



2211 W. Meadowview Road, Suite 101  
Greensboro, NC 27407  
tel: 336/ 323-0092  
fax: 336/ 323-0093  
[www.JoyceEngineering.com](http://www.JoyceEngineering.com)

September 25, 2013

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

**RE: Landfill Gas Monitoring Report  
LFG Monitoring - Monthly Event of September 2013  
Town of Kernersville Closed Landfill, Permit No. 34-04  
JOYCE Project No. 838.1301.12, Task No. 05**

Dear Ms. Drummond:

Please find attached a Landfill Gas Monitoring Log and an EMRF for the monthly monitoring event that occurred on September 20, 2013 at the Closed Town of Kernersville Landfill (Permit number 34-04). Methane monitoring for this event was conducted as proposed by JOYCE on behalf of the Town of Kernersville in accordance with approved *Landfill Gas Monitoring Plan* dated July 17, 2012. Methane was detected in gas monitoring probes GW-1, GW-2R, GW-3, and GW-8 above the LEL during this monitoring event.

During this event three probes belonging to the adjacent Waste Management Piedmont landfill GP-9, GP-10, and GP-11 were also monitored for methane gas. In the Piedmont landfill boundary probe GP-10 methane gas was detected above the LEL. As has been noted in the past, it is likely that the impacts observed at GP-10 are the result of migration from the Kernersville landfill. The results in GP-10 are consistent with those seen in the northern boundary probes of Kernersville and inconsistent with other probes surrounding the Piedmont Landfill. The migration from the Kernersville Landfill will be addressed through a Landfill Gas Corrective Action Plan that was submitted to you for your review on September 9, 2013. A map has been included in this report to illustrate the proximity of the two landfills and the gas probes between them.

If you have any further questions, please contact me at (336) 323-0092. Thank you.

Sincerely,  
**JOYCE ENGINEERING**

*Adam Cox*

Adam Cox  
Field Consultant

Copy: Thad Buck, Town of Kernersville

**Landfill Gas Monitoring Data Form**

Facility Name: Town of Kernersville Permit Number: 34-04  
 Date of Sampling: September 20, 2013 Personnel: A. COX  
 Gas Monitor Type & Serial Number: GEM 2000; GM12805 Calibration Date: July 29, 2013  
 Field Calibration Date & Time: 9/20/2013 12:15:00:00 PM Calibration Gas Type: 50% CH4, exp. 6-2014  
 General Weather Conditions: Cloudy, 60's°F Barometer: 30.00 In-Hg

Location or ID	Time	Probe Pressure (In-Wg)	Instr. sample tube purged	Time Pumped (sec.)	Initial %LEL	Stabilized %LEL	CH <sub>4</sub> (%Vol)	Notes
GW-1	1221	0.00	Y	30	462	462	23.1	replacement probe for GW-2
GW-2R	1224	0.10	Y	30	1196	1196	59.8	
GW-3	1248	0.00	Y	30	1090	1090	54.5	
GW-4	1243	0.00	Y	30	0.0	0.0	0.0	
GW-5	1233	0.00	Y	30	0.0	0.0	0.0	
GW-6	1218	0.10	Y	30	0.0	0.0	0.0	
GW-7	1254	0.00	Y	30	0.0	0.0	0.0	
GW-8	1307	0.10	Y	30	1146	1146	57.3	
GW-9	1257	0.00	Y	30	0.0	0.0	0.0	Waste Management/ Piedmont LF
GW-10	1251	0.10	Y	30	1158	1158	57.9	Waste Management/ Piedmont LF
GW-11	1300	0.00	Y	30	0.0	0.0	0.0	Waste Management/ Piedmont LF

**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):**  
 Joyce Engineering

**Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:**  
 Name: Larry Hineline, P.G. Phone: (336)-323-0092  
 E-mail: lhineline@joyceengineering.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Town of Kernersville Landfill	Freeman Road Kernersville, NC 27284	34-04	.0500	September 20, 2013

**Environmental Status: (Check all that apply)**  
 Initial/Background Monitoring  Detection Monitoring  Assessment Monitoring  Corrective Action

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

<input type="checkbox"/>	Groundwater monitoring data from monitoring wells	<input checked="" type="checkbox"/>	Methane gas monitoring data
<input type="checkbox"/>	Groundwater monitoring data from private water supply wells	<input type="checkbox"/>	Corrective action data (specify) _____
<input type="checkbox"/>	Leachate monitoring data	<input type="checkbox"/>	Other(specify) _____
<input type="checkbox"/>	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**

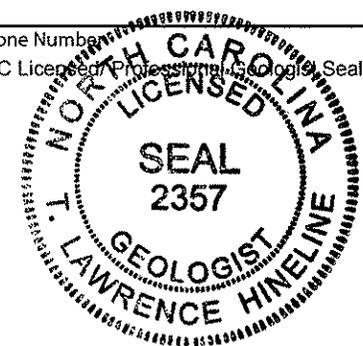
To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis 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.

