



State of Ohio Environmental Protection Agency

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July 7, 2008

Mahoning Landfill, Inc.  
3510 Garfield Road  
New Springfield, OH 44443

**CERTIFIED MAIL**

**Director's Final Findings & Orders**

Dear Sir or Madam:

Transmitted herewith are Final Findings & Orders of the Director concerning the matter indicated.

Sincerely,

Kimberly Reese  
Systems Management Unit  
Division of Solid & Infectious Waste Management

cc: Ed Gortner, CO, DSIWM  
Jeff Hurdley, CO, Legal  
Lynn Sowers, NEDO, DSIWM

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

BEFORE THE  
OHIO ENVIRONMENTAL PROTECTION AGENCY

OHIO E.P.A.  
JUL -7 2008

ENTERED DIRECTOR'S JOURNAL

In the Matter Of:

Mahoning Landfill, Inc.  
3510 Garfield Road  
New Springfield, Ohio 4443

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Director's Final Findings  
and Orders

Respondent

I certify this to be a true and accurate copy of the  
official documents as filed in the records of the Ohio  
Environmental Protection Agency.

**PREAMBLE**

It is agreed by the parties hereto as follows:

By: *[Signature]* Date: 7-7-08

**I. JURISDICTION**

These Director's Final Findings and Orders ("Orders") are issued to Mahoning Landfill, Inc. ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") §§ 3734.13 and 3745.01.

**II. PARTIES BOUND**

These Orders shall apply to and be binding upon Respondent and its successors in interest liable under Ohio law. No change in ownership of the Respondent or of the Facility (as hereinafter defined) shall in any way alter Respondent's obligations under these Orders.

**III. DEFINITIONS**

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 3734 and the rules promulgated hereunder.

**IV. FINDINGS**

The Director of Ohio EPA has determined the following findings:

1. Mahoning Landfill, Inc. ("Facility") is located at 3510 Garfield Road, New Springfield, Mahoning County, Ohio.
2. Respondent is the "owner" and the "operator" of the Facility as those terms are defined in Ohio Administrative Code ("OAC") Rules 3745-27-01(O)(7) and (O)(5), respectively, and is also the license holder for the Facility.

3. The Facility is a "sanitary landfill facility" as that term is defined in OAC Rule 3745-27-01(S)(4) and is authorized to accept "solid waste" as that term is defined in ORC Section 3734.01(E) and OAC Rule 3745-27-01(S)(24).
4. Respondent is a "person" as that term is defined in ORC Section 3734.01(G) and in OAC Rule 3745-27-01(P)(3).

### General Operational Violations

5. Mahoning County Health Department ("Health Department") conducted an inspection of the Facility on January 23, 2002. In correspondence dated January 31, 2002, the Health Department notified Respondent it was in violation of OAC Rule 3745-27-12(I)(5)(effective June 1, 1994) for failure to submit explosive gas monitoring results on time.
6. The Health Department conducted an inspection of the Facility on April 11, 2002. In correspondence dated April 16, 2002, the Health Department notified Respondent of the following violations:
  - a. OAC Rule 3745-27-19(L)(1)(b)(ii)(effective March 1, 1996) for failure to properly implement the Facility's PCB and hazardous waste plan. Specifically Respondent failed to properly classify the American Standard fiberglass and Federal Prison refurbished computer parts waste streams;
  - b. OAC 3745-27-19(E)(12)(effective March 1, 1996) for failure to keep an accurate daily log of operations. Specifically, Respondent failed to properly identify and record the "waste type" on the daily log of operations for the American Standard and Federal Prison waste streams.
7. The Health Department conducted an inspection of the Facility on February 7, 2003. In correspondence dated February 25, 2003, the Health Department notified Respondent it was in violation of OAC Rule 3745-27-19(L)(1)(b)(effective March 1, 1996) for failure to adequately implement the Facility's PCB and hazardous waste screening program. Specifically, Respondent failed to obtain appropriate material safety data sheets for waste from Zinc Corporation of America.
8. The Health Department conducted an inspection of the Facility on September 6, 2005. In correspondence dated September 9, 2005, the Health Department notified Respondent it was in violation of OAC Rule 3745-27-19(E)(10)(a) for failure to keep a daily log of operations that contains all information requested by the Director. Specifically, Respondent failed to include the "County" information for out of state waste on the daily log forms.
9. The Health Department conducted an inspection of the Facility on April 11, 2006. In correspondence dated April 24, 2006, the Health Department notified Respondent it was in violation of OAC Rule 3745-27-19(E)(10)(a) for failure to fill out daily log

forms correctly. Specifically waste haulers were being incorrectly recorded due to a default set in Respondent's computer system.

10. The Health Department conducted an inspection at the Facility on November 17, 2006. In correspondence dated November 28, 2006, the Health Department notified Respondent it was in violation of OAC Rule 3745-27-19(E)(8)(e) for acceptance of ten loads of treated infectious waste without shipping papers that verified that the infectious waste was treated in accordance with OAC Rule 3745-27-32. Shipping papers were obtained by Respondent on November 28, 2006, verifying that the infectious waste had been treated.
11. The Health Department conducted an inspection of the Facility on December 19, 2006. In correspondence dated January 2, 2007, the Health Department notified Respondent it was in violation of OAC Rule 3745-27-19(B)(5) for failure to operate the Facility in a manner that does not cause water pollution. The violation was issued because in October of 2006 the Facility exceeded the limit set for total suspended solids by the Facility's National Pollutant Discharge Elimination System Permit. The Health Department indicated that this violation should be addressed with Ohio EPA.
12. On January 31, 2008, Respondent contacted the Health Department and Ohio EPA to provide verbal notification that on January 30, 2008, it had inadvertently accepted a drum of polychlorinated biphenyl ("PCB") contaminated waste from SunPro and was actively searching for the drum to remove it from the Facility. Subsequently, Ohio EPA and the Health Department conducted an inspection of Facility on January 31, 2008, to observe the removal efforts. The drum in question was found on January 31, 2008, and was excavated along with surrounding waste on February 1, 2008, for removal from the Facility. In correspondence dated February 4, 2008, the Health Department notified Respondent that acceptance of the PCB contaminated waste for disposal at the Facility is a violation of OAC Rule 3745-27-19(E)(8)(d).
13. On February 6, 2008, Ohio EPA received correspondence from Respondent dated February 5, 2008, that provided a chronological summary of the events leading to the acceptance of the PCB contaminated waste as well as the corrective actions undertaken to address the violation.

### **Ground Water Issues**

14. On September 29, 1999, Ohio EPA received a report from Respondent titled "*Technical Report: Corrective Measures Plan.*" Ohio EPA reviewed the report and in correspondence dated November 8, 2000, notified Respondent of the following violations:

- a. OAC Rule 3745-27-10(F)(3)(a)(effective June 1, 1994) for failure to provide an alternative short term remediation procedure that addresses any potential ground water contamination leaving the Facility;
  - b. OAC 3745-27-10(F)(15)(a) and OAC Rule 3745-27-10(B)(1)(effective June 1, 1994) for failure to address ground water monitoring wells MKS-6 and UC-5 in the corrective measures plan;
  - c. OAC 3745-27-10(F)(7)(a) and OAC Rule 3745-27-10(F)(7)(b)(ii)(effective June 1, 1994) for using proposed protection standard values that are not as protective of the environment as levels currently found in ground water;
  - d. OAC Rule 3745-27-10(F)(7)(b)(i)(effective June 1, 1994) for failure to compare constituents at each monitoring location to the Maximum Contaminant Level ("MCL") for that constituent and for failure to use the MCL of 5µg/L as the concentration level for benzene;
  - e. OAC Rule 3745-27-10(F)(3)(a)(ii)(effective June 1, 1994) for failure to evaluate the proposed remediation procedure to address ground water contamination for the long term reliability of the engineering and institutional controls;
  - f. OAC Rule 3745-27-10(F)(15)(effective June 1, 1994) for failure to demonstrate that ground water contamination will be addressed at all points in the plume of contamination that lie beyond the limits of waste placement.
15. On December 20, 2000, Ohio EPA received a report from Respondent titled "*Letter Report, Ground Water Sampling and Analysis, Detection and Assessment Monitoring Programs, October 2000 Semiannual Event.*" Ohio EPA reviewed the report and in correspondence dated July 16, 2002, notified Respondent of the following violations:
- a. OAC Rule 3745-27-10(C)(1)(e)(effective June 1, 1994) for failure to implement a ground water monitoring program that includes consistent sampling and analysis procedures and statistical methods that are protective of human health, safety, and the environment, and that provides an accurate representation of ground water quality. Specifically, Respondent failed to sample the Facility monitoring wells as soon as possible after purging and failed to document that ground water samples were preserved at the appropriate temperature during collection and transportation;
  - b. OAC Rule 3745-27-10(C)(7)(c)(effective June 1, 1994) for failure to use control chart parameter values that are protective of human health and the environment. Specifically, the control chart limits for several constituents in the ground water exceeded either the MCL or action levels.
16. On July 3, 2001, Ohio EPA received a document from Respondent titled "*Revised Statistical Analysis Plan, Mahoning Landfill.*" Ohio EPA reviewed the document and

in correspondence dated June 28, 2002, notified Respondent of the following violations:

- a. OAC Rule 3745-27-10(C)(6)(effective June 1, 1994) for failure to specify a single statistical method for each well/parameter combination and failure to define the term "rarely detected" in the statistical analysis plan;
  - b. OAC Rule 3745-27-10(C)(6)(e)(effective June 1, 1994) for failure to explain in the sampling and analysis plan how volatile organic chemical ("VOC") detections will be addressed.
17. On February 7, 2002, Ohio EPA received a document from Respondent titled "*Modifications to the Ground-Water Monitoring System and Procedures, Mahoning Landfill.*" Ohio EPA reviewed the document and in correspondence dated July 15, 2002, notified Respondent of the following violations:
- a. OAC Rule 3745-27-10(C)(1)(effective June 1, 1994) for failure to have a ground water monitoring program that ensures an accurate representation of ground water quality;
  - b. OAC Rule 3745-27-10(C)(2)(c)(effective June 1, 1994) for failure to include a detailed description of the equipment, procedures, and techniques to be used for ground water samples in the sampling and analysis plan;
  - c. OAC Rule 3745-27-10(E)(3)(d)(iii)(effective June 1, 1994) for failure to include a detailed description of the techniques, procedures, and analytical equipment to be used for ground water sampling during the assessment, in the ground water quality assessment plan.
18. On April 24, 2002, Ohio EPA received a document from Respondent titled "*Site Specific Ground-Water Monitoring Plan for Mahoning Landfill.*" Ohio EPA reviewed the document and in correspondence dated July 19, 2002, notified Respondent of the following violations:
- a. OAC Rule 3745-27-10(C)(1)(effective June 1, 1994) for failure to implement a ground water monitoring program that includes consistent sampling and analysis procedures that are protective of human health, safety, and the environment and provide an accurate representation of ground water quality. Specifically, Respondent's procedures for ground water sample preservation do not preserve samples at the appropriate temperature;
  - b. OAC Rule 3745-27-10(C)(2)(a)(effective June 1, 1994) for failure to provide a detailed description of the procedures used for measurement of ground water elevation;
  - c. OAC Rule 3745-27-10(C)(6)(effective June 1, 1994) for failure to ensure that reporting limits are below the MCL.

19. In correspondence dated June 26, 2002, Ohio EPA notified Respondent it was in violation of OAC Rule 3745-27-10(B)(5)(effective June 1, 1994) for failure to include separate potentiometric surface maps for every geologic unit monitored and for failure to include potentiometric contours on the water-level elevation maps submitted for the unconsolidated materials, significant zone of saturation. The notice of violation ("NOV") was issued in response to Ohio EPA's review of the following documents submitted by Respondent:
  - a. "Annual Operational Report for 1999" received by Ohio EPA on March 27, 2000;
  - b. "Annual Operational Report for 2000" received by Ohio EPA on March 30, 2001;
  - c. "Annual Operational Report for 2001" received by Ohio EPA on April 1, 2002.
  
20. On May 13, 2003, Ohio EPA received a document from Respondent titled "Ground-water Quality Assessment Plan for Mahoning Landfill." Ohio EPA reviewed the document and in correspondence dated October 23, 2003, notified Respondent it was in violation of OAC Rule 3745-27-10(C)(1) for failure to adequately describe how sampling procedures will ensure representative ground water quality results and protection of human health and the environment.
  
21. In response to the October 23, 2003, NOV, Ohio EPA received correspondence from Respondent on November 25, 2003, titled "Response to Ground Water Notice of Violation dated October 23, 2003, Mahoning Landfill." This correspondence listed various reasons Respondent objected to the October 23, 2003, NOV. Ohio EPA reviewed the response and in correspondence dated August 11, 2004, addressed each of Respondent's objections to the NOV and further notified Respondent it would remain in violation of OAC Rule 3745-27-10(C)(1) until it revised the assessment plan to include adequate sampling procedures.
  
22. On December 23, 2003, Ohio EPA received a report from Respondent titled "2003 Second Semiannual Assessment Activities Report and Data Submittal." Ohio EPA reviewed the report and in two separate letters dated June 16, 2004, and August 10, 2004, notified Respondent of the following:
  - a. Respondent is in violation of OAC Rules 3745-27-10(E)(1), (E)(6), and (E)(10) for failure to adequately determine the vertical rate, extent of migration, and concentration of ground water contamination beneath the Facility. Specifically, Respondent failed to install and sample monitoring wells in the next zone of saturation underlying the uppermost aquifer system;
  - b. Ohio EPA further indicated that Respondent's weight of evidence approach for determining the potential for vertical migration of ground water contamination is not acceptable;

- c. Ohio EPA informed Respondent that to return to compliance it needed to immediately conduct additional field investigations, including but not limited to drilling, installing and sampling at least three additional deep down gradient monitoring wells to assess the vertical extent of contamination.
23. In response to the June 16, 2004, NOV, Ohio EPA received correspondence from Respondent dated July 6, 2004, indicating that Respondent disagreed with the NOV for various procedural and technical grounds, such as:
  - a. Respondent attested that it had submitted numerous documents in the past that dealt with the rate and extent of contamination and the comments provided by EPA on the documents made no mention that determination of vertical extent had not been made;
  - b. Respondent felt that as the ground water assessment program is self implementing, only deficiencies or comments should be issued, not violations.
27. In correspondence dated August 9, 2004, Ohio EPA again notified Respondent it was in violation of OAC Rules 3745-27-10(E)(1), (E)(6), and (E)(10) for failure to adequately determine the vertical rate, extent of migration, and concentration of ground water contamination beneath the Facility.
28. On December 19, 2003, Ohio EPA received a report from Respondent titled "*Assessment Report Addendum: Evaluation of Potential for Vertical Migration.*" Ohio EPA reviewed the document and in correspondence dated August 10, 2004, notified Respondent of the following:
  - a. Respondent is in violation of OAC Rules 3745-27-10(E)(1) and (E)(6), for failure to adequately determine the vertical rate, extent of migration, and concentration of ground water contamination;
  - b. Ohio EPA can not rely on a weight of evidence approach that assumes that the Lower Kittanning Claystone provides a continuous and competent aquitard that has arrested all vertical migration of contamination below the uppermost aquifer system. Ohio EPA further informed Respondent that actual field investigations including drilling, installing, and sampling additional deep down gradient monitoring wells will be needed to accurately assess the vertical extent of contamination.
29. In response to the August 10, 2004, NOV Ohio EPA received correspondence from Respondent dated September 8, 2004 stating, in part, that Respondent does not agree that a violation of OAC Section 3745-27-10 had occurred. Respondent attested that the weight of evidence approach used was reasonable and technically defensible for determining the vertical rate and extent of ground water contamination.

30. Ohio EPA reviewed Respondent's arguments for the weight of evidence approach, and in correspondence dated November 5, 2004, notified Respondent it remained in violation of OAC Rules 3745-27-10(E)(1) and (E)(6) for failure to determine the vertical rate, extent of migration and concentration of ground water contamination.

The correspondence from Ohio EPA also served to memorialize an October 15, 2004, meeting between Ohio EPA and Respondent wherein Ohio EPA was able to convey the rules that required the vertical extent of ground water contamination to be determined through field investigations, and that vertical extent may not be assumed based solely on geologic stratigraphy with no supporting test results.

Respondent indicated at the October 15, 2004, meeting that it would attempt to resolve the issue by installing and sampling three deeper down gradient monitoring wells in the lower Kittanning Claystone.

31. In response to the November 5, 2004, NOV Ohio EPA received correspondence from Respondent dated December 7, 2004, stating, in part, that Respondent never committed to nor indicated during the October 15, 2004 meeting that Respondent would be installing and sampling three deeper down gradient monitoring wells at the Facility. Respondent then informed Ohio EPA that additional field investigations, consisting of two borings to better define the characteristics of the aquitard beneath the Lower Kittanning Coal, were being planned.
32. On December 8, 2004, Ohio EPA received a document from Respondent titled "*Ground water Quality Assessment Plan Vertical Rate and Extent Addendum, Mahoning Landfill, Mahoning County, Ohio.*" The addendum was submitted to document additional field investigations undertaken to demonstrate that the vertical extent of migration of waste derived constituents has been sufficiently evaluated. Ohio EPA reviewed the document and in correspondence dated May 31, 2005, requested additional information concerning the following:
- a. OAC Rules 3745-27-10(E)(1) and 10(E)(6) for failure to determine the vertical rate, extent of migration, and concentration of waste derived constituents in the ground water;
  - b. OAC Rules 3745-27-10(E)(4)(e), 10(E)(4)(g), and 10(E)(4)(h) for failure to discuss how the data collected will be evaluated, and failure to discuss the criteria for determining when or if additional data may be needed and when it will become necessary to install additional monitoring wells and sample ground water.
33. On January 7, 2005, Ohio EPA received a document from Respondent titled "*2004 Second Semiannual Assessment Data Submittal, Mahoning County, Mahoning Landfill, Inc.*" Ohio EPA reviewed the document and in correspondence dated March 4, 2005, notified Respondent it was in violation of OAC 3745-27-10(C)(10) for failure to implement a ground water monitoring program that had consistent sampling and analysis procedures and statistical methods that are protective of human health,

safety, and the environment and that provides an accurate representation of ground water quality at the background and downgradient wells.

34. In electronic mail dated June 14, 2005, Ohio EPA and Respondent discussed the 2004 second semiannual sampling event trigger for nickel in ground water samples from compliance well MKS-6. January and February 2005 resampling confirmed the trigger for nickel in this well. Ohio EPA notified Respondent in the June 14, 2005, electronic mail that based on the verified trigger for nickel at MKS-6, this well needed to be returned to regular assessment monitoring, and a new determination of rate, extent, and concentration would need to be made before the well was eligible to return to the compliance monitoring program.
35. In response to the May 31, 2005, NOV, Respondent submitted a document titled *"Response to OEPA Letter Dated May 31, 2005 and Revision to Ground-Water Quality Assessment Plan – Vertical Rate and Extent Addendum"* Ohio EPA conducted a preliminary review of the document and by electronic mail dated March 8, 2006, and notified Respondent of the following:
  - a. The boring log for TB-18 confirms that the Claystone is at least partially broken and fractured as evidenced by RQD values recorded indicating that the Claystone is not very competent or massive in nature;
  - b. Both borings sampled produced fairly large volumes of water (30-60 gallons) which is hardly what would be expected from a unit that is supposed to be an aquitard;
  - c. Results of the ground water sampling show that concentrations of waste derived constituents to be right in the range of what would be expected in an area with waste derived impacts, based on a qualitative comparison to ground water data from the impacted down-gradient wells at the site;
  - d. It appears that all of the oil and gas wells that are listed as suspected sources of brine contamination are actually down gradient of the downgradient monitoring wells by at least 400 feet, with the exception of two oil and gas wells in the southeast corner of the site. This would mean that the brine contamination would have had to travel against gradient to impact the wells.
36. Ohio EPA received correspondence from Respondent dated January 7, 2006, informing Ohio EPA of a statistically significant increase for alkalinity at compliance well MKS-5 and for sodium and potassium at compliance well UC-9S.
37. In response to the March 8, 2006, e-mail, Ohio EPA received correspondence from Respondent dated April 6, 2006, wherein Respondent indicated that it disagreed with the conclusions drawn by Ohio EPA and stated in part, the following:
  - a. Respondent attested that RQD values provide a general indication of rock mass quality and should not be used as an indicator of the permeability of

the claystone. Respondent indicated that laboratory testing of permeability from collected core samples would provide more reliable results;

- b. Respondent hypothesized that the water produced in the borings likely came from coarser grained layers and bedding plane partings within the upper portion of the aquifer and thus it should not be inferred that the claystone does not have a low vertical permeability;
  - c. Respondent felt that as Chloride, Potassium, and Total Dissolved Solids ("TDS") are all naturally occurring parameters, their detection at depth should not be qualitatively inferred to be an indication of a landfill derived impact;
  - d. Respondent indicated that there is one oil and gas well that is up gradient of monitoring well TB-17.
38. In correspondence dated April 11, 2006, Ohio EPA notified Respondent that it was in violation of OAC Rules 3745-27-10(E)(1) and 10(E)(6) for failure to determine the vertical rate, extent of migration, and concentration of waste derived constituents in the ground water. The NOV was issued in response to Ohio EPA's review of the following documents submitted by Respondent:
- a. *"Ground Water Quality Assessment Report, Vertical Rate and Extent Addendum"* received by Ohio EPA on April 29, 2005;
  - b. *"Response to OEPA letter dated May 31, 2005 and Revision to Ground Water Quality Assessment Plan – Vertical rate and Extent Addendum"* received by Ohio EPA on July 28, 2005;
  - c. *"Mahoning Landfill, Ground water NOV"* prepared by Respondent and received on July 7, 2004.
39. In the April 11, 2006, NOV Ohio EPA indicated that review of the documents listed above, and results of additional data collected, (two borings drilled into the Vanport Limestone with packer tests, vertical permeability tests and ground water sampling from each boring) has provided more information supporting Ohio EPA's concern that the vertical extent and concentration of ground water contamination down gradient of the Facility has not been sufficiently evaluated. Ohio EPA also addressed the following statements/ information provided by Respondent:
- a. Section 4.3 of the assessment report presents the results of the vertical permeability tests conducted in the laboratory on core samples from the two borings. The approximate vertical permeability range from the samples was reported as  $10^{-7}$  to  $10^{-8}$  cm/sec. According to Respondent, "These results show that the potential for vertical migration in the claystone is low."
    - i. Ohio EPA informed Respondent that while this is an accurate description and conclusion based on an intact sample from a massive or unfractured claystone, at boring TB-18 the claystone is well

fractured. In this situation, ground water flow is going to be primarily through fractures in the claystone and not through interconnected pore space. As such, the laboratory determined vertical permeabilities from intact core samples has more than likely exaggerated the ability of the claystone to prevent or retard the vertical migration of contaminated ground water.

- b. Regarding the bromide/chloride ratio data and Respondent's contention that oil and gas brine impacts have affected the down gradient wells;
  - ii. Ohio EPA informed Respondent that all but two of the oil and gas wells it contends are the source of brine contamination, are down gradient of the downgradient monitoring wells by a minimum of 400 feet. This would mean that brine contamination traveled against gradient to impact the other wells, or ground water flow directions were reversed. Both of these scenarios are not likely and Respondent has not provided any evidence supporting either of these scenarios other than the presence of very low concentrations of bromide in the wells.
- c. With respect to Respondent's contention that it is difficult to establish representative background ground water quality for the site because the up gradient wells are not affected by several factors that likely affect the down gradient wells;
  - iii. Ohio EPA agreed that the site is hydrogeologically complicated but informed Respondent that that has no bearing on Respondent's obligation to monitor the Facility in accordance with the rules. Ohio EPA indicated that the Facility has space available for the installation of more monitoring wells if Respondent is of the opinion that the quality of background ground water is not adequately represented. Ohio EPA further informed Respondent that it cannot accept Respondent's minimally supported statements that coal mining, oil and gas brine contamination, and road salt application have, and/or are creating so much interference that it is impractical to make a determination of the vertical extent of ground water contamination.
- d. Regarding Respondent's contention that the ground water quality results fall within the typical range of background concentrations for Pennsylvanian bedrock or sandstone aquifers in Ohio;
  - iv. The Facility is monitored by a site specific network of 23 wells. Therefore, site specific data regarding ground water quality specific to the Facility is available and is the only pertinent and acceptable data with which to draw ground water quality comparisons from.

40. In response to the April 11, 2006, NOV Ohio EPA received correspondence from Respondent on May 19, 2006, stating that compelling evidence has been provided to demonstrate a vertical pathway is not present beneath the uppermost aquifer system, and that the contamination does not present a threat to human health or the environment.

Ohio EPA reviewed Respondent's arguments and in correspondence dated June 26, 2006, notified Respondent it remained in violation of OAC Rules 3745-27-10(E)(1) and 10(E)(6) for failure to determine the vertical rate, extent of migration, and concentration of ground water contamination as it had not provided any new evidence or information to support its statement that the extent of contamination has been sufficiently evaluated.

41. On January 9, 2006, Ohio EPA received a document from Respondent titled "*Statistical Analysis, 2005 Second Semiannual Ground Water Monitoring Event, Detection and Compliance Monitoring Results and Semiannual Determination of Rate and Extent.*" Ohio EPA reviewed the document and in correspondence dated September 26, 2006, notified Respondent it was in violation of OAC Rules 3745-27-10(E)(1) and 10(E)(6) for failure to determine the vertical rate, extent of migration, and concentration of ground water contamination down gradient of the Facility. Ohio EPA also requested that Respondent submit additional information so that Ohio EPA may determine compliance with OAC Rules 3745-27-10(C)(1), 3745-27-10(C)(6)(a), and 3745-27-10(C)(7)(d).

