

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):

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: amooore@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 Belews Creek Steam Station FGD Residue Landfill	3195 Pine Hall Road Belews Creek, NC 27042	#85-05	.0500	May 16, 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 gas 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 28806

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

July 28, 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 Sulfide and Explosive Gas Monitoring
Duke Energy Carolinas Belews Creek Steam Station
FGD Residue Landfill Permit #85-05
Belews Creek, 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 Belews Creek Steam Station flue gas desulphurization (FGD) Residue Landfill located in Belews Creek, North Carolina.

On May 16, 2011, measurements for H₂S gas and explosive gas were obtained from the landfill leachate clean-out pipes at seven locations. The sample locations are indicated 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 any of the seven locations measured; all measurements exhibited H₂S concentrations of zero parts per million (ppm). Explosive gases were not detected at any of the seven locations; all 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 November 16, 2011.

Ms. Jaclyne Drummond
July 28, 2011
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If you have questions or require additional information, please contact me at 828-281-3350.

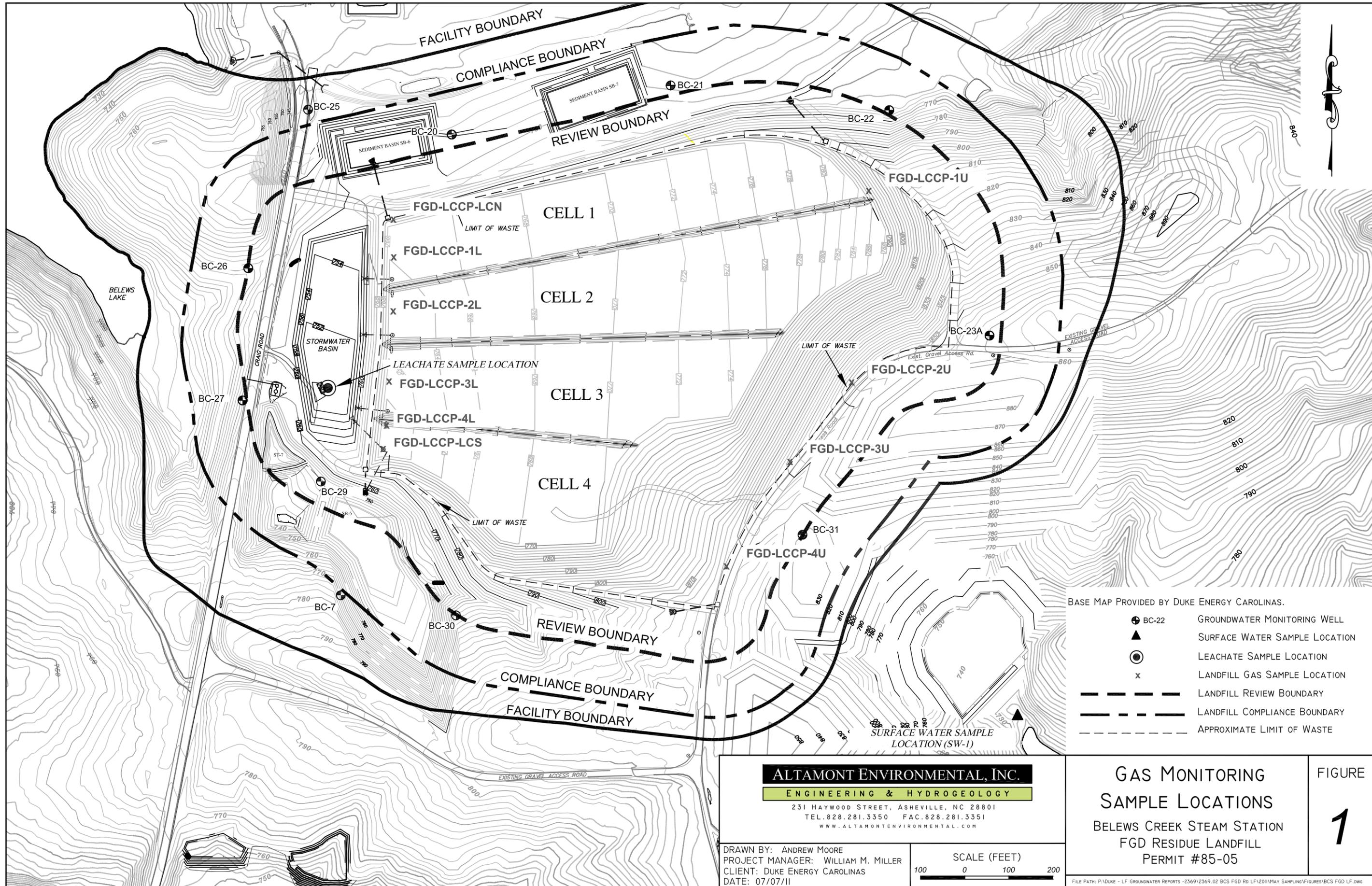
Sincerely,

ALTAMONT ENVIRONMENTAL, INC.



Stuart A. Ryman, P.G.

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



- BASE MAP PROVIDED BY DUKE ENERGY CAROLINAS.
- ⊕ BC-22 GROUNDWATER MONITORING WELL
 - ▲ SURFACE WATER SAMPLE LOCATION
 - ⊙ LEACHATE SAMPLE LOCATION
 - x LANDFILL GAS SAMPLE LOCATION
 - - - - - LANDFILL REVIEW BOUNDARY
 - - - - - LANDFILL COMPLIANCE BOUNDARY
 - - - - - APPROXIMATE LIMIT OF WASTE

ALTAMONT ENVIRONMENTAL, INC.
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DRAWN BY: ANDREW MOORE
 PROJECT MANAGER: WILLIAM M. MILLER
 CLIENT: DUKE ENERGY CAROLINAS
 DATE: 07/07/11



**GAS MONITORING
 SAMPLE LOCATIONS**
 BELEWS CREEK STEAM STATION
 FGD RESIDUE LANDFILL
 PERMIT #85-05

FIGURE
1

**APPENDIX A
FIELD DATA SHEET**



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

LOCATION:	BELEWS CREEK STEAM STATION	PROCEDURE NO:	NA
PROJECT NAME:	FGD Landfill / Hydrogen Sulfide Monitoring	Instrument Serial #	ARZH-034C
SAMPLING DATE(s):	16-May-2011		

PERMIT # **85-05**

FIELD CREW: **LDC, RLW**

LDC

SAMPLING EQUIPMENT

Location	H ₂ S (ppm)	LEL (%)	Collector
FGD-LCCP-LCN	0	0	LDC / RLW
FGD-LCCP-1L	0	0	LDC / RLW
FGD-LCCP-2L	0	0	LDC / RLW
FGD-LCCP-3L	0	0	LDC / RLW
FGD-LCCP-4L	0	0	LDC / RLW
FGD-LCCP-LCS	0	0	LDC / RLW
FGD-LCCP-1U	0	0	LDC / RLW
FGD-LCCP-2U	Not in service		
FGD-LCCP-3U	Not in service		
FGD-LCCP-4U	Not in service		

LCW = Lower Corner North
LCE = Lower Corner South
1L = Cell 1 Lower
1U = Cell 1 Upper

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