



State of Ohio Environmental Protection Agency

Northeast District Office

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Twinsburg, Ohio 44087

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

February 17, 2009

**RE: CENTRAL WASTE
GROUND WATER
NOTICE OF VIOLATION**

CERTIFIED MAIL

Tom Johnson
Central Waste, Inc.
12003 Oyster Road
Alliance, OH 44601

Dear Mr. Johnson:

The Ohio Environmental Protection Agency (Ohio EPA) has reviewed the following documents:

- Background Data for the 5th Background Sampling Event, dated July 5, 2007;
- Background Data for the 7th Background Sampling Event, dated August 16, 2007;
- Background Data for the 8th and Supplemental 9th Background Sampling Events, dated September 20, 2007.

The documents present the background ground water sampling results from monitoring wells MW-1D, MW-11DR, MW-14D, MW-15D, MW-16D, MW-17D, MW-26S, MW-27S, MW-28S, and MW-5SR. The sampling was conducted as required by OAC Rules 3745-27-10(D)(5)(a)(ii) and 3745-27-10(D)(5)(b)(ii) and the 2004 Ground Water Detection Monitoring Plan.

Ohio EPA has identified the following violation:

1. **The owner/operator is in violation of OAC Rules 3745-27-09(H) and 3745-27-10(A)(5) for failing to include the necessary signature statement(s) of a qualified ground water scientist, as well as the owner/operator, certifying that the subject documents listed above are true and complete and comply with the requirements of Chapter 3734 of the Revised Code and the rules adopted there under, to the best of their knowledge.**

None of the documents listed above contained the necessary signature statements from either the owner/operator or the qualified ground water scientist, certifying that the subject documents listed above are true and complete and comply with the requirements of Chapter 3734 of the Revised Code and the rules adopted there under, to the best of their knowledge, as required by these rules.

To return to compliance with these rules, the owner/operator should immediately submit the necessary signature statements for each of the subject documents listed, as required by these rules.

Ohio EPA needs more information to determine compliance with the following:

2. **Compliance with OAC Rules 3745-27-10(B)(3) and 3745-27-10(C)(1), which require properly installed and developed monitoring wells that allow the collection of ground water samples that are representative of the ground water quality in the geologic unit being monitored; and require consistent sampling and analysis procedures designed to ensure monitoring results that provide an accurate representation of ground water quality at the background and downgradient wells, cannot be determined at this time.**

Review of the subject documents listed above has revealed some potential issues with regard to the representativeness of the ground water sample results. In general, it appears there may be problems with turbidity, well construction, well development, and/or sampling and analysis that might have resulted in ground water sample results that do not accurately represent ground water quality at monitoring wells MW-1D, MW-11DR, MW-14D, MW-15D, MW-16D, MW-17D, MW-26S, MW-28S, and MW-5SR.

- a. Turbidity was elevated at monitoring wells MW-14D, MW-15D, and MW-16D during the 3rd round of background sampling in March. The turbidity readings (in NTUs) were 80.3, 93.1, and 53.3, at MW-14D, 15D, and 16D, respectively. The field information forms all indicate that turbidity was visually medium-low to medium-high. By the 4th background event in April, turbidity (in NTUs) had dropped at MW-14D to 14.5, but remained elevated at MW-15D and 16D at 66.7 and 48.2, albeit somewhat lower. This decreasing trend for turbidity at MW-15D and 16D continued till by the 9th supplemental background sampling event it was reduced to 18.9 and 25.8 NTUs, respectively. This is a clear indication that these wells were not properly and fully developed before background sampling was initiated. As a result, questions remain about the effect of elevated turbidity on those sample results (e.g. metals) that are sensitive to turbidity. To demonstrate compliance with these rules, the owner/operator needs to investigate this issue in more detail and make a determination as to whether or not the elevated turbidity readings resulted in ground water sample results that were not representative. If so, the owner/operator should properly censor the background data set such that the non-representative results are removed from the statistical limit calculations.

