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Greensboro, NC 27407
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December 7, 2011

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
Fourth Quarterly Sampling Event of 2011
Granville County – Butner Landfill, Permit No. 39-02
JEI Project No. 660.1101.12, Task No. 06**

Dear Ms. Drummond:

Please find attached a Landfill Gas Monitoring Log, location drawing, and an EMRF for a monitoring event that occurred on December 5, 2011 at the Granville County Butner closed Landfill (Permit number 39-02). Methane was detected in GP-2 above the LEL on this date. Please see the attached log for the summary of the monitoring results.

GP-2 is close to the edge of waste, while there is a distance of approximately 200 feet beyond GP-2 to the site boundary. Groundwater Monitoring Well MW-5 is located between GP-2 and the property line, so a cap with a shut-off valve was placed on it earlier in 2011 in order to monitor the headspace for methane. No methane was detected in MW-5. Methane does not appear to be migrating beyond the site boundary. It should also be noted that there are no known structures within 1000 feet of GP-2, and that an unnamed tributary of Picture Creek runs parallel to the southern boundary, which would prevent any further landfill gas migration.

Landfill gas monitoring will continue at Butner Landfill on a quarterly basis. Please contact me at (336) 323-0092 if you have any questions regarding the monitoring event.

Sincerely,
JOYCE ENGINEERING, INC.

A handwritten signature in black ink, appearing to read "Van Burbach", written in a cursive style.

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

Attachments

Copy: Jason Falls, Granville County

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):

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)
Butner Landfill	State Road 1004 Butner, NC	39-02	.0500	December 5, 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.

G. VanNess Burbach, Ph.D., PG

Technical Consultant

(336) 323-0092

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

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)

Revised 6/2009



Landfill Gas Monitoring Data Form

Facility Name: Butner Landfill, Granville County
 Date of Sampling: December 5, 2011

Gas Monitor Type & Serial Number: RKI GX-2003, SN 55030103RN
 Field Calibration Date & Time: 12/5/2011 9:10

General Weather Conditions: Mostly cloudy, 60° F

Permit Number: 3902

Personnel: Dan Girdner, Robert Winfield/ JE

Calibration Date: August 8, 2011

Calibration Gas Type: 2.5% CH4, exp. 8-2013

Barometer: 30.32 In-Hg

Location or ID	Time	Probe Pressure (In-Wg)	Instr. sample tube purged	Time Pumped (sec.)	Initial %LEL	Stable %LEL	CH ₄ (%Vol)	Notes
GP-1	9:14	-0.45	Y	60	0	0	0	
GP-2	9:18	0.00	Y	60	220	220	11	exceeds LEL
MW-5	9:20	0.00	Y	60	0	0	0	
GP-3	9:46	0.00	Y	60	0	0	0	
GP-4	10:39	0.00	Y	60	0	0	0	
GP-5	10:36	0.21	Y	60	80	80	4	
GP-6	10:31	0.14	Y	60	32	0	0	
GP-7		-	-	-	-	-	-	not located/missing
GP-8	10:44	-	Y	180	0	0	0	scalehouse/office

