

DENR USE ONLY:

Paper Report

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Doc/Event #:

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):

Altamont Environmental, Inc. (Consultant)

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

Name: Andrew Moore

Phone: (828) 281-3350

E-mail: amoore@altamontenvironmental.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Duke Energy Carolinas Marshall Steam Station FGD Landfill	8320 East Highway 150 Terrell, NC	18-09	.0500	March 22, 2011

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) Hydrogen Sulfide Monitoring
 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.

Stuart A. Ryman

P.G.

(828) 281-3350

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Signature

Date

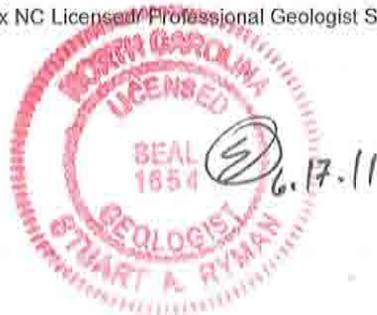
Affix NC Licensed Professional Geologist Seal

231 Haywood Street Asheville, NC 28801

Facility Representative Address

C-2185

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



ALTAMONT ENVIRONMENTAL, INC.

ENGINEERING & HYDROGEOLOGY

231 HAYWOOD STREET, ASHEVILLE, NC 28801

TEL. 828.281.3350 FAC. 828.281.3351

WWW.ALTAMONTENVIRONMENTAL.COM

June 17, 2011

Ms. Jaclynne Drummond
North Carolina Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: Hydrogen and Sulfide Gas Monitoring
Duke Energy Carolinas Marshall Steam Station
FGD Landfill Permit #18-09
Terrell, NC

Dear Ms. Drummond:

On behalf of Duke Energy Carolinas (Duke), Altamont Environmental, Inc. (Altamont) is providing hydrogen sulfide (H₂S) and explosive gas monitoring data for the Marshall Steam Station flue gas desulphurization (FGD) landfill located in Terrell, North Carolina.

On March 22, 2011, measurements for H₂S gas and explosive gas were obtained from the landfill leachate clean-out pipes at two locations. The sample locations are indicated as FGD-LCCP1 and FGD-LCCP2 on Figure 1. The measurements were taken by Duke personnel using an Industrial Scientific Corporation iTX Multi-Gas Monitor. A copy of the Field Data Sheet can be found in the Appendix.

H₂S was not detected at either of the two locations measured; all measurements exhibited H₂S concentrations of zero parts per million (ppm). Explosive gases were not detected at either of the two locations; both measurements exhibited lower explosive limits (LEL) of zero percent. The data suggest that the material in the landfill is producing neither H₂S nor explosive gases.

The next set of measurements will be collected on or about September 22, 2011.

Ms. Jaclynne Drummond
June 17, 2011
Page 2 of 2

If you have questions or require additional information, please contact me at 828-281-3350.

