



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

March 29, 2021

PennOhio Waste, LLC  
7555 North Street  
Negley, Ohio 44441

**Re: PennOhio Waste LLC**  
**Director's Final Findings and Orders (DFFO)**  
**DFFOs**  
**Construction & Demolition Debris**  
**Columbiana County**  
**CDDL018903**

**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 **PennOhio Waste LLC**.

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

Sincerely,

*Jeri Main*

Jeri Main  
Administrative Processing Unit  
Division of Materials & Waste Management

Enclosure

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**BEFORE THE  
OHIO ENVIRONMENTAL PROTECTION AGENCY**

In the Matter Of:

PennOhio Waste, LLC : Director's Findings  
7555 North Street : and Orders  
Negley, Ohio 44441 :

Respondent

**I. JURISDICTION**

These Director's Findings and Orders ("Orders") are issued to PennOhio Waste, LLC ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") §§ 3714.12, 3734.13, 6111, and 3745.01.

**II. PARTIES**

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

**III. DEFINITIONS**

Unless otherwise stated, all terms used in these Orders shall have the same meaning as used in ORC Chapters 3714, 3734, 6111 and the rules promulgated thereunder.

**IV. FINDINGS**

The Director of Ohio EPA has determined the following findings:

1. Respondent is the current owner of parcels of land located at 7555 North Street, Negley, Ohio, which are identified by the Columbiana County Auditor as Parcel Numbers 46-00106.001, 46-00108.000, 46-00109.000, 46-00140.001, 46-00951.000, 46-00954.000, 46-00954.001, 46-00962.001 ("Property"). On the Property is a Construction and Demolition Debris (C&DD) landfill (Facility).

2. Respondent is a "person" as that term is defined in ORC § 3734.01(G), and in Ohio Administrative Code ("OAC") Rules 3745-27-01(P)(3) and 3745-400-01(P)(1).
3. The Facility is authorized for 153 acres of waste placement; approximately 26 acres is currently utilized for waste placement (constructed active license disposal area ("ALDA"). It consists of Cell 1, Cell 2, Cell 3, and Cell 4A1 for C&DD disposal. Cell 4A2 is currently under construction.
4. The Facility's leachate collection system has, in part, four sumps, one in each of the four current cells. Each sump is located in the lowest point in each cell. Each sump contains a pump that pumps leachate to a leachate collection tank.
5. OAC Rule 3745-400-11(B)(1) states in pertinent part, "The owner or operator shall conduct all operations at the facility in strict compliance with the license, any orders, and other authorizing documents issued in accordance with Chapter 3714. of the Revised Code."
6. During an inspection on June 28, 2019, Ohio EPA observed that there was no pump in the leachate sump in Cell 3. The facility license requires operating leachate pumps in Cells 3 and 4A1. By letter dated July 15, 2019, Ohio EPA cited Respondent for failing to comply with its authorizing documents in violation of OAC Rule 3745-400-11(B)(1).
7. During the inspection on June 28, 2019, Respondent explained that the pump and transducer within Cell 3 was temporarily removed to repair a damaged electrical line. By letter dated July 15, 2019, the violation was resolved through a partial inspection performed on July 10, 2019 where the pump was observed to have been installed within Cell 3.
8. OAC Rule 3745-400-11(D) states in pertinent part, "Debris Placement. "The owner or operator shall place and maintain markers defining the limits of the active licensed disposal area..."
9. During inspections on July 12, 2019 and August 6, 2019, Respondent failed to maintain markers defining the limits of the ALDA. There were no markers to identify whether recently filled areas were within the ALDA. By letters dated August 1, 2019 and August 14, 2019, Ohio EPA cited Respondent for failing to place and maintain markers defining the limits of the ALDA in violation of OAC Rule 3745-400-11(D).
10. During an August 23, 2019 inspection, the northern and western limits of the ALDA had been identified in the field and the violation was abated through the August 29, 2019 letter.
11. OAC Rule 3745-400-11(B)(2) states in pertinent part, "The owner or operator shall dispose of construction and demolition debris only within the active licensed disposal area."