42. On June 30, 2006, Ohio EPA received a document from Respondent titled "*Statistical Analysis, 2006 First Semiannual Ground Water Monitoring Event, Detection and Compliance Monitoring Results and Semiannual Determination of Rate and Extent.*" Ohio EPA reviewed the document and in correspondence dated September 26, 2006, notified Respondent that it remained in violation of OAC Rules 3745-27-10(E)(1) and 10(E)(6) for failure to determine the vertical rate, extent of migration, and concentration of ground water contamination down gradient of the Facility.

43. On September 11, 2006, Ohio EPA received a document from Respondent titled "*OAC 3745-27-10 Appendix II Compliance and Assessment Sampling, MKS-5 Alkalinity Re-sampling.*" According to the cover letter, Appendix II sampling was conducted at assessment wells MKS-1, MKS-6, and compliance well MKS-5 between June 28, 2006 and July 25, 2006.

MKS-6 was returned to regular assessment monitoring after statistically triggering for nickel in 2004. Compliance well MKS-5 exhibited statistically significant increases for alkalinity which resulted in the expanded sampling for the entire Appendix II constituents.

44. On September 15, 2006, Ohio EPA received a document from Respondent titled "*Ground Water Quality Assessment Plan Revision 1.*" On November 3, 2006, Ohio EPA received an additional document from Respondent titled "*Ground Water*

*Quality Assessment Plan Revision 2*" Ohio EPA reviewed the documents and in correspondence dated December 1, 2006, notified Respondent that Ohio EPA required additional information to determine compliance with the ground water rules.

Ohio EPA also informed Respondent that it would need to revise Section 4.2.1 of the Ground Water Quality Assessment Plan to remove language indicating that the vertical rate and extent of contamination will be established at the top of the claystone pursuant to the April 2005 Assessment Report Addendum as Ohio EPA did not concur with the April 2005 Addendum, and based on evidence collected, cannot accept the assertion that the top of the claystone defines the vertical rate and extent of concentration.

45. On January 26, 2007, Ohio EPA received a document from Respondent titled "*2006 Second Semiannual Ground Water Monitoring Event Report and Notification of Statistical Exceedance*." According to the cover letter, initial statistical exceedances for arsenic at well MKS-4, ammonia at well UC-5, potassium at well UC-9S, and cobalt and alkalinity at well MKS-5, were identified. In addition, a brief review of the submittal revealed that concentrations of the volatile organic compound, acetone, were detected in ground water samples from wells UC-3, UC-8, LF/MKC-5, MKS-1, and MKS-2. A review of the laboratory method blank did not indicate the presence of acetone in the analytical process as a lab contaminant. No trip blank results were present in the report.
46. On February 28, 2007, Ohio EPA received a document from Respondent titled "*Assessment Well VP-1 Installation Report*." According to the cover letter, VP-1 was installed to evaluate the vertical rate and extent of the parameters above background at monitoring well MKS-4. The well was drilled and installed in the Vanport Limestone. Based on static water level measurements made on December 15, 2006, and January 11, 2007, the vertical gradient between MKS-4 and VP-1 was determined to be downward. Respondent indicated that this well will be added to the assessment monitoring program prior to the first semiannual sampling event of 2007.
47. On March 8, 2007, Ohio EPA received a document from Respondent titled "*2006 Annual Ground-Water Monitoring System Evaluation OAC 3745-27-10(B)(5)*." Ohio EPA reviewed the document and in correspondence dated November 28, 2007, notified Respondent that it is in violation of OAC Rules 3745-27-10(B)(5), 3745-27-10(E)(1) and 10(E)(6) for failure to install a sufficient number of vertical extent wells in the Vanport Limestone to determine the full vertical rate, extent of migration, and concentration of ground water contamination.

Ohio EPA further informed Respondent that while it has installed one deep vertical extent well, VP-1, in the Vanport Limestone, this well alone would not be sufficient to monitor possible vertical migration from a contaminant plume that is nearly 2,000 feet wide at the southern boundary of the Facility.

48. On March 23, 2007, Ohio EPA received a document from Respondent titled "2006 Second Semiannual Ground Water Monitoring Resampling Event, Notification of Statistical Exceedance." According to the cover letter, initial statistical exceedances for ammonia at well UC-5, potassium at well UC-9S, and alkalinity at well MKS-5, were verified. As a result of these verified statistically significant increases, Appendix II sampling will be conducted at monitoring wells UC-5, UC-9S, and MKS-5.
49. On May 4, 2007, Ohio EPA received a document from Respondent titled "Compliance Monitoring Appendix II Sampling Event Data Submittal." According to the cover letter, the Appendix II sampling of compliance wells MKS-5, UC-5, and UC-9S did not identify any Appendix II parameters at any well. However, a review of the submittal revealed that concentrations of the volatile organic compound, acetone, were detected in ground water samples from both MKS-5 and UC-5. A review of the laboratory method blank did not indicate the presence of acetone in the analytical process as a lab contaminant. Furthermore, elevated concentrations of arsenic, cobalt, and nickel were detected in ground water samples from UC-5.
50. On June 25, 2007, Ohio EPA received a document from Respondent titled "2007 First Semiannual Ground Water Monitoring Event Report and Notification of Statistically Significant Increase." According to the cover letter, initial statistical exceedances for sulfate at well UC-3, ammonia at well UC-5, potassium at well UC-9S, manganese and sulfate at well UC-6, alkalinity at well MKS-5, and sulfate at well MKS-9S, were identified. Verification sampling confirmed the statistically significant increases for sulfate at well UC-3, manganese and sulfate at well UC-6, potassium at well UC-9S, and alkalinity at well MKS-5. As a result of these verified statistically significant increases, Appendix II sampling will be conducted at monitoring wells UC-3, UC-6, UC-9S, and MKS-5.
51. On June 25, 2007, Ohio EPA received an additional document from Respondent titled "2007 First Semiannual Ground Water Monitoring Event Report." Ohio EPA reviewed the document and in correspondence dated December 27, 2007, notified Respondent that it is in violation of OAC Rules 3745-27-10(E)(1), 3745-27-10(E)(6), and 3745-27-10(E)(10) for failure to make a complete determination of the vertical rate, extent of migration, and concentration of groundwater contamination beneath the Facility.
52. On January 28, 2008, Ohio EPA received a document from Respondent titled "2007 Second Semiannual Ground-Water Monitoring Event Report." Ohio EPA reviewed the document and in correspondence dated March 14, 2008, notified Respondent it was in violation of OAC Rules 3745-27-10(E)(1), 3745-27-10(E)(6), and 3745-27-10(E)(10) for failure to make a complete determination of the vertical rate, extent of migration, and concentration of groundwater contamination beneath the Facility.
53. As outlined in the findings above, results from ground water samples of compliance monitoring wells at the Facility indicate that the Facility continues to have an impact on the quality of the ground water.

