



**Mike DeWine**, Governor  
**Jon Husted**, Lt. Governor  
**Laurie A. Stevenson**, Director

June 16, 2021

City of Chillicothe  
35 S. Paint Street  
Chillicothe, OH 45601

**Re: Chillicothe Landfill**  
**Director's Final Findings and Orders (DFFO)**  
**DFFOs**  
**Municipal Solid Waste Landfills**  
**Ross County**  
**MSWL020266**

**Subject:** Final Findings and Orders of the Director

Dear Sir or Madam:

Transmitted herewith are the Final Findings and Orders of the Director concerning the matter regarding **Chillicothe Landfill**.

If you have any questions, please contact Teri Finfrock at (614) 644-3037.

Sincerely,

*Jeri Main*

Jeri Main  
Administrative Professional Unit  
Division of Materials & Waste Management

Enclosure

ec: Alison Shockley, DMWM, CO  
Carl Mussenden, DMWM, CO  
Sara Anderson, DMWM, SEDO  
Rich Fox, DMWM, SEDO  
Joseph Goicochea, DMWM, SEDO  
Teri Finfrock, Legal  
Troy Harter, Legal

**BEFORE THE  
OHIO ENVIRONMENTAL PROTECTION AGENCY**

In the Matter Of:

City of Chillicothe	:	<u>Director's Final Findings</u>
35 S. Paint Street	:	<u>and Orders</u>
Chillicothe, OH 45601	:	
	:	
Respondent	:	

**PREAMBLE**

It is agreed by the parties hereto as follows:

**I. JURISDICTION**

These Director's Final Findings and Orders ("Orders") are issued to the City of Chillicothe ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") Section 3745.01.

**II. PARTIES BOUND**

These Orders shall apply to and be binding upon Respondent. No change in ownership 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 thereunder.

**IV. FINDINGS**

The Director of Ohio EPA has determined the following findings:

**General**

1. The Respondent is the owner and original applicant for the plan approval of the Chillicothe City Landfill, also known as the Seney Road Landfill ("Facility") located on a 63-acre property (parcels #340608083000 and # 340608049600) on Seney Road, Chillicothe, Ohio in Ross County.
2. The Facility is a 43-acre municipal solid waste landfill that began operating in 1954 and primarily accepted residential waste. Industrial solid waste from the Dupont

plant in Circleville was accepted between 1974 and 1979. The Facility was licensed from 1970 to 1985. Respondent operated the Facility without a license from 1986 until the cessation of waste acceptance in November 1988.

3. Following cessation of waste acceptance, Respondent completed closure activities at the Facility, including installation of a two-foot clay cap system.
4. On October 26, 1990, Ohio EPA received a copy of the plat and deed notation for the Facility, which marked the commencement of the post-closure care period. The scheduled end date of the thirty-year post-closure care period was October 26, 2020.
5. On January 3, 1991, the City of Chillicothe recorded on the plat (Ross County, Plat Book 11, Page 37) and deed to the property a notation describing the impacted acreage, exact location, depth, volume, and nature of solid waste deposited on the property.
6. Pursuant to Ohio Administrative Code ("OAC") Rule 3745-27-14, Respondent performed post-closure care activities at the Facility, including groundwater monitoring, explosive gas monitoring, and site inspections.
7. OAC Rule 3745-27-14(B) states that "upon completion of the post-closure care period, the owner, operator, or permittee shall submit to the director written certification that the sanitary landfill facility has completed post-closure care activities in accordance with this rule and the final closure/post-closure plan. The certification shall be accompanied by documentation that demonstrates the post-closure care activities have been completed and be signed and sealed by a professional engineer registered in Ohio. The documentation shall include the following:
  - a. A summary of changes to leachate quality and quantity.
  - b. Rate of leachate generation and quantity of leachate in the sanitary landfill facility, with an explanation of how these figures were derived.
  - c. A summary of any on-going ground water assessment or corrective measures.
  - d. A summary of explosive gas migration and generation by the sanitary landfill facility.
  - e. An assessment of the integrity and stability of the cap system if post-closure care activities cease."
8. On November 30, 2020, Respondent submitted a Post-Closure Care Certification Report ("PCCCR"), which includes a summary of the Facility's groundwater monitoring, explosive gas monitoring, and cap system. The Facility does not have

a leachate collection system.