12. During inspections on July 12, 2019 and August 6, 2019, Respondent disposed of C&DD mixed with soil on the west side of the landfill between the landfill and the piles of mine spoil. By letters dated August 1, 2019 and August 14, 2019, Ohio EPA cited Respondent for failing to dispose of construction and demolition debris only within the ALDA in violation of OAC Rule 3745-400-11(B)(2).
13. Respondent moved the misplaced C&DD to the ALDA immediately following the August 23, 2019 inspection and has been in compliance with that requirement since that date. By letter dated August 29, 2019 the violation was abated.
14. OAC Rule 3745-400-11(E)(1) states in pertinent part, "The owner or operator shall maintain the integrity of the engineered components of the facility(.)"
15. During inspections on October 31, 2019, January 30, 2020, and February 4, 2020 Respondent failed to maintain the facility's engineered components. Specifically, Respondent failed to ensure that leachate management and measurement equipment was functioning properly and placed in a location to ensure that there is less than 1 foot of head on the landfill's liner. By letters dated November 8, 2019, and February 7, 2020, Ohio EPA cited Respondent for failing to maintain engineered components in violation of OAC Rule 3745-400-11(E)(1).
16. Respondent installed new pumps and transducers within each sump (Cells 1A, 2A, 3A, and 4A1) between June and July 2020. Respondent performed pump tests between July 27, 2020 and August 1, 2020.
17. OAC Rule 3745-400-11(I)(4) states in pertinent part, "The owner or operator shall maintain access roads(.)"
18. During inspections on March 28, 2019, May 7, 2019, May 8, 2019, May 15, 2019, May 17, 2019, and September 13, 2019, Respondent failed to manage stormwater such that sheet flow affected the Facility's access roads. The access roads were so badly damaged that an excavator and a bulldozer had to pull or push waste vehicles and leachate tankers to appropriate locations at the Facility. Access roads were impassable due to lack of road maintenance. By letters dated April 9, May 24, May 30, and September 18, 2019, Ohio EPA cited Respondent for failing to maintain access roads in violation of OAC Rule 3745-400-11(I)(4).
19. Consistent equipment malfunction with the water truck during the dry season resulted in multiple occurrences of dusty roads. During the September 13, 2019 inspection, the water truck was observed to have been repaired and watering the roads. By letter dated September 18, 2019 the violation had been abated and the site roads have been maintained to allow passage of loaded vehicles with minimum dust generation.

20. OAC Rule 3745-400-11(I)(5) states in pertinent part, "The owner or operator shall employ measures necessary to minimize the incidence of mud, dirt, and dust on public roads before vehicles leave the facility."
21. During inspections on October 31, 2019 and January 13, 2020, Respondent caused excessive mud drag-out on public roads causing a safety hazard to citizens. By letters dated November 8, 2019, and January 23, 2020, Ohio EPA cited Respondent for failing to minimize mud and dirt on public roads in violation of OAC Rule 3745-400-11(I)(5).
22. Respondent cleaned the public road near the entrance to the facility following the January 13, 2020 inspection and by letter dated January 23, 2020 the facility had returned to compliance.
23. OAC Rule 3745-400-11(Q)(4) states in pertinent part, "Surface and ground water management. The owner or operator shall control surface and ground water to minimize the generation of leachate in the following manner:...(4) If silting or scouring occurs in surface water structures, the owner or operator shall correct the conditions causing the silting or scouring and shall repair the surface water drainage structures..."
24. During inspections on October 28, 2019 and October 31, 2019, Respondent failed to maintain the Facility such that surface water was ponding in the ditches and was not draining into sedimentation ponds causing the haul roads to be excessively muddy and difficult to drive on due to the surface water control structures being clogged. By letters dated November 1, 2019 and November 8, 2019, Ohio EPA cited Respondent for failing to correct the conditions causing silting or scouring in violation of OAC Rule 3745-400-11(Q)(4).
25. OAC Rule 3745-400-11(O) states in pertinent part, "If there is an outbreak of leachate at the surface, the owner or operator shall...contain...manage...repair the outbreak."
26. During inspections on July 12, 2019, January 20, 2020, February 4, 2020, and continuing to the present, a leachate outbreak was not being prevented or contained and was flowing out of Cell 4A1 at the interface of Cells 4A1/4A2. By letters dated August 1, 2019 and February 4, 2020, Ohio EPA cited Respondent for failing to address leachate outbreaks in violation of OAC Rule 3745-400-11(O).
27. Respondent was in the process of connecting Cells 4A1 and 4A2 when Respondent ceased accepting waste at the Facility at the request of Ohio EPA. Respondent has properly disposed of all the water collected on the surface of the Cell and disposed of it at a licensed facility.

28. OAC Rule 3745-400-11(P)(1) states in pertinent part, "The owner or operator shall operate and maintain the leachate collection system as follows: The owner or operator shall operate the leachate collection system to maintain no more than one foot of head anywhere on the in situ or added geologic material or constructed liner."
29. During inspections on September 19, 2018, June 28, 2019, July 12, 2019, October 31, 2019, December 26, 2019, January 30, 2020, and from February 4, 2020 to present, Respondent failed to operate the Facility to prevent greater than one foot of head on the liner which can potentially cause H<sub>2</sub>S odors, slope failure, and surface or ground water contamination. By letters dated July 15, August 1, October 4, November 8, 2019, January 23, and February 7, 2020, Ohio EPA cited Respondent for failing to maintain less than foot of head on the liner in violation of OAC Rule 3745-400-11(P)(1). Between January 1, 2020, and July 24, 2020, Ohio EPA and Respondent participated in weekly technical meetings to discuss the prevalent leachate issues at the facility, including discussions regarding a leachate system investigation.
30. Respondent has installed new pumps and transducers within each sump (Cells 1A, 2A, 3A and 4A1) between June and July 2020. Respondent performed pump tests between July 27, 2020 and August 1, 2020. The pumps and transducers were set during the pump test and remain in that position.
31. OAC Rule 3745-400-11(P)(2) states in pertinent part, "The owner or operator shall maintain the leachate collection system."
32. During a June 28, 2019 inspection, Respondent failed to inspect and verify that the leachate collection system was not crushed or blocked after the first lift of debris placement following construction of Cell 4A1. By letter dated July 15, 2019, Ohio EPA cited Respondent for failing to verify the condition of the leachate collection system in violation of OAC Rule 3745-400-11(P)(1).
33. Respondent scheduled a third-party contractor (Robinson Pipe Cleaning Co.) to clean and inspect all leachate lines at the Facility. Respondent continuously updated Ohio EPA of the work status during and at completion following verification of the condition of the leachate collection system.
34. OAC Rule 3745-400-11(Q)(1) states in pertinent part, "The owner or operator shall divert surface and ground water from the active and inactive licensed disposal areas of the facility by non-mechanical means."
35. During inspections on June 18, 2019, June 21, 2019, July 12, 2019, September 19, 2019, and October 31, 2019, Respondent failed to divert stormwater away from the leachate collection system. By letters dated July 5, August 1, October 4, and November 8, 2019, Ohio EPA cited Respondent for failing to divert

- surface and ground water from the active and inactive licensed disposal areas of the facility by non-mechanical means in violation of OAC Rule 3745-400-11(Q)(1).
36. By letter dated July 5, 2019, Ohio EPA states that the conditions which led to stormwater flowing into the ALDA observed on June 18, 2019 and June 21, 2019 had been corrected on June 26, 2019 and the violation had been abated. During a site visit on July 12, 2019, Ohio EPA observed ponding immediately outside of Cell 4A1 and surmised that it was generated by stormwater. By letter dated August 14, 2019, Ohio EPA noted during an August 6, 2019 site visit, surface water or groundwater was not observed entering Cell 4A1 and the violation was abated.
  37. During the October 31, 2019 inspection, it was observed that the leachate riser pipe within Cell 3 was positioned within a perimeter ditch and was slightly below the current road elevation. Ohio EPA was notified by letter dated February 17, 2020 that the leachate riser pipe has been extended and a removeable cover had been installed to eliminate the potential of surface water intrusion.
  38. OAC Rule 3745-400-11(H)(1) states in pertinent part, "Fire prevention. The owner or operator shall operate the facility in a manner that prevents fires by doing one of the following: (1) Covering all disposed combustible debris on a weekly basis with soil, clean hard fill, or other material which is noncombustible. For the purpose of this rule, covering means to apply noncombustible material in a manner such that combustible debris is not visible..."
  39. During inspections on April 19, 2019, May 15, 2019, May 17, 2019, June 18, 2019, June 21, 2019, July 12, 2019, September 10, 2019, September 19, 2019, February 11, 2020 and February 18, 2020, Respondent failed to compact and cover waste with soil or noncombustible material. By letters dated April 25, 2019, May 30, 2019, July 5, 2019, August 1, 2019, September 17, 2019, September 20, 2019, and February 27, 2020, Ohio EPA cited Respondent for failing to "operate the facility in a manner that prevents fires...by covering all disposed combustible debris on a weekly basis" in violation of OAC Rule 3745-400-11(H)(1).
  40. No fires occurred as a result of the alleged violations, OAC Rule 3745-400-11(F)(3) states, "The owner or operator shall not dispose of any solid wastes..."
  41. During inspections on July 12, 2019, October 2, 2019, October 28, 2019, and October 31, 2019, Respondent disposed of solid waste. There were many types of solid waste including tires, toys, fabrics, cushions, industrial hoses, food wrappers, garbage, infant car seats, mattresses, bedding, cushions, boots, blankets, and clothing. On at least one occasion, a swarm of flies was in the solid waste in the working face. By letters dated August 1, 2019, October 9, 2019, November 1, 2019, and November 8, 2019, Ohio EPA cited

Respondent for disposal of solid waste in violation of OAC Rule 3745-400-11(F)(3).

42. OAC Rule 3745-400-11(F)(4)(a) and (b) states in pertinent part, "The owner or operator shall unload the debris in clearly designated and marked unloading zones separate from the working face. Upon inspection of the unloaded debris, the owner or operator shall remove prohibited materials prior to placing the debris on the working face ... The owner or operator shall clearly mark the limits of the unloading zone with at least two temporary markers..."
43. During inspections on June 18, 2019, June 28, 2019, July 12, 2019, August 6, 2019, August 30, 2019, and October 11, 2019, Respondent unloaded trucks with waste into the working face and failed to clearly designate the unloading zone with markers. The pickers did not have the ability to inspect the loads and remove prohibited waste in an unloading zone prior to the waste being pushed into the working face. By letters dated July 15, 2019, August 1, 2019, August 14, 2019, September 6, 2019, and October 30, 2019, Ohio EPA cited Respondent for disposal of solid waste in violation of OAC Rule 3745-400-11(F)(4)(a) and (b).
44. OAC Rule 3745-400-11(F)(6) states, "The owner or operator shall attempt to remove all solid waste from the construction and demolition debris prior to disposal of construction and demolition debris on the working face of the facility as required under section 3745.021 of the Revised Code ."
45. During inspections on June 18, 2019, June 21, 2019, July 12, 2019, September 26, 2019, October 2, 2019, October 28, 2019, October 31, 2019, Respondent failed to ensure pickers were present and inspecting loads in the unloading zone and picking prohibited material prior to disposal in the working face. There were many examples of solid waste disposed including tires, toys, fabrics, cushions, industrial hoses, food wrappers, garbage, infant car seats, mattresses, blankets, and clothing. By letters dated July 5, 2019, August 1, 2019, October 2, 2019, October 9, 2019, November 1, 2019, and November 8, 2019, Ohio EPA cited Respondent for failing to remove all solid waste from the C&DD prior to disposal as required under section 3745.021 of the Revised Code.
46. Following multiple meetings between Respondent and Ohio EPA regarding the condition of the Facility's leachate collection system, on April 10 and April 23, 2020, Respondent submitted a Draft Leachate Investigation Plan to the Agency.
47. By letter dated May 14, 2020, Ohio EPA provided recommendations to Respondent's Draft Leachate Investigation Plan.



48. Respondent submitted a response to Ohio EPA's recommendations for the Draft Leachate Investigation Plan on June 22, 2020 and amended the response on November 23, 2020, December 21, 2020 and February 10, 2021.
49. By letter dated June 19, 2020, Ohio EPA replied to February 17 and 24, 2020 letters from Respondent in response to violations issued beginning in April 24, 2019 through February 7, 2020. Ohio EPA's letter addressed ongoing leachate issues and partial resolution of several violations.
50. Since at least 2020, leachate is being discharged and collected along the Cell 4A1/4A2 interface at the lowest point along the outer edge of Cell 4A1 and further investigation is needed to address the issue. Beginning on April 5, 2020 through the present, Respondent has provided a summary of weekly leachate data to Ohio EPA, including leachate hauled from the Facility, the disposal facility, the hauling company, the name of the hauler, and the specific sump from which the leachate was removed.
51. Beginning in August 2020 and continuing to the present, Respondent has been providing weekly summaries of leachate pumped from each sump within the landfill, as well as an estimated total weekly leachate removal from the Facility.

### **Surface Water Findings**

52. On October 31, 2019, November 8, 2019, and December 9, 2019, unauthorized discharges were occurring from the concrete apron associated with the facility's entrance and from the storm water collection system that is not connected to Pond 11. In addition, unauthorized discharges were occurring throughout the disturbed areas of the facility.
53. A discharge of sediment and sediment deposition within surface waters of the state were observed within the Front Street roadside ditch and a wetland complex located north of the eastern portion of the railcar waste offloading area.
54. The facility's storm water collection and treatment system was not being properly maintained to ensure that sediment-laden storm water runoff was collected and diverted to a sediment pond for treatment prior to an offsite discharge to surface waters of the state. The storm water collection system was filled in with sediment causing runoff to bypass treatment prior to an offsite discharge. Pond 11 had significant sediment accumulation reducing the treatment capacity. Trees were also observed growing within the sediment pond.

55. **ORC 6111.04(A)**: No person shall cause pollution or place or cause to be placed any sewage, sludge, sludge materials, industrial waste, or other wastes in a location where they cause pollution of any waters of the state.
56. **ORC 6111.07(A)**: No person shall violate or fail to perform any duty imposed by sections 6111.01 to 6111.08 or division (8) of section 6111.33 of the Revised Code or violate any order, rule, or term or condition of a permit issued or adopted by the director of environmental protection pursuant to those sections. Each day of violation is a separate offense.
57. **Part III.2.A of NPDES Permit No. 3IN00360\*BD**: The effluent shall, at all times, be free of substances in amounts that will settle to form putrescent, or otherwise objectionable, sludge deposits; or that will adversely affect aquatic life or waterfowl.
58. **Part III.2.C of NPDES Permit No. 3IN00360\*BD**: The effluent shall, at all times, be free of substances in amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance.
59. **Part III.3.A of NPDES Permit No. 3IN00360\*BD**: At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.
60. **Part 111.3.B of NPDES Permit No. 3IN00360\*BD**: The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge

## **V. ORDERS**

Respondent shall achieve compliance with ORC Chapters 3714, 3734, and 6111 and the rules promulgated thereunder according to the following phased compliance schedule:

### **Cell 4A1/4A2 Berm Maintenance/Leachate Containment:**

1. Within fourteen (14) days of the effective date of these Orders, and continuing until cell 4A2 cell construction is certified in writing by Ohio EPA, Respondent shall:

- a. create and maintain an earthen berm along the cell 4A1/4A2 interface to ensure that storm water does not mix with leachate that may collect or pond in the cell 4A1/4A2 interface, until storm water and leachate can be properly managed and Ohio EPA concurs in writing.
- b. install a fixed measuring rod with readily visible one (1) inch increments marked on the rod and installed in the lowest point in the south side of the earthen berm.
- c. maintain a minimum of two (2) feet of freeboard below the berm.
- d. ensure that at all times there is a maximum of twelve (12) inches of leachate temporarily contained on the south side of the earthen berm.
- e. record compliance with this Order by taking daily date stamped photographs and e-mailing them to Ohio EPA on a weekly basis, until given written permission from Ohio EPA to stop.

#### **Access Roads:**

2. Within fourteen (14) days of the effective date of these Orders and continuing thereafter, Respondent shall ensure that the Facility's roads:
  - a. are constructed and maintained in such a manner as to withstand heavy equipment uses and allow passage of loaded waste/debris vehicles, leachate tankers without assistance (towing or pushing) during all weather conditions.
  - b. are maintained in a manner that does not impair surface water drainage ditches or create berms and ensures storm water pipes and culverts are free of rocks, soil, and debris.
  - c. are maintained to ensure minimum dust generation from any vehicle.
  - d. are maintained to create minimum dust generation; leachate is not permitted to be used as a dust suppressant.