Larry Hineline P.G. Technical Consultant (336)-323-0092

Facility Representative Name (Print) \_\_\_\_\_ Title \_\_\_\_\_ (Area Code) Telephone Number \_\_\_\_\_  
 Signature [Signature] Date 9/25/13 Affix NC Licensed Professional Geologist Seal

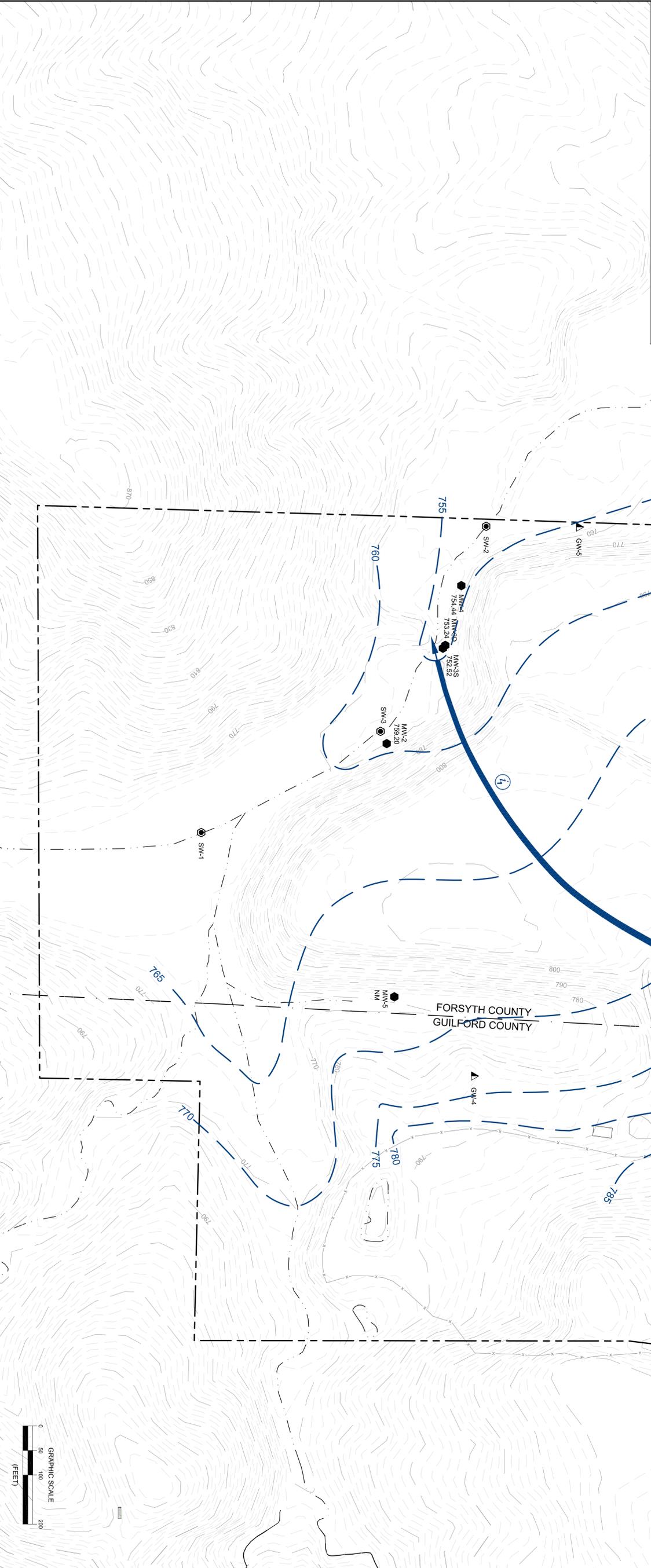
2211 W. Meadowview Rd. Ste. 101, Greensboro, NC 27407  
 Facility Representative Address

C-0782  
 NC PE Firm License Number (if applicable effective May 1, 2009)



**LEGEND**

- 800 --- EXISTING 10' TOPOGRAPHIC CONTOUR
- 770 --- EXISTING 2' TOPOGRAPHIC CONTOUR
- --- PROPERTY LINE
- --- EXISTING ROAD
- --- APPROXIMATE LIMITS OF WASTE
- --- CENTERLINE OF STREAM
- --- GROUNDWATER CONTOUR AND ELEVATION
- SW-1 APPROXIMATE SURFACE WATER SAMPLING POINT LOCATION AND IDENTIFICATION
- MW-1 789.95 MONITORING WELL IDENTIFICATION AND WATER LEVEL READING
- ▲ GW-1 GROUNDWATER FLOW DIRECTION WITH GRADIENT CALCULATION SEGMENT
- ④ SEGMENT USED FOR GRADIENT CALCULATIONS
- ▲ GW-1 EXISTING LANDFILL GAS WELL
- ▲ GW-6 PROPOSED LANDFILL GAS WELL
- ◇ GP-1 PROPOSED LANDFILL GAS PROBE
- NMI NOT MONITORED



PIEDMONT LANDFILL AND RECYCLING CENTER

FORSYTH COUNTY  
GUILFORD COUNTY



DRAWING NO. 1	SCALE AS SHOWN	PROJECT NO. 838.1201.12	<p><b>TOWN OF KERNERSVILLE LANDFILL FORSYTH COUNTY, NORTH CAROLINA</b></p> <p>POTENTIOMETRIC SURFACE CONTOUR MAP MAY 1, 2013</p>	<p><b>JOYCE ENGINEERING</b></p> <p>2211 W. MEADOWVIEW ROAD GREENSBORO, NC 27407 PHONE: (336) 323-0092</p> <p>NC CORP LIC: C-0782</p>	DESIGNED ACE	<table border="1"> <thead> <tr> <th>DATE</th> <th>REVISIONS AND RECORD OF ISSUE</th> <th>NO</th> <th>BY</th> <th>CK</th> <th>APP</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	DATE	REVISIONS AND RECORD OF ISSUE	NO	BY	CK	APP						
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