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April 23, 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 April 2014
Town of Kernersville Closed Landfill, Permit No. 34-04
JOYCE Project No. 838.1301.12, Task No. 05**

Dear Ms. Drummond:

Attached please find a Landfill Gas Monitoring Log and an Environmental Monitoring Reporting Form (EMRF) for the quarterly monitoring event that occurred on April 16, 2014 at the Closed Town of Kernersville Landfill (Permit number 34-04). Methane monitoring for this event was conducted by Joyce Engineering (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, and GW-8 above the LEL (Lower Explosive Limit) 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. There were no exceedances of the LEL in GP-10 this month; however, GW-8 was above the LEL. The readings were verified for calibration and proper sampling technique, and there were no issues.

The soil conditions at the Kernersville Landfill site were very wet, which could have an affect on LFG migration and on the influence of the passive vents installed on the in November 2013. Additional monthly monitoring will provide additional data to demonstrate whether the methane migration is being reduced by the vents. A map has been included in this report to illustrate the proximity of the two landfills and the locations of the gas probes.

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

Sincerely,
JOYCE ENGINEERING

A handwritten signature in blue ink that reads "Van Burbach".

Van Burbach, Ph.D, P.G.
Technical Consultant

Attachments
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	April 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

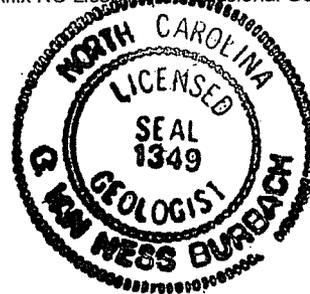
Facility Representative Name (Print) _____ Title _____ (Area Code) Telephone Number _____
G. Van Ness Burbach _____ Affix NC Licensed Professional Geologist Seal
 Signature _____ Date 4/23/14

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

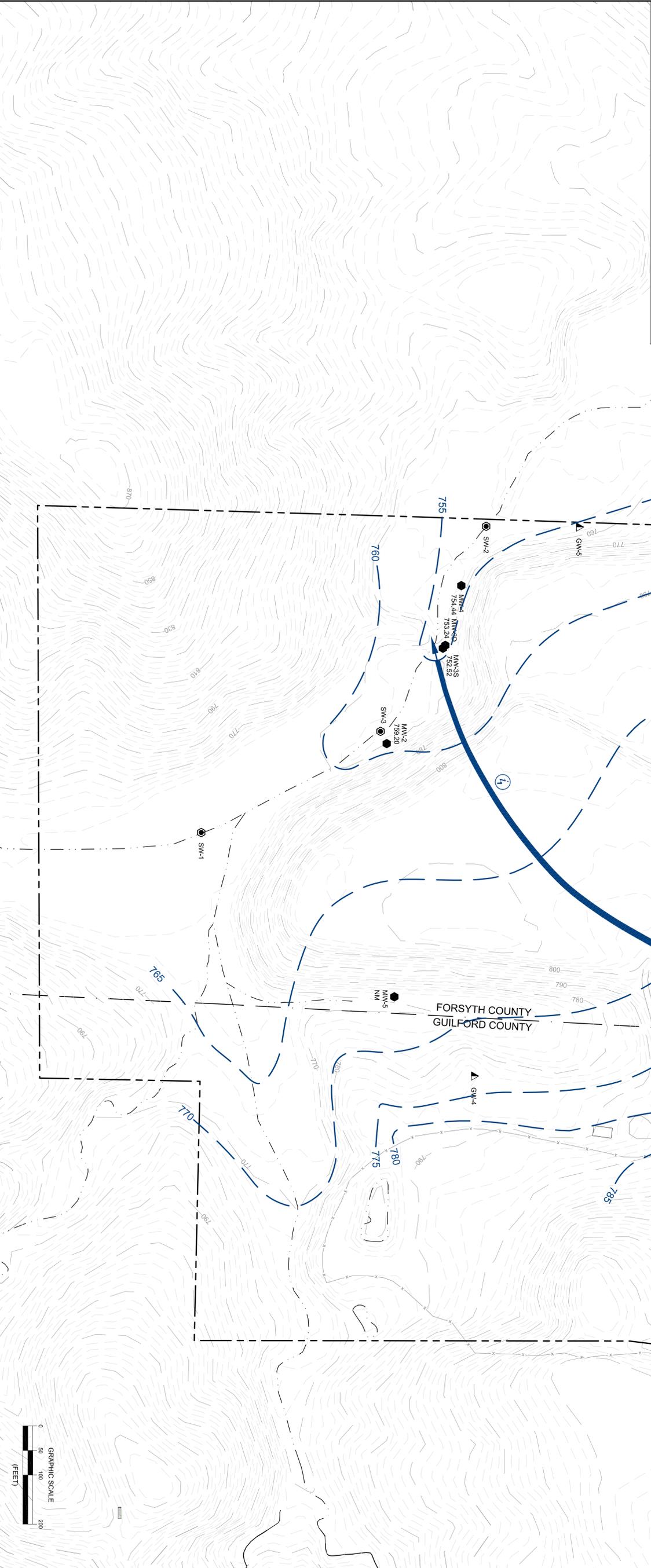
Facility Name: Town of Kernersville Landfill
 Date of Sampling: 4/16/2014
 Gas Monitor Type & Serial Number: GEM 5000 SN G500636
 Field Calibration Date & Time: 4/16/14 0937 AM
 General Weather Conditions: Sunny 50's°F

Permit Number: 34-04
 Personnel: Dan Girdner
 Calibration Date: 3/25/2014
 Calibration Gas Type: 15% CH₄, exp. 4-2016
 Barometer : 29.55 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		0.02	Y	60	448	22.4	replacement probe for GW-2
GW-2R		0.18	Y	60	160	8.0	
GW-3		0.01	Y	60	38	1.9	
GW-4		0.00	Y	60	0	0.0	
GW-5		0.01	Y	60	0	0.0	
GW-6		0.01	Y	60	0	0.0	
GW-7		0.01	Y	60	0	0.0	
GW-8		0.02	Y	60	1118	55.9	
GW-9	0	0.01	Y	60	0	0.0	Waste Management/ Piedmont LF
GW-10	0	0.09	Y	60	4	0.2	Waste Management/ Piedmont LF
GW-11	0	0.00	Y	60	0	0.0	Waste Management/ Piedmont LF

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	TOWN OF KERNERSVILLE LANDFILL FORSYTH COUNTY, NORTH CAROLINA	 2211 W. MEADOWVIEW ROAD GREENSBORO, NC 27407 PHONE: (336) 323-0092 NC CORP LIC: C-0782	DESIGNED ACE	© 2013 Joyce Engineering All rights reserved.	DATE	REVISIONS AND RECORD OF ISSUE	NO	BY	CK	APP
		POTENTIOMETRIC SURFACE CONTOUR MAP MAY 1, 2013	DRAWN RWH CHECKED ACE APPROVED GVB DATE 05/29/13									