2</sub> )	% Oxygen (O <sub>2</sub> )	H2S (ppm)	Comments
MP-1	13:41	0.0	0.0	20.5	0	
MP-2	--	--	--	--	--	Well could not be located.
MP-3	14:24	0.0	3.0	16.8	0	
MP-4	14:14	0.0	19.4	0.6	0	
MP-5	14:38	35.1	24.8	6.2	0	
MP-6	15:33	1.1	2.2	17.1	0	
LFG-101	16:12	0.0	3.8	12.0	0	
LFG-102	16:07	0.0	3.8	13.1	0	
LFG-103	16:17	0.0	7.7	10.0	0	
TR-1	14:49	0.0	2.7	17.2	0	
TR-2	--	--	--	--	--	Well believed to be destroyed.
TR-3	14:56	10.6	31.5	0.0	0	
Activity Building	15:51	0.0	0.0	20.9	0	Building
Animal Shelter	15:45	0.0	0.0	20.9	0	Building
Break House	13:33	0.0	0.0	20.9	0	Building
Bus Garage	15:40	0.0	0.0	20.9	0	Building
Convenience Center	16:21	0.0	0.0	20.9	0	Building
Maintenance Shop	16:29	0.0	0.0	20.9	0	Building
Revis House	16:35	0.0	0.0	20.9	0	Building
Scalehouse	16:25	0.0	0.0	20.9	0	Building
Trace Barn	15:26	0.0	0.0	20.9	0	Building

Completed by: Daniel Childress  
 Daniel Childress



**LEGEND**

	EXISTING 10 FT. CONTOUR
	EXISTING 2 FT. CONTOUR
	PROPERTY LINE
	LIMITS OF WASTE
	STREAM
	BUFFER
	TREELINE
	EXISTING ROAD
	FENCE
	MW-8 2210.79 COMPLIANCE MONITORING WELL AND IDENTIFICATION
	MW-1 NON COMPLIANCE MONITORING WELL AND IDENTIFICATION
	MP-6 METHANE MONITORING PROBE AND IDENTIFICATION
	BR-1 SURFACE WATER MONITORING POINT AND IDENTIFICATION

- NOTES**
1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET
  2. COORDINATE SYSTEM IS N.C. STATE PLANE GRID.
  3. TOPOGRAPHIC DIVIDING LINE DIVIDES THE BASE MAP TOPOGRAPHIC CONTOURS FROM LANDSAT TOPOGRAPHIC CONTOURS. LANDSAT TOPOGRAPHIC CONTOURS HAVE A 5-CONTOUR INTERVAL.

- REFERENCES**
1. BASE MAP PROVIDED BY CAMP DRESSER & MCKEE FROM PREVIOUS WATER QUALITY MONITORING REPORTS.



SITE LOCATION MAP  
NOT TO SCALE

04/12/13	DAC	REVISED GW CONTOURS	BSD		
11/21/12	DYR	REVISED GW CONTOURS	LKB	DYR	RPK
REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK

PROJECT  
**HENDERSON COUNTY CLOSED MSW AND C&D LANDFILL  
PERMIT # 45-01**

TITLE  
**METHANE MONITORING LOCATION MAP**

<p><b>Golder Associates</b> GOLDER ASSOCIATES, INC.</p>	PROJECT No.	083-9650612	FILE No.	Methane Monitoring Location Map	
	DESIGN	JAD	04/28/09	SCALE	AS SHOWN
	CADD	LKB	04/28/09		
	CHECK	DYR	06/30/09		
	REVIEW	RPK	06/30/09		

**DWG. 1**