9. OAC Rule 3745-27-14(D) states that "the post-closure care period may be extended by order of the director or a court of competent jurisdiction if conditions at a sanitary landfill facility are impacting human health, safety, or the environment or if ground water assessment or ground water corrective measures are required to be conducted at the sanitary landfill facility in accordance with rules adopted under Chapter 3734. of the Revised Code.

### **Groundwater Monitoring**

10. On June 20, 1989, the Respondent commenced groundwater detection monitoring at the Facility in accordance with the approved Ground Water Monitoring Program.
11. Pursuant to OAC Rule 3745-27-14(A)(7), Respondent performed semiannual groundwater monitoring during the post-closure care period and submitted associated reports in accordance with OAC Rule 3745-27-10.
12. On September 20, 1996, following a determination that a release of contaminants to groundwater had occurred, Respondent commenced a groundwater assessment monitoring program in accordance with OAC Rule 3745-27-10(E), which included semiannual groundwater monitoring to define the rate, extent, and concentrations of contaminants. Assessment monitoring has continued on a semiannual schedule since this time.
13. Data collected from the groundwater assessment monitoring program between September 20, 1996 and March 14, 2001 indicated the primary constituents of concern ("COCs") at the Facility were barium, sodium, chloride, benzene, carbon disulfide, chloroethane, 1,1-dichloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and trichlorofluoromethane.
14. OAC Rule 3745-27-10(F)(7)(b) states that a corrective measures plan shall propose concentration levels for each waste-derived constituent that has been detected in the groundwater at a statistically significant level. For constituents for which maximum contaminant levels have been promulgated under OAC Chapter 3745-81, the proposed concentration level in the corrective measures plan shall be the maximum contaminant level for each respective contaminant.
15. Respondent proposed to implement a Corrective Measures Plan ("CMP"). The CMP was submitted in December 1997 and later revised twice in September 1998 and April 1999.
16. On March 14, 2001, the Director selected a corrective measure and approved the Facility's Corrective Measures Plan ("CMP-2001"). The selected corrective measure was no action with long-term monitoring.
17. Based on the groundwater data submitted by Respondent, none of the COCs



identified in the CMP-2001 and in Finding No. 12 have ever exceeded the corresponding concentration levels.

18. There were no downgradient water supply wells identified in the CMP-2001, and there are no known receptors that have been identified since that time.
19. Upon review of the Facility's semiannual groundwater monitoring reports, Ohio EPA noted that manganese concentrations in the downgradient groundwater monitoring wells was present at higher concentrations when compared to upgradient wells.
20. In 2017, Ohio EPA requested that Respondent prepare updated statistics for manganese to determine if the downgradient concentrations were statistically significant.
21. On May 29, 2019, Respondent submitted a revision ("CMP-2019") to the Facility's CMP-2001 to include an action level of 0.3 mg/L for manganese following a determination that the downgradient concentrations for manganese were statistically significant.
22. OAC Rule 3745-27-10(F)(15)(b) states that compliance with the OAC Rule 3745-27-10(F)(7) ground water remediation standards, which is a prerequisite for completion of corrective measures, is achieved by demonstrating semiannually that ground water contamination has not exceeded the action levels identified as ground water remediation standards in the CMP for a period of three years or until the end of the post-closure period, whichever is longer.
23. On June 25, 2020, Respondent submitted semiannual groundwater monitoring results for the June 2020 groundwater sampling event, which include manganese concentrations exceeding the action level (0.3 mg/L) in monitoring wells MW-1 (1.6 mg/L), MW-2 (0.72 mg/L), MW-3 (0.98 mg/L), and MW-4R (1.1 mg/L).
24. The PCCCR submitted as described in Finding No. 8 provided a summary of groundwater data and included a recommendation to extend this post-closure care activity beyond the scheduled end of the post-closure care period.
25. Pursuant to OAC Rule 3745-27-14(D), the Director finds that extension of the post-closure care period is appropriate because groundwater conditions at the Facility have the potential to impact human health, safety, or the environment and that ground water assessment or ground water corrective measures are required to be conducted in accordance with rules adopted under Chapter 3734. of the Revised Code.

