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Solid Waste Authority Palm Beach

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

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DIVISION OF AIR
RESOURCES MANAGEMENT

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Howard L. Rhodes, Director
Division of Air Resources Management
FL Department of Environmental Protection
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Rhodes:

The purpose of this letter to provide you with comments regarding an alternative monitoring proposal submitted to the U.S. Environmental Protection Agency (EPA) Region 4 in the enclosed February 5, 2002, letter from the Solid Waste Authority (SWA) of Palm Beach County. In its letter, the SWA proposed a reduction in the frequency of methane surface monitoring conducted on the Class III landfill at its North County Resource Recovery Facility (NCRRF). This landfill is subject to 40 C.F.R. Part 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills), and SWA requested approval for an annual methane surface monitoring frequency as an alternative to the quarterly monitoring frequency required under 40 C.F.R. §60.756(f). Based upon our review of this request, an annual monitoring frequency for the Class III landfill at the NCRRF would be acceptable provided that the methane concentration during the annual screening does not exceed 250 parts per million (ppm). Details regarding the proposal and the basis for our determination are provided in the remainder of this letter.

Both a Class I and a Class III landfill are located at the NCRRF. The Class I landfill typically receives garbage, municipal solid waste incinerator ash, and other non-hazardous wastes. Construction demolition debris, trash, asbestos, paper, and glass are sent to the Class III landfill which is prohibited from accepting putrescible household waste. Based upon the types of wastes received, the Class III landfill is expected to generate less gas than the Class I landfill. Under the provisions in 40 C.F.R. §60.756(f), methane surface concentrations must be monitored on a quarterly basis, and under the provisions of 40 C.F.R. §60.755(c), corrective action must be taken if the methane surface concentration detected during these quarterly checks is 500 ppm or more above the background concentration. 40 C.F.R. §60.756(f) also has a provision that allows owners and operators of closed landfills to reduce the methane surface monitoring frequency to an annual basis if no readings of 500 ppm or more are detected during three consecutive quarterly monitoring periods.

No methane has been detected during five consecutive quarterly surface checks in the Class III landfill at the NCRRF, and based upon these results, the SWA has requested approval to conduct future methane surface monitoring on an annual basis. Under this proposal, the

monitoring would revert to a quarterly frequency if a methane reading of more than 500 ppm is detected during any of the annual surface monitoring checks. Since the Class III landfill at the NCRRF has not been closed, it does not qualify for a reduced monitoring frequency under the provisions in 40 C.F.R. §60.756(f). An alternative monitoring frequency can, however, be approved under provisions in 40 C.F.R. §60.13(i), and the authority to approve alternatives of this type has been delegated to the EPA Regional Offices.

The fact that no methane has been detected during any of the five quarters of monitoring conducted in the Class III landfill at the NCRRF is consistent with the expectation that the types of waste received will have low gas generation rates. Since there is no reason to expect that there will be any abrupt changes in the Class III landfill's gas generation rate, the SWA request for approval of an annual frequency for methane surface monitoring is acceptable to EPA Region 4. One condition for approval of this reduced monitoring frequency, however, is that a methane concentration of 250 ppm, rather than 500 ppm, must be used as the trigger for reverting back to a quarterly methane surface monitoring frequency.

One reason for using a lower threshold for resumption of a quarterly monitoring schedule for the Class III landfill at the NCRRF is that no methane has been detected during any of the five quarters of monitoring conducted thus far. Based upon the results of the previous monitoring, a methane concentration reading of 250 ppm or more above background during any future monitoring would indicate a significant change in the condition of the Class III landfill, and a change of this magnitude would justify the resumption of quarterly monitoring frequency. A second reason to use a lower threshold for resumption of a quarterly monitoring schedule for the Class III landfill at the NCRRF is that this landfill is still active. Because it is active, gas generation rates may vary more than they would for closed landfills for which 500 ppm is used as the threshold for reduced monitoring under the provisions in 40 C.F.R. §60.756(f). The possibility that gas generation rates will be more variable in an active landfill than they will be in a closed landfill justifies the use of a lower threshold for a reduced monitoring frequency in the Class III landfill at the NCRRF.

Although the 250 ppm concentration level used as the threshold for a reduction in the methane surface monitoring frequency in the Class III landfill at the NCRRF will be lower than the 500 ppm concentration level used for closed landfills under the provisions in 40 C.F.R. §60.756(f), the 500 ppm methane concentration used as a trigger for corrective action under the provisions in 40 C.F.R. §60.755(c)(4) would also apply to the Class III landfill at the NCRRF. Therefore, quarterly monitoring will be required if the methane concentration levels exceeds 250 ppm, but corrective action will be required only when the concentration level exceeds 500 ppm.

If you have any questions about the issues addressed in this letter, please contact Mr. David McNeal of the EPA Region 4 staff at (404)562-9102.

Sincerely,

R. Douglas Neeley
Chief
Air Toxics and Monitoring Branch
Air, Pesticides and Toxics
Management Division

Enclosure

(1) February 5, 2002, alternative monitoring proposal from the SWA

cc: Mr. Joe Kahn
Mr. Donald L. Lockhart