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OhioEPA

State of Ohio Environmental Protection Agency

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Ted Strickland, Governor
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April 11, 2008

RE: GENEVA LANDFILL GROUND WATER

Mr. Evan Jahn
USA Waste Geneva Landfill
Geneva Landfill
4339 Tuttle Road
Geneva, Ohio 44041

Dear Mr. Jahn:

The Ohio Environmental Protection Agency (Ohio EPA) has reviewed the document titled "Semiannual Ground Water Monitoring Report September 2006 Analytical Results for Ground Water Detection Monitoring USA Waste Geneva Landfill, Geneva, Ohio." The document dated November 30, 2006, was received at the Northeast District Office of Ohio EPA on December 1, 2006. The document presents the findings of the September 2006 semiannual ground water sampling event, pursuant to OAC Rule 3745-27-10(D). The Geneva Landfill ground water monitoring programs are regulated by the Solid and Infectious Waste Regulations (OAC 3745-27-10), effective August 15, 2003.

Upon review, Ohio EPA has determined that the owner of USA Waste Geneva Landfill (Geneva Landfill) is in violation of the following:

1. Geneva Landfill is in violation of **OAC Rule 3745-27-10(C)(1)(a)** that states *"A written sampling and analysis plan, which documents the sampling and analysis procedures that shall be utilized in the ground water monitoring program. The owner or operator is required to use the procedures documented within the sampling and analysis plan."*

   This rule requires the owner to follow all low flow purging and volumetric sampling requirements in the written Sampling and Analysis Plan (SAP).

   Ohio EPA has determined that the owner/operator failed to follow their written SAP. Specifically, the owner/operator failed to properly follow all low flow and volumetric sampling requirements as set forth in the SAP.

   The plan specifies for low-flow purging (page 36) that *"...after evacuating the water in the pump and discharge tubing, collection of field measurements can begin...Stabilization will be considered achieved and purging will be considered complete when the following criteria have been met: three consecutive water-level*

measurements vary by one foot or less, and three consecutive measurements of specific conductance, pH, and conductivity agree to within 10%. Samples will not be collected from any well, using the purging method in this section, unless these criteria are met..."

The plan also specifies for volumetric purging (page 34) that *"MW5R...may require alternative purging methods...include the following...3 well volumes/Dry and sample within 24 hours due to turbidity..."*

According to the field information forms (well record forms), the owner/operator did not properly evacuate the stagnant water from the dedicated pump and tubing prior to initiating the measurement of the field stabilization parameters and sample collection at all wells as specified in the SAP. This resulted in the collection of unrepresentative ground water samples from the following wells:

- MW-4R...The owner/operator should have purged 3.15 liters of stagnant pump and tubing water prior to beginning the measurement of field stabilization parameters and collection of samples. Instead, a total of only 3.41 liters were removed from the well prior to sampling;

- MW-5R...The owner/operator did not properly purge this well following the volumetric 3-5 (well volumes)/Dry method. The field information form indicates that only 1.15 well volumes were purged and that the static water level was measured at 78.5 feet below top of casing after purging. The total well depth was recorded to be 138.30 feet. Thus, the well was not purged dry as indicated on the form;

- MW-6...The owner/operator should have purged 2.99 liters of stagnant pump and tubing water prior to beginning the measurement of field stabilization parameters and collection of samples. Instead, a total of only 3.79 liters were removed from the well prior to sampling;

- MW-7...The owner/operator should have purged 3.01 liters of stagnant pump and tubing water prior to beginning the measurement of field stabilization parameters and collection of samples. Instead, a total of only 3.79 liters were removed from the well prior to sampling;

- MW-8...The owner/operator should have purged 2.75 liters of stagnant pump and tubing water prior to beginning the measurement of field stabilization parameters and collection of samples. Instead, a total of only 3.03 liters were removed from the well prior to sampling.

The owner/operator needs to ensure that all purging and sampling steps, procedures, and analyses in the written plan are followed to ensure the proper measurement of field parameters and the collection of representative ground water samples.

2. **Geneva Landfill is in violation of OAC Rules 3745-27-10(C)(1), 3745-27-10(C)(2)(c)(i), and 3745-27-10(C)(2)(c)(ii), requiring the proper collection of representative ground water samples from all monitoring wells.**

   As indicated in Comment 1 above, the owner/operator did not properly evacuate the stagnant water from within the dedicated pump and tubing prior to initiating the measurement of field stabilization parameters and sample collection at several wells. This resulted in the collection of unrepresentative ground water samples from wells listed in Comment 1 above (MW-4R, MW-5R, MW-6, MW-7 and MW-8).

   The owner/operator must ensure that all purging and sampling requirements in the written SAP are followed in the future. The ground water sample results from these wells (MW-4R, MW-5R, MW-6, MW-7 and MW-8) cannot be accepted or used for statistical analysis or considered for inclusion as background data.

   Ohio EPA will need additional information to determine compliance with OAC Rule 3745-27-10(B)(1)(b) and (B)(3(e) that requires that all monitoring wells be maintained to provide for the collection of representative samples.

3. Information submitted indicates that monitoring wells MW-2R, MW-3R, and MW-8 had elevated pH measurements of greater than 9 units during the September 2006 sampling event. Values of pH greater than 9 units may indicate grout contamination of the monitoring well itself and/or impact from the landfill or other source. Ohio EPA-DDAGW is unable to determine whether these wells meet the requirements of these two rules because it is unclear if the wells are impacted by grout, the landfill, another source of contamination, or have a compromised surface seal.

   To demonstrate compliance with these rules, the owner/operator needs to explain the issue of the elevated pH readings for monitoring wells, MW-2R, MW-3R, and MW-8. Furthermore, the owner/operator needs to prove that these wells have, and will continue to perform as required by these rules. This demonstration should include showing that MW-2R, MW-3R, and MW-8 have produced representative samples in the past, that these wells were designed, installed, and developed in a manner that allows collection of ground water samples that are representative of ground water quality in the geologic unit being monitored, and that these wells have been properly maintained to perform to design specifications. Ohio EPA-DDAGW recommends that monitoring wells, MW-2R, MW-3R, and MW-8, be re-developed in an attempt to remedy the elevated pH of ground water coming from these wells.

If you have any technical questions regarding this review, please contact Conni McCambridge at (330) 963-1263. Please submit all correspondence to Colum McKenna, Division of Solid and Infectious Waste Management, Northeast District Office, Ohio EPA, 2110 East Aurora Road, Twinsburg, Ohio 44087.

Sincerely,

Colum J. McKenna
Environmental Specialist
Division of Solid and Infectious Waste Management

CJM:cl

cc: John Hujar, DSIWM-NEDO
Conni McCambridge, DDAGW-NEDO
Raymond Saporito, ACHD
Scott Herman, WMI
File: [TUKEL/LAND/Geneva Landfill/COR/04]