#### **Explosive Gas Monitoring**

26. Pursuant to OAC Rule 3745-27-14(A)(7), Respondent performed semiannual explosive gas monitoring during the post closure care period and submitted

associated reports in accordance with OAC Rule 3745-27-12.

27. On July 8, 1992, Ohio EPA approved the Facility's Explosive Gas Monitoring Plan ("EGMP"). The EGMP has been revised several times, most recently an alteration was approved on May 9, 2018.
28. The EGMP includes a network of monitoring locations designed to protect the approximately twelve occupied structures located within 1,000 feet of the Facility.
29. Upon review of explosive gas monitoring reports submitted by Respondent since July 8, 1992, data from the Facility has never indicated migration of explosive gas above the lower explosive limit beyond the limits of waste placement at a level that would trigger contingency monitoring.
30. On September 4, 2019, Ohio EPA conducted an explosive gas monitoring field survey to ensure that the monitoring network was properly maintained and sampling procedures adhered to the Facility's approved EGMP. Based on this inspection, no violations were observed.
31. On October 28, 2020, Respondent conducted explosive gas monitoring as outlined in DMWM's guidance titled *Ending Explosive Gas Monitoring for Solid Waste Landfills that Ceased Accepting Waste Prior to June 1, 1994*. This event found that only two of the twenty-four gas vents installed on the cap were below five percent methane by volume, indicating that explosive gas is still being formed within the waste mass at levels that would trigger contingency monitoring if migration occurred.
32. The PCCCR submitted as described in Finding No. 8 provided a summary of explosive gas migration monitoring data and included a recommendation to extend this post-closure care activity. The PCCCR provided data from March 21, 2013 to October 28, 2020, that indicated that methane was non-detect at all monitoring locations beyond the limits of waste placement, with the exception of two readings at one monitoring location that were both at/or below 0.2 percent methane by volume.
33. Pursuant to OAC Rule 3745-27-14(D), the Director finds that extension of the post-closure care period is appropriate because explosive gas conditions at the Facility have the potential to impact human health, safety, or the environment.

#### **Cap Integrity**

34. Pursuant to OAC Rule 3745-27-14(A), Respondent performs quarterly inspections of the Facility and submits written summaries to Ohio EPA detailing the results of the inspections and schedules of any actions to be taken to maintain compliance with applicable rules.
35. The PCCCR submitted as described in Finding No. 8 provided a summary of cap

inspections and included a recommendation to extend this post-closure care activity due to the ground water contamination and explosive gas concerns described in the Findings above.

36. Pursuant to OAC Rule 3745-27-14(D), the Director finds that cap conditions at the Facility are unlikely to impact human health, safety, or the environment.
37. Pursuant to ORC Section 3734.02(A) and OAC Rule 3745-27-03(C), the Director may grant a variance if she determines that construction, operation, closure activities and/or post-closure activities of the solid waste facility conducted in the manner approved by the variance and any terms or conditions imposed as part of the variance will not create a nuisance or hazard to public health or safety or the environment and are unlikely to result in violation of any other requirements of ORC Chapters 3704, 3714, 3734, and 6111 and any rules adopted thereunder.
38. The Director has determined that granting a variance from OAC Rule 3745-27-14 will not create a nuisance or hazard to public health or safety or the environment and is unlikely to result in violation of any other requirements of ORC Chapters 3704, 3714, 3734, and 6111 and any rules adopted thereunder.

## **VI. ORDERS**

1. Respondent is hereby granted a variance, pursuant to ORC Section 3734.02(A) and OAC Rule 3745-27-03(C), from post-closure care activities required by OAC Rule 3745-27-14(A), groundwater monitoring activities required by OAC Rule 3745-27-10, and explosive gas monitoring activities required by OAC Rule 3745-27-12. In lieu of the requirements of these Rules, Respondent is authorized to perform reduced monitoring frequencies in accordance with Order Number 2. This variance shall remain valid throughout the post-closure care period, unless otherwise revoked.
2. Pursuant to OAC Rule 3745-27-14(D), the post-closure care period for the Facility shall be extended, and the activities conducted during the extended post-closure care period shall be modified as follows:
  - a. Respondent shall perform post-closure care activities required by OAC Rule 3745-27-14(A), as modified by this Order, until such time that the Director approves all certification reports required by this Order and provides written notice that approves discontinuance of the post-closure care period.
  - b. Respondent shall conduct groundwater monitoring in accordance with OAC Rule 3745-27-10 and the Facility's CMP. In lieu of semiannual sampling events, Respondent may reduce sampling frequency to annual. To seek discontinuance of groundwater monitoring, Respondent shall submit a certification report in accordance with OAC Rule 3745-27-14(B) demonstrating that the Facility does not pose a risk to human health, safety, and the environment, and that the concentration for manganese has not

exceeded the groundwater remediation standard specified in the CMP-2019 at monitoring wells MW-1, MW-2, MW-3, and MW-4R for a period of three years of semiannual sampling or six years of annual sampling.

