



STATEMENT OF BASIS

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BAQ Engineering Services Division
2600 Bull Street, Columbia, SC 29201
Phone: 803-898-4123 Fax: 803-898-4079

Company Name: Three Rivers Solid Waste Authority Landfill
Permit Number: TV-0080-0112

Permit Writer: Wanda Parnell
Date: June 23, 2009

DATE APPLICATION RECEIVED: June 6, 2008

DATE OF LAST INSPECTION: February 5, 2009 (No violations were observed.)

FACILITY DESCRIPTION

This facility is a municipal solid waste landfill.

PROJECT DESCRIPTION

On 6/6/08, BAQ received two (2) Title V Minor Modification (TVMM) applications. One application is to allow operation of the landfill gas (LFG) treatment and compression skid, also referred to as treatment skid. This system will be used as the primary treatment system for LFG collected at the facility. The treatment skid will compress, dehydrate and filter the LFG to the standards of a treated gas. Then, the gas will be transported via a 16 mile underground pipeline to Kimberly-Clark Beech Island Facility for combustion/sale. Since the treatment skid is an enclosed system with no outlets for LFG to freely vent or be combusted, modeling was not required. Additionally, with the reduction in emissions from the flare station, re-modeling of the flare was not required. BAQ letter dated 1/16/08 exempted the treatment skid from construction permitting requirements. The non-enclosed, non-assisted LFG powered flare station will become the back up control device. An updated startup, shutdown and malfunction plan and a revised site layout of the compliant LFG collection system has been included with this application. The second TVMM application requests an increase in the operating temperature (< 62.8 deg C, 145 deg F) for LFG extraction wells 1 & 2 as allowed by 40CFR60 Subpart WWW Standards of Performance for MSW Landfills, Section 60.753(c). Monitoring events have shown that extraction wells 1 & 2 (EW-1 & EW-2) have temperatures consistently near the permitted temperature (< 55 deg C, 131 deg F). This is due to the climatic condition in SC that promotes vigorous microbial stabilization and higher temperatures.

This modification to the Title V Operating Permit will incorporate the LFG treatment and compression skid as a primary control device and increase the operating temperature for EW-1 & EW-2 gas extraction wells. In accordance with SC Regulation 61-62.70.7(e)(4), it will be processed as a Significant Modification due to the relaxation of the operational limit for the two (2) extraction wells.

CHANGES SINCE LAST OP ISSUANCE

- 2/1/08 CP exemption for the construction of a gas treatment and compression skid
- 6/17/08 CP -CE to install a Resource Recovery Facility (RRF) and baghouse

SPECIAL CONDITIONS, MONITORING, LIMITS

American Landfill in Waynesburg, OH requested an Applicability Determination from the US EPA (EPA) for a higher temperature value (165 deg F) for ten wells. The request was submitted in accordance with 40 CFR 60.753(c) which states the following: *Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 deg C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.* Supporting data provided by the facility included documentation of the following: disassembly of the flame arrestor mesh screen on 9/26/01 for possible evidence of a sub surface landfill fire and landfill gas samples collected on 10/22/01. The investigation revealed that no substance found in the mesh screen represented a burned char material and lab analysis of the gas samples did not show elevated levels of CO, O₂, or other landfill gas constituents. Based on this information presented by American Landfill, the EPA approved the request concluding that the methanogenic process is still at an anaerobic phase at the higher landfill gas temperatures and no evidence of subsurface landfill fire is present at the site.

Landfill gas extraction wells EW-1 & EW-2 at Three Rivers Solid Waste Authority Landfill are allowed to operate at less than 62.8 deg C (145.0 deg F) vice 55 deg C based on supporting data from American Landfill and approval by the EPA. All other conditions, limits, and monitoring requirements remain unchanged.

PUBLIC NOTICE

In accordance with SC Regulation 61-62.70.7(h), the draft Title V Operating Permit will go on public notice for 30 days.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.



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