CDM
One Cambridge Place, 50 Hampshire Street
Cambridge, Massachusetts 02139
tel: +1 617 452-6000
fax: +1 617 452-8000

April 5, 2010

Mr. David Ellis
Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, Massachusetts 02347

Subject: Summary of Landfill Gas Sampling Results
Nantucket Landfill – March 2010

Dear Mr. Ellis:

On March 31, 2010, personnel from Camp Dresser & McKee Inc. (CDM) conducted environmental monitoring at the Nantucket Landfill. The environmental monitoring included field screening for landfill gas. The environmental sampling was conducted in accordance with the approved Environmental Monitoring Plan, prepared by SECOR International Inc. in July 1999 and in conformance with the Solid Waste Management Regulations (310 CMR 19.132).

As part of the closure construction at the landfill, the environmental monitoring network was expanded by the addition of seventeen landfill gas wells (LGW-1 through LGW-17). See the site plan for locations of the landfill gas monitoring locations.

Landfill gas wells were screened in the field for the following parameters:

- Hydrogen Sulfide (H_2S);
- Methane (CH_4);
- Lower Explosive Limit (LEL);
- Carbon Dioxide (CO_2);
- Oxygen (O_2); and
- Volatile Organics (VOCs).

Evaluation of Results

Landfill gas wells were screened for the parameters indicated previously in this report. Prior to purging the wells, initial readings were taken at each location. Following recording of the initial readings, approximately ten minutes were allowed for purging before final readings were recorded.

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Methane was only detected in one perimeter landfill gas well (LGW-9). Methane was detected at a concentration of 594% of the LEL. LGW-9 is not located at the property line of the site. CDM conducted a probe (PROBE-1) approximately 6 feet from LGW-9. Methane was detected in PROBE-1 at a concentration of 52% of the LEL. CDM also conducted a second probe (PROBE-2) approximately 25 feet from LGW-9. Methane was not detected in PROBE-2. Each of the two probes was conducted at a depth of approximately 8 feet below grade. Landfill gas is not currently migrating across the property line.

Methane was detected in LGW-14 through LGW-17 at concentrations ranging from 908% to 1504% of the LEL. LGW-14 through LGW-17 are located between Phase I and Phase 2A of the landfill. These wells are most likely located in waste or immediately adjacent to waste. LGW-1, LGW-10, and LGW-11 are located between the landfill and property line or buildings. Methane was not detected in these wells, indicating landfill gas migration is not currently violating solid waste regulations.

Carbon dioxide was detected in most well locations at concentrations ranging from 0.3% to 27.7%. Hydrogen sulfide was detected in sampling locations LGW-15 and LGW-16 at concentrations of 7.7 ppm and 200 ppm, respectively. VOCs were detected in several sampling locations at concentrations ranging from 0.6 ppm to 11.8 ppm. Sampling locations are shown on the attached plan and complete sampling results are summarized in Table 1.

The next quarterly landfill gas screening is scheduled for June 2010.

Please do not hesitate to call me at (617) 452-6659 if you have any questions or require additional information.

Very truly yours,

Vincent M. Recchia, P.E.
Camp Dresser & McKee Inc.

Attachments

c: Jeff Willet, Nantucket
Tracy Sundell, Nantucket
Whitney Hall, Waste Options

TABLE 1
NANTUCKET LANDFILL
NANTUCKET, MASSACHUSETTS
GAS WELL MONITORING - MARCH 2010

Gas Well	Type	Date	OVM (ppm)		H_2S (ppm)		CH_4 (%)		%LEL		CO_2 (%)		O_2	
No.			*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*
LGW-1	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.3	20.4	19.5
LGW-2	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1	20.5	19.3
LGW-3	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	20.9	21.0
LGW-4	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	20.9	20.9
LGW-5	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.3	17.3	20.4
LGW-6	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	9.0	13.5	10.3
LGW-7	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	19.6	18.4
LGW-8	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	21.0
LGW-9	Well	3/31/2010	3.3	0.6	0.0	0.0	25.1	29.7	502.0	594.0	24.3	27.7	3.0	0.0
LGW-10	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	20.7	20.7
LGW-11	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	20.6	20.9
LGW-12	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	20.1	20.3
LGW-13	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	21.0	20.9
LGW-14	Well	3/31/2010	0.0	0.0	0.0	0.0	44.2	45.4	884.0	908.0	25.4	25.2	2.5	1.0
LGW-15	Well	3/31/2010	7.6	3.0	5.2	7.7	69.1	69.2	1382.0	1384.0	24.5	24.5	3.9	0.0
LGW-16	Well	3/31/2010	10.0	3.9	200.0	200.0	75.1	75.2	1502.0	1504.0	14.0	13.7	0.7	0.6
LGW-17	Well	3/31/2010	8.6	11.8	0.3	0.3	55.5	55.3	1110.0	1106.0	25.6	25.5	1.8	0.9
PROBE-1	Well	3/31/2010	0.0	0.0	0.0	0.0	2.6	1.9	52.0	38.0	5.2	4.3	14.9	16.3
PROBE-2	Well	3/31/2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	20.9	20.8

Notes:
1. Wells and probes were purged for approximately 10 minutes before final readings were recorded.
2. Methane measured with combustible gas indicator.