- c. Respondent shall conduct explosive gas monitoring in accordance with OAC Rule 3745-27-12 and the Facility's EGMP. Respondent shall include the sampling of seven vents in the waste mass as identified in the Facility's PCCCR. In lieu of semiannual sampling events, Respondent may reduce sampling frequency to an annual event conducted in the second quarter of each calendar year. To seek discontinuance of explosive gas monitoring, Respondent shall submit a certification report in accordance with OAC Rule 3745-27-14(B) demonstrating that the Facility does not pose a risk to human health, safety, and the environment, and that methane concentrations within the waste mass are below five percent by volume for six consecutive semiannual monitoring events, unless an alternative standard is accepted by Ohio EPA.
  - d. Respondent shall conduct inspections to assess the integrity and stability of the cap in accordance with OAC Rule 3745-27-14(A)(6). In lieu of quarterly inspections, Respondent may reduce inspection frequency to annually. To seek discontinuance of cap inspections, Respondent shall submit a certification report in accordance with OAC Rule 3745-27-14(B) demonstrating that the Facility does not pose a risk to human health, safety, and the environment based on an assessment of the final cap system. This certification shall not be submitted earlier than the submittal of the groundwater monitoring and explosive gas monitoring demonstrations required by this Order.
3. Respondent shall execute and record the Environmental Covenant attached as Exhibit 1 hereto and incorporated herein as if fully rewritten. The parties agree that the Environmental Covenant was prepared in accordance with ORC Sections 5301.80 through 5301.92 as an equitable servitude on the land to impose activity and use limitations on the Property owned by Respondent and its successor(s) in interest as described in the Environmental Covenant.
  4. No later than thirty (30) days after the effective date of these Orders, Respondent shall record with the Ross County Recorder's Office the Environmental Covenant including exhibits in the same manner as a deed to the property in accordance with 5301.88. No later than thirty (30) days after recording the Environmental Covenant, Respondent shall submit to Ohio EPA a file stamped copy of the recorded Environmental Covenant including exhibits.

## **VI. TERMINATION**

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



Respondent has performed all obligations under these Orders and the Chief of Ohio EPA's Division of Materials and 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 the Respondent of the obligations that have not been performed, in which case the 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 the Respondent to Ohio EPA and shall be signed by a responsible official of the Respondent. For purposes of these Orders, a responsible official is the chief administrative officer of the Respondent.

#### **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 the Respondent.

#### **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 the Respondent pursuant to these Orders shall be addressed to:

Ohio Environmental Protection Agency  
Southeast District Office  
Division of Materials and Waste Management  
2195 Front Street  
Logan, Ohio 43138  
Attn: Supervisor, Division of Materials and Waste Management

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

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

Ohio EPA and the Respondent each reserve all rights, privileges and causes of action, except as specifically waived in Section XII of these Orders.

#### **XII. WAIVER**

Respondents consent to the issuance of these Orders and agrees to comply with these Orders.

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

Notwithstanding the preceding, Ohio EPA and the Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondents retain the right to intervene and participate in such appeal. In such an event, the 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. The parties acknowledge and agree that these Orders may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, "electronic signature" shall include faxed versions of an original signature or electronically scanned and transmitted versions (e.g., via pdf) of an original signature.

**IT IS SO ORDERED AND AGREED:**

**Ohio Environmental Protection Agency**



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Laurie A. Stevenson  
Director

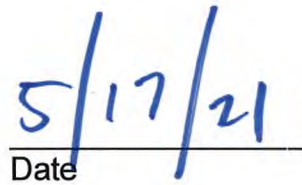
**IT IS SO AGREED:**

**City of Chillicothe**



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Luke Feeney, Mayor



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Date