

NC DENR **Environmental Monitoring Reporting Form**
 Division of Waste Management - Solid Waste

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	191 Transfer Station Drive Hendersonville, NC 28791	45-01	.1600/.0500	December 10, 2014

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 Hydrogeologist 336-852-4903
 Facility Representative Name (Print) Title (Area Code) Telephone Number
 Signature *David Y. Reedy II* Date 12-15-14
 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)





December 15, 2014

083-9650614.200

Ms. Jaclynne Drummond
Compliance Hydrogeologist
North Carolina Department of Environment and Natural Resources
Division of Waste Management – Solid Waste Section
2090 US Highway 70
Swannanoa, NC 28778
828-296-4706

**RE: METHANE MONITORING RESULTS – FOURTH QUARTERLY EVENT OF 2014
CLOSED HENDERSON COUNTY LANDFILL, PERMIT NO. 45-01
HENDERSON COUNTY, NORTH CAROLINA**

Dear Jackie:

Attached are the results from the December 10, 2014, fourth quarterly methane monitoring event conducted at the above-referenced facility. As shown on the attach Boundary Gas Probe Monitoring Log, there were detections of methane noted above the lower explosive limit (LEL) during this event in compliance monitoring points MP-5 and TR-2 as they have been during previous events. Methane was detected below the lower explosive limit (LEL) during this event in compliance monitoring points MP-4, MP-6, and TR-3. No methane was detected in the facility structures during this compliance monitoring event.

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. If you have any questions or concerns, please contact us at 336-852-4903.

Sincerely,
GOLDER ASSOCIATES NC, INC.

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

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

Attachment: Boundary Gas Probe Monitoring Log – December 10, 2014
Methane Monitoring Location Map

Cc: Marcus Jones, P.E., Director of Engineering, Henderson County, 1 Historic Courthouse Square, Suite 6, Hendersonville, NC 28792. 828-694-6560. majones@hendersoncountync.org (electronic copy)

Natalie Berry, P.E., Assistant County Engineer, Henderson County, 100 North King Street, Hendersonville, North Carolina 28792. 828-694-6521. nberry@hendersoncountync.org

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

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Engineering Lic. No. C-2862/Geology Lic. No. C-399

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BOUNDARY PROBE MONITORING LOG

