

SCS ENGINEERS

October 8, 2009

File No. 02199312.02-2

Ms. Jackie Drummond
NCDENR
Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Subject: Notification of Methane Exceedances at Landfill Gas Monitoring Probes
North Wake County Landfill – Raleigh, North Carolina

Dear Ms. Drummond:

On behalf of Wake County (the County), SCS Engineers, PC (SCS) is submitting this letter to formally notify NCDENR of methane exceedances detected at perimeter landfill gas (LFG) monitoring probes M-3 and M-10 at the North Wake County Landfill (Permit No. 92-09, the Landfill). Under 15A NCAC 13B Section .1626(4)(c), the County must:

- i. Immediately take all necessary steps to ensure protection of human health and notify NCDENR; and
- ii. Place in the operating record the methane gas levels recorded within seven days of a detected exceedance, and a description of the steps taken to protect human health.

During the Third Quarter 2009 routine monitoring event performed on September 23, 2009, two (2) perimeter LFG monitoring probes at the Landfill, probes M-3 and M-10, exhibited methane concentrations greater than the regulatory compliance threshold of 5.0 percent, which is equivalent to the lower explosive limit (LEL) for methane. LFG probe monitoring results are attached in Exhibit 1. Probe M-3 is located on the north side of the closed, unlined cell and M-10 is located on the south side of the closed, unlined cell. You will recall that SCS notified NCDENR of these exceedances via electronic mail on October 1, 2009.

SCS immediately notified the County and the LFG control system operator, Wake Gas Producers (WGP) of these exceedances at the perimeter monitoring probes. WGP implemented operational adjustments to the LFG control system in these areas and continued to monitor the adjacent extraction components and perimeter probes. SCS coordinated with Wake County to monitor the active LFG control system performance in the vicinity of the exceedances and performed a verification monitoring event at the impacted perimeter LFG probes on September 25, 2009. During the verification monitoring event, SCS measured LFG concentrations at exceedance probes M-3 and M-10 below the compliance threshold. Results of the verification monitoring event are depicted in Exhibit 1. SCS would also note no detectable methane concentration was recorded in any monitored structure during this most recent event.



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As required by 15A NCAC 13B Section .1626(4)(c)(iii), the Facility has implemented a LFG Remediation Plan, most recently updated on July 12, 2007. In accordance with the Plan, the frequency for monitoring LFG probes exhibiting non-compliant methane concentrations will be monthly until such time that the probes have demonstrated compliant concentrations for three consecutive months. However, due to the demonstration of compliance within two (2) days of the 3rd Quarter initial event, SCS does not suggest any additional corrective action at this time. Furthermore, SCS suggests these two (2) LFG probes remain on a quarterly monitoring schedule in lieu of monthly monitoring.

The referenced regulations also require completing an update to the LFG Remediation Plan, within 60 days of the initial exceedance, to consist of a description of proposed remedies to correct the exceedances. Operational adjustments to increase the LFG system effectiveness in controlling subsurface LFG migrations in the areas of concern were expeditiously implemented resulting in an immediate impact. Thus SCS believes that an update to the LFG Remediation Plan is not necessary at this time. If additional remediation efforts are warranted based on subsequent monitoring results, the County will revisit the requirements to update the existing LFG Remediation Plan.

If you have questions or comments regarding the County's notification, please feel free to contact Johnny Beal of Wake County at (919) 856-5634 or Bob Dick at (804) 598-9480.

Sincerely,



D. Brandon King
Staff Scientist



Scott N. Mortimer
Sr. Project Professional
SCS ENGINEERS, PC

cc: Johnny Beal – Wake County
Lee Squires – Wake County

EXHIBIT 1. LANDFILL GAS MONITORING PROBES NORTH WAKE LANDFILL - WAKE COUNTY, NORTH CAROLINA

Date: September 23 and 25, 2009
 Project No: 02199312.02-2
 Weather: Sunny, 85°F

Personnel: DBK
 Equipment: GEM-2000

| Date (mm/dd/yy) | Monitoring Probe No. | Time (24-hr) | Methane (% vol) | Carbon Dioxide (% vol) | Oxygen (% vol) | Balance Gas (% vol) | Pressure (in-wc) |
|--------------------|----------------------------|-----------------|--------------------|------------------------------|-------------------|---------------------------|---------------------|
| 9/23/09 | M 3 | 9:52 | 6.6 | 7.7 | 13.8 | 71.9 | 0.1 |
| 9/23/09 | M 10 | 10:33 | 5.0 | 11.4 | 1.2 | 82.4 | 0.0 |
| 9/25/09 | M 3 | 11:45 | 1.5 | 2.5 | 17.6 | 78.4 | 0.2 |
| 9/25/09 | M 10 | 11:51 | 2.5 | 11.2 | 0.4 | 85.9 | 0.0 |

Notes: