

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

February 21, 2013

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

**RE: RITTMAN PAPERBOARD RESIDUAL WASTE LANDFILL, GROUNDWATER
NOTICE OF VIOLATION, REQUEST FOR MORE INFORMATION**

Dear Mr. McQuate:

On January 4, 2013, Ohio Environmental Protection Agency (OEPA), Northeast District Office (NEDO), Division of Materials and Waste Management (DMWM), received a document entitled *Statistical Report of Ground Water Quality* and was dated December 2012. The document was submitted by Hull & Associates on behalf of Carastar Mill Group, Inc., owner of the Rittman Paperboard Residual Waste Landfill (Rittman Paperboard), and contains resultant analytical laboratory data, statistical analyses, and supporting documentation pertaining to the 2012 Second Semiannual Ground Water Monitoring Event.

Rittman Paperboard is currently conducting detection and assessment monitoring in accordance with Ohio Administrative Code (OAC) 3745-30-08.

The owner/operator initiated the 2012 Second Semiannual Sampling Event on October 23, 2012. The 75-day deadline for information and data obtained subsequent to the sampling event, in accordance with OAC Rule 3745-30-08(C)(8), was January 7, 2013.

Upon review of the subject document the following violations have been identified:

1. **OAC Rule 3745-30-08(D)(10)(b)(ii)**: *"The owner or operator shall, within 15 days of notifying Ohio EPA in accordance with paragraph (D)(8) of this rule, sample the leachate and/or the affected well(s) and analyze for constituents as follows:*
 - (b) *For facilities without leachate collection systems, comply with one of the following:*
 - (ii) *For class II, III, and IV residual waste facilities, the affected well(s) shall be sampled and analyzed for those parameters listed in appendix II of this rule, unless otherwise approved by the director or his authorized representative.*

The owner/operator has been sampling the ground water monitoring system for **OAC Rule 3745-30-08 Appendix IIIC**, exclusively. The owner/operator should be conducting semiannual assessment monitoring. This sampling would include **OAC Rule 3745-30-08 Appendix II** parameters determined to be present above background during the April 2006 sampling event.

The owner/operator has not been conducting semiannual assessment sampling as required by **OAC Rule 3745-30-08(E)(4)**.

2. **OAC Rule 3745-30-08(E)(1)**: *"The owner or operator shall, within 180 days of conducting the sampling required under paragraph (D)(12) of this rule, submit to Ohio EPA and implement a specific plan for a ground water quality assessment program to determine the concentration and the rate and extent of migration of waste-derived constituents in the ground water at the landfill facility. This plan shall, at a minimum, include:*
- (a) *A summary of the hydrogeologic conditions at the landfill facility; and*
 - (b) *A description of the detection monitoring program implemented by the landfill facility, including:*
 - (i) *The number, location, depth, and construction of detection monitoring wells with documentation; and*
 - (ii) *A summary of detection monitoring ground water analytical data; and*
 - (iii) *A summary of statistical analyses applied to the data; and*
 - (c) *A detailed description of the investigatory approach to be followed during the assessment, including but not limited to:*
 - (i) *The proposed number, location, depth, installation method, and construction of assessment monitoring wells; and*
 - (ii) *The proposed method(s) for gathering additional hydrogeologic information; and*
 - (iii) *The planned use of supporting methodology [i.e., soil gas or geophysical survey(s)]; and 3745-30-08 14.*
 - (d) *A detailed description of the techniques, procedures, and analytical equipment to be used for ground water sampling during the assessment, including but not limited to, the items listed in paragraphs (C)(1)(a) to (C)(1)(g) of this rule.*
 - (e) *A detailed description of the data evaluation procedures to be used, including but not limited to:*
 - (i) *Planned use of statistical data evaluation; and*
 - (ii) *Planned use of computer models; and*
 - (iii) *Planned use of previously gathered information; and*
 - (iv) *Criteria which will be utilized to determine if additional assessment activities are warranted; and*
 - (f) *A schedule of implementation.*

The owner/operator has not submitted a *Ground Water Quality Assessment Program Plan* capable of complying with **OAC Rule 3745-30-08(E)(1)**.

Correspondence from Ohio EPA was forwarded to Gary McQuate of Rittman Paperboard May 25, 2011. This correspondence identified the outstanding compliance issues associated with the June 5, 2006 *Shallow Ground Water Quality Assessment Plan* and April 15, 2011 *Deep Ground Water Quality Assessment Plan*.

The owner/operator has not adequately responded to the May 25, 2011 correspondence from Ohio EPA to Gary McQuate of Rittman Paperboard. Therefore, the owner/operator has yet to submit a *Ground Water Quality Assessment Program Plan* that complies with **OAC Rule 3745-30-08(E)(1)**.

Upon review of the subject document, Ohio EPA has determined that more information is needed to determine compliance with the following:

OAC Rule 3745-30-08(C)(5): *“The owner or operator shall, within 90 days of obtaining the final sample which completes the initial year of ground water monitoring, specify one of the following statistical methods to be used in evaluating ground water monitoring data. The statistical method chosen shall be conducted separately for each of the parameters required to be statistically evaluated in paragraph (D)(4) of this rule. The statistical method specified shall ensure protection of human health and safety and the environment and shall comply with the performance standards outlined in paragraph (C)(6) of this rule.*

The statistical analysis applied to the ground water sampling dataset utilizes existing background data that was acquired using bailer purging and sampling techniques. The owner/operator has recently implemented low-flow purge and sampling techniques. In order to utilize existing background ground water quality data that was acquired utilizing bailer purge and sampling techniques, the owner/operator must first demonstrate that the bailer data is from the same statistical population as the low-flow purge and sampling data.

Within the July 6, 2012 submittal of the *First 2012 Semiannual Statistical Report of Ground Water Quality*, the owner/operator plotted recent resultant analytical laboratory concentrations of ground water parameters acquired utilizing low-flow purge and sampling techniques on time series graphs of historical data acquired utilizing bailer data. The owner/operator's conclusion was that there was no apparent discrepancy and, therefore, the bailer-acquired data was appropriate to use as statistical background data.

The procedure used to compare bailer-acquired sampling data to low-flow sampling data was repeated during the *Second 2012 Semiannual Statistical Report of Ground Water Quality*. The narrative within the *Second 2012 Semiannual Statistical Report of Ground Water Quality* states,

“A review of the data collected during this sampling event using low-flow procedures as compared to historical data collected using a bailer, does not indicate any significant differences in the concentrations reported. Therefore, the historical data collected using bailers is appropriate as background data for the data collected using low-flow procedures.”

The above described procedure utilized during the *First and Second 2012 Semiannual Sampling Events* is inappropriate and inadequate to demonstrate that the low-flow acquired data is of a similar population as the bailer acquired data.

In order to utilize bailer acquired sampling data for statistical comparisons, a minimum of four independent sampling events utilizing low-flow purge and sampling techniques should be conducted. Upon establishing these four independent sampling events, the owner/operator should then compare the low-flow dataset to the bailer dataset utilizing a t-test, Wilcoxon rank sum test, or other appropriate statistical analysis identified within the *U.S. EPA Unified Guidance* to demonstrate that the data acquired utilizing low-flow techniques is from the same population as that acquired from bailer techniques.

If the two differently acquired datasets indicate origination from differing populations, the owner/operator will need to first utilize a statistical analysis based on four background events of low-flow data until eight independent samples utilizing low-flow techniques can be collected, at which time, a more robust statistical analysis may be utilized.

Ohio EPA has the following comments regarding the *2012 Second Semiannual Statistical Report of Ground Water Quality*:

1. *Section 2.0 Monitoring Well Network*

The *2012 Second Semiannual Statistical Report of Ground Water Quality* does not distinguish between detection and assessment monitoring programs. The document does not indicate which ground water monitoring wells are maintained within the detection monitoring program and which wells are maintained within the assessment monitoring program.

2. *Section 3.0 Data Review*

The narrative indicates that Test American reanalyzed selected data points and issued a revised report. The *Test America Case Narrative* indicates that several issues were identified during several analyses: Volatile organic compounds (VOC), several metal analytes, total dissolved solids, chloride, and nitrate/nitrite. It appears that at the request of Carastar, reanalysis of ammonia and chloride was performed. The VOC surrogates, percent recovery, and acceptable limits were not reported within the resultant analytical laboratory report.

It is unclear as to what the specific laboratory issues were, why the surrogates were not reported, and why the owner/operator requested reanalysis of several parameters at several wells. It is also unclear as what data first or second analysis was presented within the summary tables of the *2012 Second Semiannual Statistical Report of Ground Water Quality*.

3. *Section 5.0 Alternate Source Demonstration*

Geochemical Evaluation

In order to demonstrate an alternative source other than the landfill was responsible for the statistically significant differences (SSD) at MW-11R, MW-3, and MW-4, the owner/operator presents several *Piper Trilinear Diagrams*. Ohio EPA has identified several issues with the *Piper Trilinear Diagrams* as presented within the *2012 Second Semiannual Statistical Report on Ground Water Quality*:

Due to the lack of historical potassium sampling data, the owner/operator has replaced the cations potassium and sodium with manganese. Manganese is not typically considered a major cation when developing *Piper Trilinear Diagrams*. The manganese concentration is relatively low in comparison to other major cations. Plotting a relatively low manganese milliequivalents against those of calcium, and magnesium significantly skews the ground water classification to the right of the cation field. Therefore, the characterization of up and downgradient ground water quality utilizing manganese in place of potassium, and sodium is not considered an appropriate use of the *Piper and Stiff Diagrams for an alternate source demonstration*.

The *Piper Trilinear Diagrams* presented within the 2012 *Second Semiannual Statistical Report on Ground Water Quality* contain numerous data points. However, these data points are not referenced by sampling date. In order for the *Piper Trilinear Diagrams* to effectively demonstrate a trend or lack thereof of the data, the data points must be date referenced.

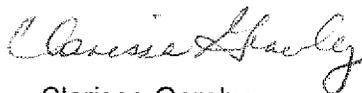
Rittman Paperboard has indicated that the initial SSDs are due to natural variation of ground water quality. Although Rittman Paperboard has not submitted a formal request that the Director of the Ohio EPA approve reinstatement of detection monitoring, Ohio EPA reviewed the information and data provided to support an alternate source demonstration. Upon review, Ohio EPA has determined that Rittman Paperboard has not submitted a sufficient quantity of information and data to support an alternate source demonstration and, therefore, does not recommend approval of the alternate source demonstration or reinstatement of detection monitoring at the Rittman Paperboard Landfill.

The owner/operator should adequately address the violations and comments identified, above. Ohio EPA does not recommend approval of the alternate source demonstration or reinstatement of detection monitoring at the Rittman Paperboard Landfill for the reasons stated above.

Please respond within 45 days of receipt of this correspondence. Please contact Jeff Rizzo at (330) 963-1115 if you have any questions regarding this review. Otherwise, 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 other applicable federal or state laws or regulations except as specified herein. This letter shall not be interpreted to release the owner or operator from responsibility under Ohio Revised Code (ORC) Chapters 3704, 3714, 3734, or 6111; under the Federal Clean Water Act, 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:ddw

cc: Ken Eng, Wayne County General Health District
Jeff Rizzo, DDAGW, NEDO
FILE: [Singh/LAND/Rittman Paperboard/GRO/85]
Project ID# 4799