

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)).
- In Accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- 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):

S&ME, Inc (Consultant)

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

Name: Julie Petersen, P.G., Project Manager Phone: 704-523-4726  
E-mail: jpetersen@smeinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Lincoln County Landfill	5291 Crouse Road, Crouse, NC 28033	55-03		December 30, 2010

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

- Initial/Background Monitoring  Detection Monitoring  Assessment Monitoring  Corrective Action

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

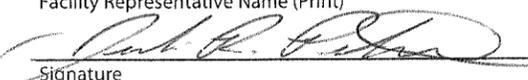
- Groundwater monitoring data from monitoring wells  Methane gas monitoring data  
 Groundwater monitoring data from private water supply wells  Corrective action data (specify) \_\_\_\_\_  
 Leachate monitoring data  Other(specify) \_\_\_\_\_  
 Surface water monitoring data

**Notification attached?**

- No. No groundwater or surface water standards or explosive methane gas limits 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.

Julie Petersen Project Manager 704-523-4726  
 Facility Representative Name (Print) Title (Area Code) Telephone Number  
 Signature Date 2/10/11

Affix NC Licensed/ Professional Geologist/Engineer Seal here:





February 10, 2011

North Carolina Department of Environment and Natural Resources (NCDENR)  
Division of Waste Management – Solid Waste Section  
610 East Center Avenue  
Mooreville, North Carolina 28115

Attention: Charles T. Gerstell  
Environmental Senior Specialist, Regional Representative

**Reference: December 2010 Methane Monitoring Report**  
Lincoln County Landfill (Permit No. 55-03)  
Crouse, North Carolina  
S&ME Project No. 1356-10-044

Dear Mr. Gerstell:

S&ME, Inc. (S&ME), on behalf of Lincoln County, is submitting methane gas monitoring data collected December 30, 2010 at the Lincoln County Landfill in Crouse, North Carolina. Please find attached to this letter:

- Completed Environmental Monitoring Report Form;
- Field Form for Monitoring Event;
- Figure 1 – Methane Monitoring Locations; and
- Table 1 – Methane Gas Measurements.

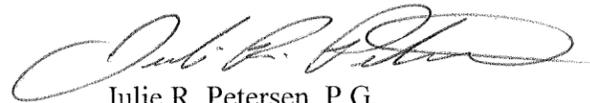
The attached data includes measurements from the Methane Monitoring Wells which are currently part of the approved monitoring regime (MW-01 through MW-08) and monitored structures (lift station, scale house, and shop area).

Methane measurements were collected by Lincoln County personnel using a GEM 2000 combustible gas meter that was field calibrated prior to data collection. Measurements indicate that concentrations did not exceed the lower explosive limit (LEL) for methane (5% CH<sub>4</sub>) during the December 2010 monitoring event.

Please call us at (704) 523-4726 if you have any questions or comments, or if we can be of further assistance.

Sincerely,

**S&ME, Inc.**



Julie R. Petersen, P.G.  
Project Manager/Senior Geologist

Senior reviewed by: M. Neal McElveen P.E., Environmental Services Manager

cc: Nancy Rickard - Lincoln County Solid Waste Manager  
Jackie Drummond - NCDENR Division of Waste Management, Solid Waste Section

**Crouse Landfill Gas Monitoring Form  
Lincoln County Landfill Permit # 55-03**

Date: 12/30/2010					
Field Personnel: Mark Bivins, Joey Gates					
Ambient Outside Temperature: 42°F					
Ambient Barometric Pressure: 30.17"					
General Weather Conditions: Overcast					
Meter Name and Model Number: Landtec GEM 2000					
Meter Calibration Date: 12/30/2010					
<b>Field Measurements:</b>					
Well	Time of	Measurements			
Identification	Measurement	% LEL	% CH4	% CO2	% O2
MW-01	2:00 PM	0	0	2.1	18
MW-02	2:10 PM	0	0	1.3	18.5
MW-03	2:16 PM	0	0	2.4	16.8
MW-04	2:25 PM	0	0	0.1	19.9
MW-05	2:35 PM	0	0	3.7	16.7
MW-06	2:50 PM	0	0	9.2	7.8
MW-07	3:00 PM	0	0	4.1	16.6
MW-08	3:06 PM	0	0	2.9	18.4
*added 10/07/03 SCALEHOUSE	3:12 PM	0	0	0.1	20.2
*added 10/07/03 LANDFILL SHOP	3:15 PM	0	0	0	20.2
*added 1/30/09 LIFT STATION	2:30 PM	0	0	0.2	19.8



**REFERENCE:**  
 AERIAL PHOTOGRAPHY PERFORMED BY SPATIALDATA CONSULTANTS INC. ON 07-04-10. HORIZONTAL DATUM NAVD83, VERTICAL DATUM NAVD88.

DATE: 10-4-10  
 DRAWN BY: CLD  
 CHECKED BY:

SCALE: 1" = 400'  
 PROJECT NO. 1356-03-255B



**METHANE MONITORING LOCATIONS**  
 LINCOLN COUNTY LANDFILL  
 CROUSE, NORTH CAROLINA

FIGURE NO. **1**

**Table 1 - Methane Gas Measurements**  
 Data Tracking for the Years of 2008 to 2010  
 Lincoln County Landfill (Permit #55-03)



Percent Methane Gas by Date

Date	Well Identification								Monitored Structure		
	MMW-1	MMW-2	MMW-3	MMW-4	MMW-5	MMW-6	MMW-7	MMW-8	Scale House	Shop Area	Lift Station
Feb-08	0	0	0	0	0	0	0	0.006	0	0	N/A
Apr-08	0	0	0	0	0	0	0	0	0	0	N/A
Sep-08	0	0	0	0	0	0	0	0.7	0	0	N/A
Feb-09	0	0	0	0	0	0	0	2.5	0	0	0
Apr-09	0	0	0	0	4.3	0	0	0	0	0	0
Jul-09	0	0	0	0	2.1	0	0	0	0	0	0
Nov-09	0	0	0	0	0	0	0	1.5	0	0	0
Feb-10	0	0	0	0	18.4	8.4	0	0	0	0	0
Jun-10	0	0	0	0	14.8	2	2.3	0	0	0	0
Aug-10	0	0	0	0	23	0	0.03	0	0	0	0
Dec-10	0	0	0	0	0	0	0	0	0	0	0

Notes:

- (1) Recorded measurements are in percent methane.
- (2) Highlighted data are above 100 percent of the lower explosive limit.
- (3) Lower explosive limit for methane is 5 percent.
- (4) Upper explosive limit for methane is 15 percent.
- (5) N/A = Not Available
- (6) Methane measurements collected by Lincoln County personnel.
- (7) Lift Station monitoring was added in January 2009.