



Environmental Engineers, Scientists & Consultants

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January 16, 2014

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 January 2014
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 January 16, 2014 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 has been addressed through a system of landfill gas vents installed on the property at the end of November. 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
Field Consultant

Copy: Thad Buck, Town of Kernersville

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, Inc.

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

Name: G. Van Ness Burbach, Ph.D., P.G. Phone: (336)-323-0092

E-mail: vburbach@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	January 16, 2014

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?

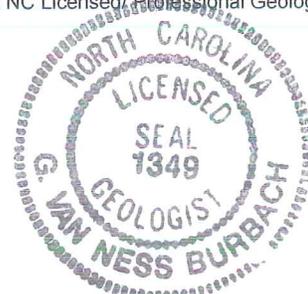
- No. No groundwater or surface water standards were exceeded.
 Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water 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.

G. Van Ness Burbach, Ph.D., P.G. Technical Consultant (336)-323-0092
 Facility Representative Name (Print) Title (Area Code) Telephone Number
 4/16/14
 Signature Date 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)



Landfill Gas Monitoring Data Form

Facility Name: Town of Kernersville Permit Number: 34-04
 Date of Sampling: January 16, 2014 Personnel: A. Cox
 Gas Monitor Type & Serial Number: GEM 2000: 5194 Calibration Date: July 29, 2013
 Field Calibration Date & Time: 1/16/14 10:46 AM Calibration Gas Type: 50% CH₄, exp. 2-2014
 General Weather Conditions: Sunny 40's F Barometer: 29.95 In-Hg

Location or ID	Time	Probe Pressure (In-Wg)	Instr. sample tube purged	Time Pumped (sec.)	CH ₄ (%LEL)	CH ₄ (%Vol)	Notes
GW-1	1053	0.00	Y	60	562	28.1	replacement probe for GW-2
GW-2R	1057	-0.10	Y	60	1176	58.8	
GW-3	1123	0.10	Y	60	304	15.2	
GW-4	1114	0.00	Y	60	0.0	0.0	
GW-5	1106	0.00	Y	60	0.0	0.0	
GW-6	1049	-0.80	Y	60	0.0	0.0	
GW-7	1128	0.00	Y	60	0.0	0.0	
GW-8	1148	0.10	Y	60	1150	57.5	
GW-9	1132	0.05	Y	60	0.0	0.0	Waste Management/ Piedmont LF
GW-10	1138	-0.10	Y	60	650	32.5	Waste Management/ Piedmont LF
GW-11	1143	-0.20	Y	60	0.0	0.0	Waste Management/ Piedmont LF