

## Werner, Elizabeth

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**From:** Joan Smyth [joan@rsgengineers.com]  
**Sent:** Wednesday, March 02, 2011 10:14 AM  
**To:** 'Elizabeth Werner'  
**Cc:** 'Dan LaMontagne'  
**Subject:** Chatham County Landfill LFG Monitoring Data  
**Attachments:** Chatham Co LFG Data 2-17-11.pdf

Elizabeth -

Attached is the report of landfill gas data from the Chatham County landfill collected on 2-17-11. As we discussed on February 16th, we also performed a soil gas survey to evaluate the extent of landfill gas migration in the areas of exceedance of 100% LEL. Our report summarizing the results of our soil gas survey will be submitted in the next week or so under separate cover. Please let me know if you have any questions or require any additional data in the meantime.

Thanks!

Joan A. Smyth, P.G.  
*Principal, Senior Hydrogeologist*  
Richardson Smith Gardner and Associates, Inc.  
14 N. Boylan Avenue  
Raleigh, NC 27603  
ph: 919-828-0577 x 221  
cell: 919-815-1494

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):

Richardson Smith Gardner and Associates, Inc.

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

Name: Joan A. Smyth, P.G.

Phone: 919-828-0577 x 221

E-mail: joan@rsgengineers.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Chatham Co. Closed MSW Landfill	Landfill Rd Pittsboro, NC	19-01	.0500	February 17, 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) \_\_\_\_\_  
 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.

Joan A. Smyth, P.G.

Senior Hydrogeologist

919-828-0577 x 221

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Affix NC Licensed/ Professional Geologist Seal

*Joan A. Smyth*  
Signature

2/21/11

Date

14 N. Boylan Avenue Raleigh, NC 27603

Facility Representative Address

C0828

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

Revised 6/2009



NC Division of Waste Management - Solid Waste Section

Landfill Gas Monitoring Data 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).

Facility Name: CHATHAM CO. MSW LF Permit Number: 19-01

Date of Sampling: 2/17/11 NC Landfill Rule (.0500 or .1600): .0500

Name and Position of Sample Collector: DMM & LAQ (RSG)

Type and Serial Number of Gas Meter: GEM 2000 (GM 07002 HP) Calibration Date of Gas Meter: 9/23/10

Date and Time of Field Calibration: 2/17/11 8am

Type of Field Calibration Gas (15/15 or 35/50): 15/15 Expiration Date of Field Calibration Gas Canister: 4/2013

Pump Rate of Gas Meter: 0.5 L/min

Ambient Air Temperature: 60°F Barometric Pressure: 29.68 Hg General Weather Conditions: Partly Cloudy

Instructions: Under "Location or LFG Well" identify the monitoring wells or describe the location for other tests (e.g., inside buildings). A drawing showing the location of test must be attached. Report methane readings in both % LEL and % methane by volume. A reading in percent methane by volume can be converted to % LEL as follows: % methane by volume = % LEL/20

Table with 10 columns: Location or LFG Well ID, Sample Tube Purge, Time, Time Pumped (s), Initial %LEL, Stabilized %LEL, %CH4 by Volume, %O2, %CO2, Notes. Rows include MP-1 through MP-10 with various gas readings.

If your facility has more gas monitoring locations than there is room on this form, please attach additional sheets listing the same information as contained on this form.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Signature of Staff Engineer (RSG)

Staff Engineer (RSG)

### NC Division of Waste Management - Solid Waste Section

### Landfill Gas Monitoring Data 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).

Facility Name: \_\_\_\_\_ Permit Number: \_\_\_\_\_

Date of Sampling: \_\_\_\_\_ NC Landfill Rule (.0500 or .1600): \_\_\_\_\_

Name and Position of Sample Collector: \_\_\_\_\_

Type and Serial Number of Gas Meter: \_\_\_\_\_ Calibration Date of Gas Meter: \_\_\_\_\_

Date and Time of Field Calibration: **[SEE PAGE 1]**

Type of Field Calibration Gas (15/15 or 35/50): \_\_\_\_\_ Expiration Date of Field Calibration Gas Canister: \_\_\_\_\_

Pump Rate of Gas Meter: \_\_\_\_\_

Ambient Air Temperature: \_\_\_\_\_ Barometric Pressure: \_\_\_\_\_ General Weather Conditions: \_\_\_\_\_

**Instructions:** Under "Location or LFG Well" identify the monitoring wells or describe the location for other tests (e.g., inside buildings). A drawing showing the location of test must be attached. Report methane readings in both % LEL and % methane by volume. A reading in percent methane by volume can be converted to % LEL as follows: % methane by volume = % LEL/20

Location or LFG Well ID	Sample Tube Purge	Time	Time Pumped (s)	Initial %LEL	Stabilized %LEL	%CH4 by Volume	%O2	%CO2	Notes
MP-11	>60S	9:24	>60S	0	0	0	17.2	3.4	
MP-12	>60S	9:19	>60S	0	0	0	16.2	3.3	
MP-13	>60S	9:14	>60S	0	0	0	14.4	5.6	
MP-14	>60S	9:11	>60S	100	100	15.7	5.0	12.4	
MP-15	>60S	9:07	>60S	0	0	0	9.8	10.7	
MP-16	>60S	9:04	>60S	100	100	40.6	0.1	27.2	
MP-17	>60S	8:32	>60S	100	100	44	3.3	14.9	
NE	>60S	10:15	>60S	0	0	0	21.1	0.3	
NW	>60S	10:17	>60S	0	0	0	21.1	0.2	
SE	>60S	10:19	>60S	0	0	0	21.1	0.2	

Scale House }

If your facility has more gas monitoring locations than there is room on this form, please attach additional sheets listing the same information as contained on this form.

#### Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Lily Out  
SIGNATURE

Staff Engineer (RSG)  
TITLE

NC Division of Waste Management - Solid Waste Section

Landfill Gas Monitoring Data 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).

Facility Name: \_\_\_\_\_ Permit Number: \_\_\_\_\_

Date of Sampling: \_\_\_\_\_ NC Landfill Rule (.0500 or .1600): \_\_\_\_\_

Name and Position of Sample Collector: \_\_\_\_\_

Type and Serial Number of Gas Meter: \_\_\_\_\_ Calibration Date of Gas Meter: \_\_\_\_\_

Date and Time of Field Calibration: [SEE PAGE 1]

Type of Field Calibration Gas (15/15 or 35/50): \_\_\_\_\_ Expiration Date of Field Calibration Gas Canister: \_\_\_\_\_

Pump Rate of Gas Meter: \_\_\_\_\_

Ambient Air Temperature: \_\_\_\_\_ Barometric Pressure: \_\_\_\_\_ General Weather Conditions: \_\_\_\_\_

Instructions: Under "Location or LFG Well" identify the monitoring wells or describe the location for other tests (e.g., inside buildings). A drawing showing the location of test must be attached. Report methane readings in both % LEL and % methane by volume. A reading in percent methane by volume can be converted to % LEL as follows: % methane by volume = % LEL/20

Location or LFG Well ID	Sample Tube Purge	Time	Time Pumped (s)	Initial %LEL	Stabilized %LEL	%CH4 by Volume	%O2	%CO2	Notes
Scale House	SW	>60S	10:21	>60S	0	0	0	21.1	0.1
Scale maintenance Building	NE	>60S	10:25	>60S	0	0	0	21.2	0.1
	NW	>60S	10:27	>60S	0	0	0	21.1	0.1
	SE	>60S	10:29	>60S	0	0	0	21.1	0.1
	SW	>60S	10:31	>60S	0	0	0	21.2	0.1
Animal Shelter	NE	>60S	10:35	>60S	0	0	0	21.1	0.1
	NW	>60S	10:57	>60S	0	0	0	21.2	0.1
	SE	>60S	10:59	>60S	0	0	0	21.1	0.1
	SW	>60S	11:01	>60S	0	0	0	21.1	0.1
Admin Office	NE	>60S	10:35	>60S	0	0	0	21.2	0

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Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

SIGNATURE [Handwritten Signature]

TITLE Staff Engineer (RSG)

NC Division of Waste Management - Solid Waste Section

Landfill Gas Monitoring Data 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).

Facility Name: \_\_\_\_\_ Permit Number: \_\_\_\_\_

Date of Sampling: \_\_\_\_\_ NC Landfill Rule (.0500 or .1600): \_\_\_\_\_

Name and Position of Sample Collector: \_\_\_\_\_

Type and Serial Number of Gas Meter: \_\_\_\_\_ Calibration Date of Gas Meter: \_\_\_\_\_

Date and Time of Field Calibration: SEE PAGE 1

Type of Field Calibration Gas (15/15 or 35/50): \_\_\_\_\_ Expiration Date of Field Calibration Gas Canister: \_\_\_\_\_

Pump Rate of Gas Meter: \_\_\_\_\_

Ambient Air Temperature: \_\_\_\_\_ Barometric Pressure: \_\_\_\_\_ General Weather Conditions: \_\_\_\_\_

Instructions: Under "Location or LFG Well" identify the monitoring wells or describe the location for other tests (e.g., inside buildings). A drawing showing the location of test must be attached. Report methane readings in both % LEL and % methane by volume. A reading in percent methane by volume can be converted to % LEL as follows: % methane by volume = % LEL/20

Location or LFG Well ID	Sample Tube Purge	Time	Time Pumped (s)	Initial %LEL	Stabilized %LEL	%CH4 by Volume	%O2	%CO2	Notes
Admin office {	NW	>60S	10:37	>60S	0	0	0	21.1	0
	SE	>60S	10:39	>60S	0	0	0	21.1	0
	SW	>60S	10:41	>60S	0	0	0	21.1	0.1
Maintenance Building {	NE	>60S	10:45	>60S	0	0	0	21.2	0.1
	NW	>60S	10:47	>60S	0	0	0	21.2	0.1
	SE	>60S	10:49	>60S	0	0	0	21.2	0.1
	SW	>60S	10:51	>60S	0	0	0	21.2	0.1

If your facility has more gas monitoring locations than there is room on this form, please attach additional sheets listing the same information as contained on this form.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Loisly Quint  
SIGNATURE

Staff Engineer (RSG)  
TITLE