

**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

May 31, 2011

**RE: RITTMAN PAPERBOARD
NOTICE OF VIOLATION
GROUND WATER
WAYNE COUNTY**

CERTIFIED MAIL

Mr. Gary McQuate
Rittman Paperboard Landfill
100 Industrial Ave.
Rittman, Ohio 44270-1573

Dear Mr. McQuate:

On January 6, 2011, the Ohio Environmental Protection Agency (Ohio EPA), Division of Materials and Waste Management (DMWM), Northeast District Office (NEDO), received a document entitled, "Statistical Analysis of October, 2010," for Rittman Paperboard Residual Waste Landfill, located in Wayne County, and was dated June 2, 2006.

Rittman Paperboard operates a Class III Residual Waste Landfill currently owned and operated by Carastar Mill Group, Inc. The PTI #02-5056 was approved on June 4, 1997. The landfill received waste from the pulp and paper making operations conducted at the facility. Rittman Paperboard closed and ceased production of paper materials in 2006. The Residual Waste Landfill currently only receives paperboard waste sludge removed from the north lagoons and dried prior to placement within the permitted limits of waste placement.

The following violations of rule or statute were identified during the review of the subject documents:

1. Ohio Administrative Code (OAC) Rule 3745-30-08(C)(2):

Ground water elevations shall be measured: within a single 24-hour period in all monitoring wells at least semiannually and in each well prior to purging and sampling. The owner or operator shall determine, for the uppermost aquifer system and for all significant zones of saturation monitored, the direction of ground water flow at least semiannually, the ground water elevations, and directions of flow shall be shown on a potentiometric map submitted within the sampling data.

Ground water flow map of the shallow hydrostratigraphic unit contained within Appendix III is not in agreement with the supposition that the slurry wall is an impermeable barrier to inward and outward flow of ground water.

Rittman Paperboard should either revise the supposition regarding the ability of the slurry wall to impede ground water flow or revise the flow map to be reflective of actual conditions within the shallow hydrostratigraphic unit.

2. **OAC Rule 3745-30-08(C)(6):**

Any statistical method chosen in accordance with paragraph (C)(5) of this rule shall comply with the following performance standards as appropriate:

The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or waste-derived constituents. If the distribution of the chemical parameters or waste-derived constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

Rittman Paperboard does not adequately address the non-normality of the background data and does not attempt to transform the data such that a parametric prediction limit can be utilized accurately, nor does Rittman Paperboard attempt to utilize a nonparametric prediction limit on the data that exhibits non-normal distribution.

Rittman Paperboard has submitted time series plots. It is unclear as to whether Rittman Paperboard submitted the time series plots to represent trend tests, or whether trend tests were actually performed.

Rittman Paperboard appears to be incorporating outliers into calculated prediction limits.

Rittman Paperboard should address these discrepancies.

(d) If a tolerance interval or a prediction interval is used to evaluate ground water monitoring data, then the levels of confidence, and the percentage of the population contained in any tolerance or prediction interval shall be protective of human health and safety and the environment. These statistical parameters shall be determined after considering the number of

samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

Rittman Paperboard has established prediction limits for the volatile organic compounds (VOCs): Acetone, Benzene, Carbon Disulfide, Methylene Chloride, and Xylenes. These VOCs are not naturally occurring. If VOCs are determined to be present within downgradient wells on two consecutive sampling events, statistics are not to be performed, but rather an automatic Statistically Significant Increase is to be declared.

Rittman Paperboard should revise the Statistical Analysis Plan accordingly.

(e) The statistical method shall account for data below the limit of detection with one or more statistical procedures that ensure protection of human health and safety and the environment. Any practical quantification limit (PQL) used in the statistical method shall be the lowest concentration level that can be reliably achieved within the specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

Rittman Paperboard has not utilized the lowest achievable Practical Quantitation Limits for various parameters as required by OAC Rule 3745-30-08(C)(6)(e). Several of the reporting limits identified on the analytical laboratory resultant data sheets are from 4 to 20 times the target PQLs as identified in Ohio EPA Guidance Document #406.

Rittman Paperboard should address this discrepancy.

(f) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

Rittman Paperboard has not adequately corrected for seasonal and/or spatial variability within the data set.

Rittman Paperboard should revise the Statistical Analysis Plan to address seasonal and/or spatial variability of ground water quality.

(g) Background data can be added only in blocks of data resulting from the analysis of four or more statistically independent samples after the data have been statistically compared to the current background data and no

statistical differences are detected, unless another method is deemed acceptable to the director.

Rittman Paperboard has not adequately described the methods or frequencies utilized to update background data sets.