Sincerely,

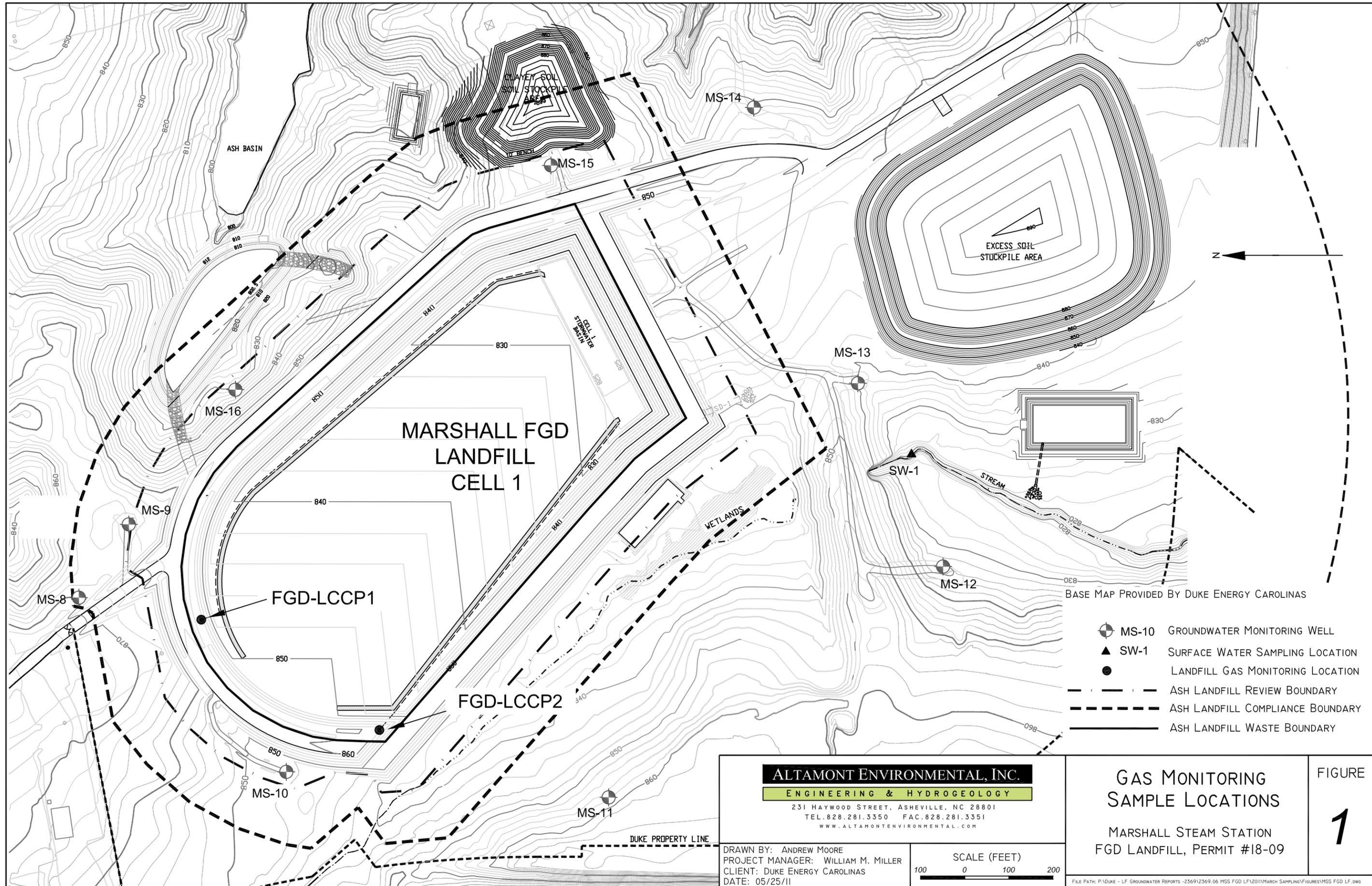
ALTAMONT ENVIRONMENTAL, INC.

 For

Stuart A. Ryman

Enclosures: Figure 1—Gas Monitoring Sample Locations
Appendix A—Field Data Sheet

cc: Duke Energy Carolinas
Marshall Steam Station
8320 East Highway 150
Terrell, North Carolina 28682
Attention: Ms. Donna Burrell



BASE MAP PROVIDED BY DUKE ENERGY CAROLINAS

-  MS-10 GROUNDWATER MONITORING WELL
-  SW-1 SURFACE WATER SAMPLING LOCATION
-  LANDFILL GAS MONITORING LOCATION
-  ASH LANDFILL REVIEW BOUNDARY
-  ASH LANDFILL COMPLIANCE BOUNDARY
-  ASH LANDFILL WASTE BOUNDARY

ALTAMONT ENVIRONMENTAL, INC.
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DRAWN BY: ANDREW MOORE
 PROJECT MANAGER: WILLIAM M. MILLER
 CLIENT: DUKE ENERGY CAROLINAS
 DATE: 05/25/11



GAS MONITORING SAMPLE LOCATIONS

MARSHALL STEAM STATION
 FGD LANDFILL, PERMIT #18-09

FIGURE 1

FILE PATH: P:\DUKE - LF GROUNDWATER REPORTS - 2369\2369.06 MSS FGD LF\2011\MARCH SAMPLING\FIGURES\MSS FGD LF.DWG

**APPENDIX A
FIELD DATA SHEET**



DUKE ENERGY

LEACHATE COLLECTION CLEANOUT PIPES (LCCP) HYDROGEN SULFIDE (H₂S) MONITORING

LOCATION:	MARSHALL STEAM STATION	PROCEDURE NO:	NA
PROJECT NAME:	FGD Landfill / Hydrogen Sulfide Monitoring	ITX Serial Number	07110CA-002
SAMPLING DATE(s):	22-Mar-2011 <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	WC 3/23/11	

PERMIT # **18-09**

FIELD CREW: **LDC, RLW**

SAMPLING EQUIPMENT **Industrial Scientific Corp / ITX Multi-Gas Monitor**

Location	Time	H2S (ppm)	LEL (%)	Collector
FGD-LCCP-1	1210	0	0	LDC, RLW
FGD-LCCP-2	1220	0	0	LDC, RLW

NOTES ITX Multi-Gas Monitor is checked out from the Marshall Station pre-calibrated for Hydrogen Sulfide (Range 0 to 999 ppm) and LEL Calibration documentation available from Marshall upon request