Central Testing Laboratory

Engineering and Materials Testing

LEESBURG • INVERNESS • OCALA

2001 YEARLY METHANE GAS MIGRATION STUDY

SUMTER COUNTY PUBLIC WORKS,
SOLID WASTE DISPOSAL

SUMTER COUNTY

CONDUCTED FOR

Mr. Gary Breeden

November 9, 2001

CENTRAL TESTING LABORATORY

Conducted and prepared by
Patricia Snowdon, Environmental Specialist

November 9, 2001

Leesburg

Mr. Garry Breeden, Director of Public Works
Sumter County Public Works Department
319 E. Anderson Avenue
Bushnell, FL 33513

RE: Gas Migration Study Report
Gas Monitoring In and Around Buildings
Sumter County Solid Waste Management Facility
9984006.300

Dear Mr. Breeden:

As is required by specific condition of the permit, Central Testing Laboratory (CTL) performed a gas migration study at the above referenced facility on November 9, 2001. Permanent monitoring assemblies were installed, October 5, 1994, at various locations at the facility. The locations are shown on the attached aerial photograph. The purpose of this study is to determine if generation and possible migration of combustible gases occur at the closed Class I Landfill.

The monitoring assemblies were placed at sampling locations chosen to detect methane gas migrating off areas of the subject site to areas of concern, which include the structures. The sampling location within the structures was based upon accessibility. At all locations sampled within the buildings no methane gas was detected. The sampling locations were analyzed by inserting a probe of a Foxboro Organic Vapor Analyzer (OVA), Model 128, (Serial Number A41775) through a rubber stopper then inserting the rubber stopper into the top of the monitoring assembly. The meter on the OVA was visually monitored, allowing the meter to stabilize. The OVA was calibrated using air and 100 ppm methane (CH_4) in air. No methane gas was detected in the monitoring assemblies. The results of the OVA analysis are tabulated in the table entitled **Gas Migration Survey – November 9, 2001**, presented below.

Florida Department of Environmental Protection (FDEP) has requested that the OVA test results be converted to percentage of Lower Explosive Limit (LEL) for methane. The LEL for methane reported in various publications is 5.0 percent. This value was used to make the conversion from percent methane to percent LEL of methane. To simplify, divide the ppm methane by 50,000 to obtain percent LEL of methane.

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GAS MIGRATION SURVEY
NOVEMBER 9,2001

MONITORING POINT N^{O}	ppm CH_4	%LEL CH_4
M-1	0	0
M-2	0	0
M-3	0	0
M-4	0	0
M-5	0	0
M-6	0	0
M-7	0	0
M-8	0	0
M-9	0	0
M-10	0	0
M-11	0	0
M-12	0	0
M-13	0	0
M-14	0	0
M-15	0	0
M-16	0	0
M-17	0	0
M-18	0	0
M-19	0	0
M-20	0	0
M-21	0	0
M-22	0	0

M-23	0	0
M-24	0	0
M-25	0	0
M-26	0	0
M-27	0	0
M-28	0	0
M-29	0	0

Gas Monitoring was performed inside the Material Recovery Facility at each corner and at gaps and cracks in the concrete floor. Readings ranged from 0.0 ppm to .3-ppm methane. When converted to %LEL, readings range from 0.0 %LEL to $.6^{-5}$ %LEL of CH_4.

The inside of the Scale House was monitored for gas. No readings above 0.0-ppm methane were observed.

Based upon the results of the tests conducted as part of this gas migration survey, it is CTL's opinion that the existing gas venting system is functioning satisfactorily and that no recommendations for additional measures or corrective actions are required at this time.
We hope that the provided information meets your needs at the present time. Should you have any questions, or if you require additional information, please contact our office.

Very Truly Yours,
Central Testing Laboratory

Patricia Snowdon
Environmental Specialist

Theodore J. Strouse, P.E.
Florida Reg. No. 48220