Utilizing background data established over 30 sampling events, Rittman Paperboard has not adjusted the background data set to represent current conditions.

3. **OAC Rule 3745-30-08(C)(8):**

All ground water analysis results, statistical analysis results, and ground water elevation data generated in accordance with paragraphs (C), (D), (E), and (F) of this rule shall be submitted to Ohio EPA no later than 75 days after sampling the well. All ground water data and accompanying text shall be submitted on a form specified by the director.

Rittman Paperboard has not submitted the calculations pertaining to the normality of the data, trend tests, outlier testing, and plots of prediction limits.

Rittman Paperboard should submit all calculations, plots, and resultant data generated in the statistical evaluation for the October 2010 sampling data, and all future statistical analyses submitted with the semiannual ground water monitoring reports.

More information is needed to determine compliance with the following:

1. **OAC Rule 3745-30-08(C)(1):**

The Ground water Monitoring Program shall include consistent sampling and analysis procedures that are protective of human health and safety and the environment, and that are designed to ensure monitoring results that provide an accurate representation of ground water quality at the background and downgradient wells installed in accordance with paragraph (B) of this rule. Sampling and analysis procedures employed in the ground water monitoring program shall be documented in a sampling and analysis plan, which shall be included in the ground water monitoring program plan required by paragraph (A) of this rule; and which shall also be available for inspection at the landfill facility. The owner or operator shall use the methods documented in the sampling and analysis plan.

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Rittman Paperboard has not utilized purging and sampling techniques that ensure the acquisition of ground water samples that accurately represent background and downgradient ground water quality. Rittman Paperboard has purged the ground water monitoring wells on one day, and then acquired ground water samples for analytical analysis the following day. Thus, Rittman Paperboard allowed ground water within the well casing to be exposed to atmospheric conditions for the time interval between purging and sampling.

Rittman Paperboard has not adequately demonstrated that the time interval between purging and sampling is appropriate and is capable of adequately yielding representative ground water quality.

2. **OAC Rule 3745-30-08(A)(1) and (C)(5):**

The ability of the ground water monitoring program and statistical analysis program to detect a release from the facility.

Rittman Paperboard has not provided a sufficient quantity of information and data for the Ohio EPA to conclude that the statistical analyses applied to the ground water monitoring data has the statistical power sufficient to adequately detect a release from the facility.

Rittman Paperboard should re-evaluate the Statistical Analysis Program and update the program in accordance with the U.S. EPA – Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities – Unified Guidance.

In addition to the above, Ohio EPA recommends that Rittman Paperboard evaluate the site-wide false positive rate. Reducing the site-wide false positive rate can be achieved through various methods described in the U.S. EPA – Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities – Unified Guidance. Specifically, Rittman Paperboard appears to be utilizing a 'k' value based solely on the number of downgradient ground water monitoring wells. In order to reduce the site-wide false positive rate, Rittman Paperboard should evaluate the potential of 1 of m resampling protocol and, thus, establish a 'k' value from Appendix D of the Unified Guidance.

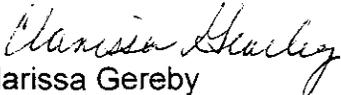
In conclusion, the Ground Water Monitoring Program and Statistical Analysis Program applied to the ground water monitoring are currently incapable of detecting a release from the facility. Rittman Paperboard should adequately respond to all of the issues identified above.

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Please revise the Statistical Analysis Plan as necessary and address the above issues within 60 days of the receipt of this correspondence. If you have any technical questions regarding this review, please contact Jeff Rizzo, Division of Drinking and Ground Waters, Northeast District Office, Ohio EPA at (330) 963-1115. Please submit all correspondence to Clarissa Gereby, Division of Materials and Waste Management, Northeast District Office, Ohio EPA, 2110 East Aurora Road, Twinsburg, Ohio 44087.

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 Chapter 3704, 3714, 3734, or 6111 of the Ohio Revised Code or under the Federal Clean Water Act or the Resource Conservation and Recovery Act, or the Comprehensive Environmental Response, Compensation, and Liability Act or from other applicable requirements for remedying conditions resulting from any release of contaminants to the environment.

Sincerely,


Clarissa Gereby
Environmental Specialist
Division of Materials and Waste Management

CG/cl

cc: Ken Eng, Wayne County Health Department
Jeff Rizzo, DDAGW, NEDO
Julie Hewlett, Bowser-Morner, Inc.
File: [Kurko/LAND/RITTMAN PAPERBOARD/GRO/85]
Project ID# 3652

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Mr. Gary McQuate
 RPB Manager
 Rittman Paperboard Landfill
 100 Industrial Ave.
 Rittman, Ohio 44270-1573

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