



State of Ohio Environmental Protection Agency

Southeast District Office

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Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

December 29, 2008

RE: **TUSCARAWAS COUNTY
FAC - KIMBLE SANITARY LANDFILL
GW**

Mr. Keith Kimble
Kimble Clay & Limestone Co.
3596 State Route 39 NW
Dover, Ohio 44622

Re: Review of Ground Water Quality Sampling Results and Statistical Analysis for First Half 2008

Dear Mr. Kimble:

The Ohio Environmental Protection Agency (Ohio EPA) Southeast District Office (SEDO) has reviewed Kimble Sanitary Landfill's (KSL) Ground Water Quality Sampling Results and Statistical Analysis for the First Half of 2008. This report was received by the Ohio EPA SEDO on August 28, 2008. KSL is conducting detection ground water monitoring. The report includes laboratory analytical results, QA/QC analyses, potentiometric maps, and statistical analyses for the ground water monitoring network.

Ohio EPA has determined that KSL is in violation of two rules listed in Ohio Administrative Code Rule (OAC) 3745-27-10(C)(7) regarding background data and using lowest practical quantification limits. Additionally, Ohio EPA recommends that KSL submit a new Ground Water Detection Monitoring Plan that includes the revised pages submitted since May 2004. Ohio EPA also seeks clarification of the monitoring status of the native soil water-bearing zone.

Please find specific violations and comments listed below:

Violations

1. **KSL is in violation of OAC 3745-27-10(C)(7)(g) and Section (C)(7) of their Ground Water Detection Monitoring Plan (GWDMP) which requires background data to be added in blocks of at least four statistically independent samples.**

KSL uses an intra-well comparison strategy based on the combined Shewhart-CUSUM control charts statistical method. The background data for each well is updated following only two sampling events instead of at least four as required by this rule. KSL statistically analyzes the data for trends; however, it is not clear that the previous background data plus new background data is analyzed as required by this rule and Section (C)(7) in KSL's GWDMP.

The previous background data plus the new data to be added must be checked for slow increasing or decreasing trends. If a slow increasing trend is identified, then the background must not be updated unless concurrence is received that it has been adequately demonstrated that the increasing trend is not the result of a release from the landfill. The

recent sampling events (at least four), must give no indication of an adverse change in groundwater quality if they are to be included in background.

KSL must recalculate background for each of its wells and revise their process for updating background to meet the requirements of this rule.

- OAC Rule 3745-27-10(C)(7)(e) - KSL needs to demonstrate that the practical quantification limits (PQLs) currently used by its laboratory meet the requirements of this rule.**

Ohio EPA's review of the 2007 ground water monitoring data identified eight parameters in Appendix I where the PQL used by TestAmerica is elevated above their respective target PQL listed in Ohio EPA Guidance Document #406. These parameters were: Ammonia, Arsenic, Calcium, Magnesium, Potassium, Sodium, Acrylonitrile, and Vinyl Chloride. In March 2008, Ohio EPA requested more information to determine compliance with OAC Rule 3745-27-10(C) (7)(e). KSL provided a satisfactory response in a letter dated May 14, 2008, indicating that the PQLs used by TestAmerica will meet the target PQLs in Ohio EPA Guidance Document #406.

However, Ohio EPA's review of the first half 2008 sampling results indicates that the PQLs for arsenic and ammonia still do not meet the "lowest PQL" requirement of OAC Rule 3745-27-10(C)(7)(e). KSL's May 14, 2008, letter indicates that the laboratory would use a PQL of 0.002 mg/L for arsenic and 0.2 mg/L for Ammonia in future data analysis. However, laboratory data reports from the first half of 2008 indicate that PQLs of 0.005 mg/L and 2.0 mg/L were used for arsenic and ammonia, respectively. KSL needs to demonstrate that the PQLs currently used by its laboratory meet the requirements of this rule.

Recommendation

- Ohio EPA recommends that KSL submit a complete Ground Water Detection Monitoring Plan with appropriate updates to reflect the current monitoring program.**

KSL's GWDMP has had multiple revisions since the last complete version of the plan (May 2004) was submitted to Ohio EPA. Revised pages were submitted in April, May, and September 2005 and most recently in May 2008. A stand-alone plan in the operating record would assist Ohio EPA in determining compliance with OAC 3745-27-10.

Statement

- The monitoring status of the native soils/overburden water-bearing zone at the Kimble Sanitary Landfill needs to be clarified.**

The Ground Water Detection Monitoring Plan identifies the native soils to the north and south of the site to have an estimated yield ranging from 0.01 to 0.2 gpm. Four monitoring wells (SP-38, SP-40, SP-46, and SP-47) are installed in the native soils and are sampled semi-annually. The GWDMP states that "because the native soils will remain under portions of the expansion, they will be monitored as **"if"** (emphasis added) they were a significant

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zone of saturation." The designation of the native soils as not a significant zone of saturation, but treated as one, will likely lead to confusion in the future and possible violations of OAC Rule 3745-27-10.

Because this saturated zone will remain under the expansion area and it yields water, it should be designated as a significant zone of saturation.

KSL is in violation of OAC Rule 3745-27-10(C)(7)(g) and section (C)(7) and OAC Rule 3745-27-10 (C)(7)(e). Please provide a written response within 30 days detailing the steps taken to correct the aforementioned violations. Ohio EPA SEDO also recommends the revising of the groundwater monitoring plan in accordance with paragraph 4 entitled "Statement".

If you should have any questions, please contact me at (740) 380-5435.

Sincerely,



Dale W. Warner R.S
Environmental Specialist
Division of Solid and Infectious Waste Management

DWW/jg

cc: Tuscarawas County Health Dept.
cc: Steve Williams, DDAGW-SEDO