54. To date, Respondent has yet to determine the full vertical rate, extent, and concentration of the waste derived constituents in the ground water.

## **V. ORDERS**

Respondent shall complete the following ground water monitoring activities pursuant to OAC Rule 3745-27-10 and shall achieve compliance with ORC Chapter 3734. and the rules promulgated thereunder according to the following compliance schedule:

1. Not later than thirty (30) days after the effective date of these Orders, Respondent shall submit a revised Ground Water Quality Assessment Plan that contains the details for installing and sampling three additional down gradient assessment monitoring wells in the Vanport Limestone for the purposes of determining the full vertical rate, extent, and concentration of the waste derived constituents impacting the ground water beneath the Facility. The revised Ground Water Quality Assessment Plan shall contain an updated schedule of implementation for making a full determination of the vertical rate, extent, and concentration of the waste derived constituents impacting the ground water beneath the Facility, and submitting an updated Ground Water Quality Assessment Report.
2. Not later than one hundred twenty (120) days after the effective date of these Orders, Respondent shall determine the full vertical rate, extent, and concentration of the waste derived constituents impacting the ground water beneath the Facility by, at a minimum, installing and sampling three additional down gradient assessment monitoring wells in the Vanport Limestone.
3. Respondent shall notify Ohio EPA in writing at least seven (7) days prior to performing any activities required pursuant to Order No. 2.
4. Not later than one hundred fifty (150) days after the effective date of these Orders, Respondent shall submit a revised Ground Water Quality Assessment Plan that contains the details of the three additional down gradient assessment monitoring wells installed in the Vanport Limestone required pursuant to Order No. 2, and incorporates these wells into the assessment monitoring program sampling schedule.
5. Not later than two hundred ten (210) days after the effective date of these Orders, Respondent shall submit an updated Ground Water Quality Assessment Report containing the results of the work performed pursuant to Order No. 2, and the determination of the full vertical rate, extent, and concentration of the waste derived constituents impacting the ground water.
6. Respondent shall immediately notify Ohio EPA in writing if waste derived constituents have impacted the quality of ground water in the Vanport Limestone and shall perform the activities required by Orders No. 7 through 12. If waste

derived constituents have not impacted the quality of the groundwater in the Vanport Limestone, Respondents may remove the Vanport Limestone groundwater monitoring wells from the assessment monitoring program and shall describe the disposition of such wells in the Corrective Measures Plan.

7. Not later than 30 days after notifying Ohio EPA that the quality of ground water in the Vanport Limestone has been impacted, Respondent shall submit a revised Ground Water Quality Assessment Plan containing an updated schedule of implementation and the details for installing and sampling at least one additional down gradient assessment monitoring well in the next zone of saturation below the Vanport Limestone for making a full determination of the vertical rate, extent, and concentration of the waste derived constituents impacting the ground water beneath the Facility.
8. Not later than one hundred twenty (120) days after notifying Ohio EPA that the quality of ground water in the Vanport Limestone has been impacted, Respondent shall determine the full vertical rate, extent, and concentration of the waste derived constituents impacting the ground water beneath the Facility by installing and sampling at least one additional down gradient assessment monitoring well in the next zone of saturation below the Vanport Limestone.
9. Respondent shall notify Ohio EPA in writing at least seven (7) days prior to performing any activities required pursuant to Order No. 8.
10. Not later than one hundred fifty (150) days after notifying Ohio EPA that the quality of ground water in the Vanport Limestone has been impacted, Respondent shall submit a revised Ground Water Quality Assessment Plan that contains the details of the additional down gradient assessment monitoring well installed in the next zone of saturation below the Vanport Limestone required pursuant to Order No. 8, and incorporates this well into the assessment monitoring program sampling schedule.
11. Not later than two hundred ten (210) days after notifying Ohio EPA that the quality of ground water in the Vanport Limestone has been impacted, Respondent shall submit an updated Ground Water Quality Assessment Report containing the results of the work performed pursuant to Order No. 8, and the determination of the full vertical rate, extent, and concentration of the waste derived constituents impacting the ground water.
12. Respondent shall immediately notify Ohio EPA in writing if waste derived constituents have impacted the quality of ground water in the next zone of saturation below the Vanport Limestone.