Date: 12/10/14

Project Number: 0839650614

Technician(s): Anna Stoddard

End Temperature: 39.0° F

End Barometric Pressure: 30.06 in Hg

Project Name: Henderson County Landfill

Site Contact: Greg Wiggins

Starting Temperature: 37.9° F

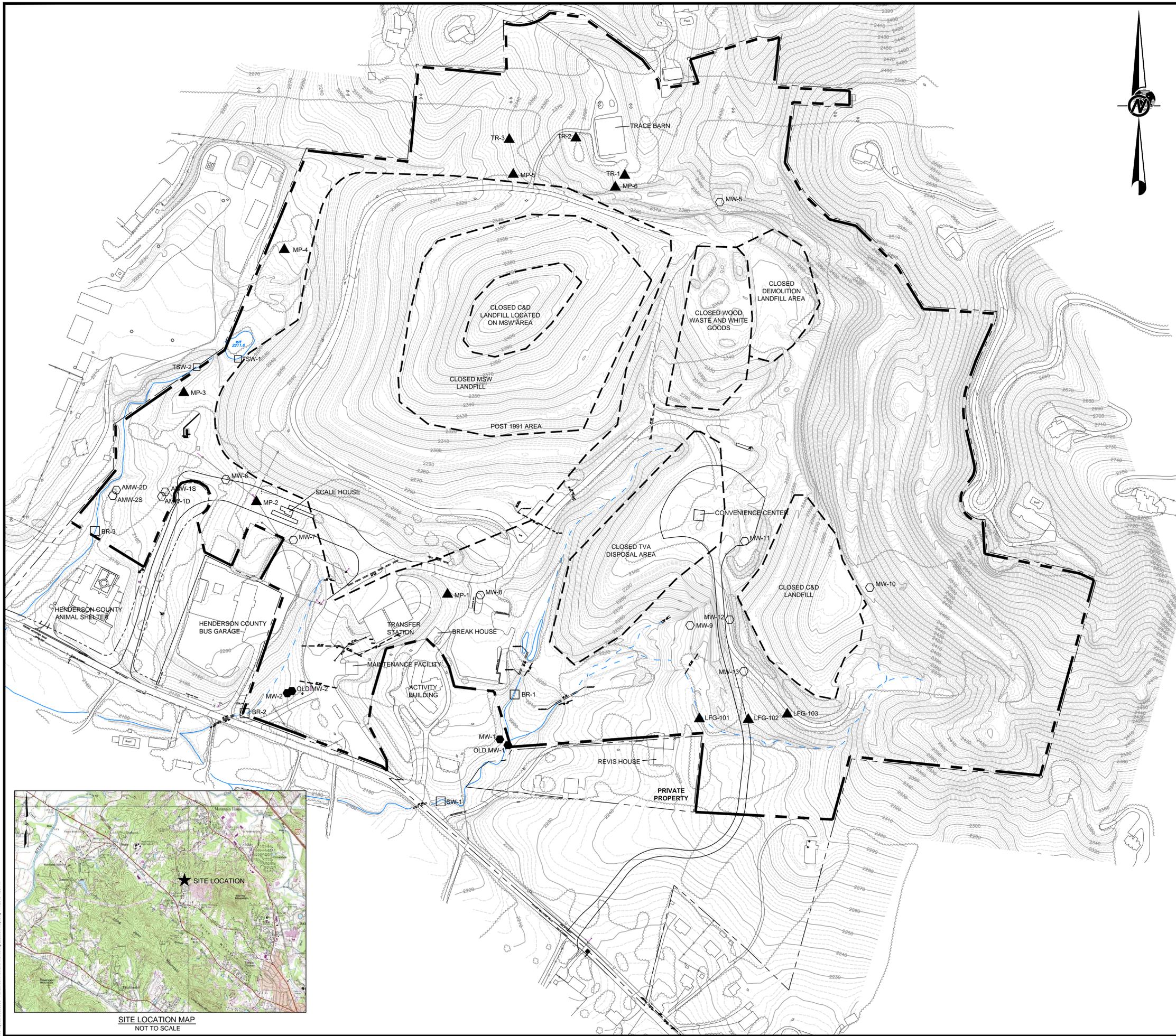
Starting Barometric Pressure: 30.07 in Hg

Monitoring Equipment: GEM 2000 plus

Monitoring Location	Time	Time Pumped (sec)	% Methane (CH ₄)	% Carbon Dioxide (CO ₂)	% Oxygen (O ₂)	% Balance Gas	Initial % LEL	Stabalized % LEL	Hydrogen Sulfide (H ₂ S, ppm)	Static Pressure (Inches of H ₂ O)
MP-1	12:36	60	0.0	2.2	19.2	78.6	0	0	0.0	not applicable
MP-3	12:55	60	0.0	0.9	20.8	78.3	0	0	0.0	not applicable
MP-4	12:58	60	0.5	21.8	0.0	77.7	10	10	0.0	not applicable
MP-5	13:02	60	43.9	30.1	4.0	22.0	878	878	0.0	not applicable
MP-6	14:14	60	1.9	6.6	12.0	79.5	38	38	0.0	not applicable
LFG-101	13:32	60	0.0	3.1	17.6	79.3	0	0	0.0	not applicable
LFG-102	13:29	60	0.0	2.5	18.3	79.2	0	0	0.0	not applicable
LFG-103	13:26	60	0.0	7.9	14.5	77.6	0	0	0.0	not applicable
TR-1	13:12	60	0.0	1.3	20.3	78.4	0	0	0.0	not applicable
TR-2	13:08	60	8.8	22.2	1.0	68.0	176	176	0.0	not applicable
TR-3	13:06	60	4.3	13.7	13.5	68.5	86	86	0.0	not applicable
Activity Building	12:40	200	0.0	0.1	21.1	78.8	0	0	0.0	not applicable
Animal Shelter	13:49	200	0.0	0.1	22.0	77.9	0	0	0.0	not applicable
Break House	12:38	200	0.0	0.1	21.0	78.9	0	0	0.0	not applicable
Bus Garage	13:41	200	0.0	0.1	22.1	77.8	0	0	0.0	not applicable
Convenience Center	13:20	200	0.0	0.1	21.7	78.2	0	0	0.0	not applicable
Maintenance Shop	12:45	200	0.0	0.0	21.4	78.6	0	0	0.0	not applicable
Scalehouse	12:32	200	0.0	0.0	21.7	78.3	0	0	0.0	not applicable
Trace Barn	13:10	200	0.0	0.1	21.8	78.1	0	0	0.0	not applicable

Completed by: *Anna Stoddard*





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>Golder Associates 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

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