- b. The volatile organic compounds (VOCs) benzene, bromodichloromethane, chloroform, and toluene were detected in ground water samples from monitoring wells MW-11DR (benzene, chloroform, toluene), MW-14D (chloroform), MW-15D (chloroform), MW-16D (chloroform, bromodichloromethane), and MW-17D (chloroform) during the 3rd background sampling event. The owner/operator gave no reason for the detection of these constituents in the ground water samples, and gave no narrative of the potential effects on sample representativeness, other than to say the issue would be addressed, if necessary, after the wells became part of the monitoring system. It is unknown if these VOC detections were false positives, laboratory or sampling errors. After the 3rd background sampling event, the only VOC that was consistently detected in ground water samples from any of these wells was chloroform in ground water samples from MW-16D, which was detected during the 4th, 5th, 7th, 8th, and 9th background sampling events. It is worth noting that carbon disulfide was detected in ground water samples from MW-14D and MW-16D during the 5th background sampling event. Again, the owner/operator provided no viable explanation for the presence of these VOCs other than to call chloroform a common lab contaminant. A review of all trip blank samples and method blank samples showed that chloroform was simply not present in sample bottles, reagent water, or the analytical instrument during the analysis of any of these samples. Therefore, the laboratory instrument, sample bottles and reagent water can be ruled out as potential sources. This still doesn't explain the occurrence and detection of these various VOCs. Ohio EPA-DDAGW is concerned that the chloroform is an artifact of well development, if potable city water was required during drilling and/or development to flush fines and sediment out of the well. MW-16D is well documented as being a low yielding well and is sampled using the passive method. It would not have been unusual for the owner/operator to have had difficulties drilling and developing the well, and for potable water to have been added to MW-16D during the drilling and well development processes. To demonstrate compliance with these rules, the owner/operator needs to conduct a thorough investigation of these matters and provide Ohio EPA with both explanations for what happened and the corrective actions that were taken to remedy these issues.
- c. A review of the ground water sample results for MW-17D revealed that the ground water quality at MW-17D more closely mirrors the ground water quality of the shallow mine spoil and/or glacial wells that were also being sampled for background. This is very evident when looking at ammonia, sodium, potassium, pH, alkalinity, sulfate, magnesium, calcium, and iron.

The results are well out of line with MW-11DR, 14D, 15D, 16D, and suggest either a greater interconnection between shallow and deep ground waters in this area of the landfill, faulty well construction that is allowing shallow and deep waters to come together, or possibly an impact to water quality from the landfill. To demonstrate compliance with these rules, the owner/operator needs to investigate this phenomenon and provide Ohio EPA with more information clarifying what is happening at this well location and any corrective actions that were undertaken.

- d. Ohio EPA's review of the pH readings for monitoring wells MW-1D, MW-11DR, and 15D revealed pH readings above 9.0 units, and in the case of MW-16D above 8.5 units. Readings of pH this elevated typically indicates possible grout contamination or the need to conduct more well development to ensure that any potential residual grout effects from well construction activities on water quality are eliminated before background sampling is initiated. To demonstrate compliance with these rules, the owner/operator needs to investigate this issue and provide Ohio EPA with more information clarifying whether or not sample results may have been affected, and at which wells additional well development was conducted to resolve the issue of the elevated pH. If it is determined that sample results were affected, the owner/operator should properly censor the background data set such that the non-representative results are removed from the statistical limit calculations.
- e. Ohio EPA's review of the 4th and 5th background sampling events revealed that these sampling events were only 20 days apart in April. The 4th background sampling event took place on April 3, 2007, while the 5th event took place on April 23, 2007. It isn't clear, especially for the low yielding wells that are sampled using the passive method (MW-14D, 16D, and 27S), if 20 days is sufficient time for well recovery and for a new independent slug of ground water to have moved past the well head. The rules require that background consist of independent samples. To demonstrate compliance with these rules, the owner/operator needs to demonstrate that 20 days was sufficient time between the 4th and 5th background sampling events for fresh ground water to have flowed past the monitoring wells in question, such that independent samples were obtained during the 5th background sampling event.

Nothing in this letter shall be construed to authorize any waiver from the requirements of any applicable state or federal laws or regulations. This letter shall not be interpreted to release the Entity from responsibility under Chapters 3704, 3714, 3734, or 6111 of the Ohio Revised Code or under the Federal Clean Water or Comprehensive Environmental Response, Compensation, and Liability Acts for remedying conditions resulting from any release of contaminants to the environment.

Tom Johnson
Central Waste, Inc.
February 17, 2009
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If you have any questions concerning this letter, please contact me at (330) 963-1257.

Sincerely,



Katharina Snyder
Division of Solid and Infectious Waste Management

KS:cl

cc: Mark Kroenke, DDAGW-NEDO
Mary Helen Smith, Mahoning County Health Department
File: [Sowers/LAND/CENTRAL/GRO/50] ID# None, 581, 740, 833

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 or PO Box No. Central Waste
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PS Form 3800, August 2006 See Reverse for instructions

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Tom Johnson
 Central Waste, Inc.
 12003 Oyster Road
 Alliance, OH 44601

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