### **Civil Penalty**

13. Respondent shall pay to Ohio EPA the amount of twenty five thousand two hundred fifteen dollars (\$25,215.00) in settlement of Ohio EPA's claim for civil penalties, which may be assessed pursuant to ORC Chapter 3734. in accordance with the following provisions:
  - a. Within thirty (30) days after the effective date of these Orders, Respondent shall pay the amount of twenty thousand one hundred seventy-two dollars (\$20,172.00) of the total amount which will be deposited into the environmental protection remediation fund established pursuant to ORC Section 3734.281. Payment to Ohio EPA shall be made by an official check made payable to "Treasurer, State of Ohio" for twenty thousand one hundred seventy-two dollars (\$20,172.00). The official check shall be submitted to Ohio EPA, Office of Fiscal Administration, P.O. Box 1049, Columbus, Ohio 43216-1049, together with a letter identifying the Respondent and the Property. A copy of the check shall be sent to Ohio EPA, Division of Solid and Infectious Waste Management, Supervisor, Systems Management Unit, P.O. Box 1049, Columbus, Ohio 43216-1049.
  - b. In lieu of paying the remaining five thousand forty-three (\$5,043.00) of the civil penalty identified in Order No. 13-a above, Respondent shall fund a Supplemental Environmental Project (SEP) by making a contribution in the amount of five thousand forty-three (\$5,043.00) to the Ohio EPA Clean Diesel School Bus Program. Respondent shall make payment within thirty (30) days after the effective date of these Orders by tendering an official check made payable to "Treasurer, State of Ohio" for five thousand forty-three (\$5,043.00). The official check shall be submitted to Ohio EPA, Office of Fiscal Administration, P.O. Box 1049, Columbus, Ohio 43216-1049, together with a letter identifying the Respondent and the Property. A copy of the check shall be sent to Ohio EPA, Division of Solid and Infectious Waste Management, Supervisor, Systems Management Unit, P.O. Box 1049, Columbus, Ohio 43216-1049 and to Ohio EPA, Division of Air Pollution Control, Assistant Chief, SIP Development and Enforcement, P.O. Box 1049, Columbus, Ohio 43216-1049.
  - c. Should Respondent fail to fund the Diesel Bus SEP in accordance with Order No. 13-b above, Respondent shall pay Ohio EPA five thousand forty-three (\$5,043.00) of the civil penalty in accordance with the procedures in Order No. 13-a.

### **VI. TERMINATION**

Respondent's obligations under these Orders shall terminate when Respondent certifies in writing and demonstrates to the satisfaction of Ohio EPA that Respondent has performed

all obligations under these Orders and the Enforcement Coordinator of Ohio EPA's Division of Solid and Infectious Waste Management acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent of the obligations that have not been performed, in which case Respondent shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

This certification shall be submitted by Respondent to Ohio EPA and shall be signed by a responsible official of Respondent. For purposes of these Orders, a responsible official is a principal executive officer of at least the level of vice president or his duly authorized representative, if such a representative is responsible for the overall operation of the Property.

#### **VII. OTHER CLAIMS**

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to, the operation of Respondent's Facility.

#### **VIII. OTHER APPLICABLE LAWS**

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent or to the Facility.

#### **IX. MODIFICATIONS**

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

#### **X. NOTICE**

All documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Ohio Environmental Protection Agency  
Northeast District Office  
Division of Solid and Infectious Waste Management  
2110 East Aurora Road  
Twinsburg, Ohio 4087

Attn: Unit Supervisor, DSIWM

and to:

Mahoning County District Board of Health  
50 Westchester Drive  
Youngstown, Ohio 44515  
Attn: Health Commissioner

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

#### **XI. RESERVATION OF RIGHTS**

Ohio EPA and Respondent each reserve all rights, privileges and causes of action, except as specifically waived in Section XII of these Orders. Ohio EPA specifically reserves the right to require Respondent to perform corrective measures to address ground water contamination associated with the Facility.

#### **XII. WAIVER**

In order to resolve disputed claims, without admission of fact, violation or liability, and in lieu of further enforcement action by Ohio EPA for only the violations specifically cited in these Orders, Respondent consents to the issuance of these Orders and agrees to comply with these Orders. Compliance with these Orders shall be a full accord and satisfaction for Respondent's liability for the violations specifically cited herein.

Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such an event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

#### **XIII. EFFECTIVE DATE**

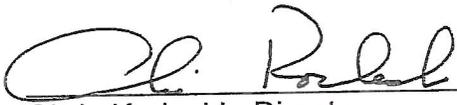
The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

**XIV. SIGNATORY AUTHORITY**

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

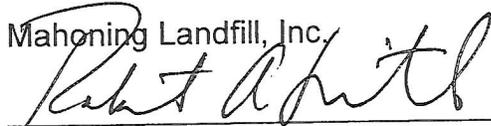
**IT IS SO ORDERED AND AGREED:**

Ohio Environmental Protection Agency

 7/3/08  
Chris Korleski , Director

**IT IS SO AGREED:**

Mahoning Landfill, Inc.

  
Signature

Robert A. Smith  
Printed or Typed Name

Area Vice President - Ohio  
Title

6/4/08  
Date