#### **Leachate Collection System Integrity:**

3. Within ten (10) days of the effective date of these orders, Respondent will implement the Leachate Investigation Plan which is attached hereto and incorporated herein as Attachment 1. Respondent will complete installation of the five (5) wells identified in the Leachate Investigation Plan within sixty (60) days of the effective date of these orders. Respondent will follow all the requirements and timeframes set forth in the Leachate Investigation Plan.
4. If the results of the Leachate Investigation Plan indicate that the leachate collection system is ineffective then Respondent shall, within thirty (30) days of submitting the report and analysis, submit to Ohio EPA NEDO for approval a Leachate Collection System Remediation Plan and Implementation Schedule ("The Remediation Plan"). The Remediation Plan shall propose multiple remedies that ensure the landfill has an effective leachate collection system and will be in compliance with OAC Rule 3745-400-11(P)(1). The Remediation Plan may include such remedies as elimination or reduction of water infiltration into the landfill such as installation of an FML cap The Remediation Plan should

- also address the need to increase the facility's financial assurance, if applicable.
5. Within sixty (60) days of the effective date of these Orders and continuing thereafter, Respondent shall ensure that:
    - a. at least one backup pump and transducer, is always available at the Facility.
    - b. Daily (Monday through Friday), on a form provided by the Director for submission to Ohio EPA NEDO during the following week and for inclusion in the Facility's daily log, Respondent shall record:
      - i. the reading at each leachate sump transducer, as displayed on the panel in inches, and the time the reading is observed.
      - ii. the volume of leachate removed from each individual leachate sump.
      - iii. the volume of leachate removed from each individual leachate tank.
      - iv. the volume of leachate removed from ponded seep in cell 4A1.
      - v. the volume and name of the treatment facility(ies) where the leachate is disposed.
      - vi. photograph documentation from near and far of leachate ponds/ponded leachate in cell 4A2 before and after pumping from several distinct locations and pictures of any leachate seeps along the A41/A42 interface.
      - vii. a daily summary of work completed, and any problems encountered.
      - viii. the amount of time each pump runs daily.
    - c. each permanent and portable leachate tank has a functioning, leachate level indicator (digital or mechanical).
  6. Respondent shall employ an appropriate third-party consultant to conduct tri-annual inspections of the leachate collection system and:
    - a. verify the location/position of each leachate pump with integrated transducer.
    - b. verify the level of leachate in each sump, verify on/off transducer settings are in compliance with OAC Rule 3745-400-11(P)(1).
    - c. verify and ensure through visual observation and a review of site data that the leachate system is working as designed and is not clogged/silted or malfunctioning.
    - d. repair or replace the leachate pumps, transducers, and associated equipment as necessary, and flush/clear leachate system as needed.
    - e. verify that the pumps with integrated transducers and associated equipment have been returned to the correct location in the riser/sump following inspection.
    - f. verify the integrity of the riser pipe in cell 4A1. Report any breaches or further deflections in the riser pipe.
    - g. submit a report prepared by the third-party consultant to Ohio EPA NEDO sent by e-mail on January 10, May 10 and September 10 documenting the

findings of the inspection and compliance with paragraphs (a) through (f) above.

Respondent shall notify Ohio EPA NEDO at least three (3) days prior to each leachate collection system inspection.

**Liner & Leachate Collection Design:**

7. Upon the effective date of these Orders, Respondent shall comply with the liner design and construction requirements specified in OAC Rule 3745-400-07(F)(5)(a), at a minimum.

Prior to waste acceptance and with Ohio EPA approval, Respondent shall construct Cell 4A2 to include the installation of a sump in the southeast corner, an HDPE side slope riser large enough for pump access consistent with typical landfill construction practice or vertical concrete riser that is at least five feet in diameter, and pumps consistent with the pumps installed in Cells 1-4.

8. Respondent shall ensure that design plans for all future cells including cell 4A2, shall include an enhanced leachate collection system and drainage layer design that ensures a minimum permeability of  $1 \times 10^{-2}$  cm/sec. The design plans with these specifications shall be included in each year's license renewal applications.
9. Respondent shall not plug or repair the seep in cell 4A1 without the prior written permission of Ohio EPA. However, construction of Cell 4A2 may continue and is not considered to be plugging or repairing.

**Rail Unloading Area – Negley:**

10. Upon the effective date of these Orders, Respondent shall cease waste acceptance from rail cars at the Negley rail spur, unless otherwise authorized by Ohio EPA in writing.

**Surface Water Diversion:**

11. Upon the effective date of these Orders, Respondent shall ensure that surface water control structures:
  - a. are designed, constructed, and maintained to control surface water run-on and runoff prior to construction of cells, and during operations.
  - b. ensure minimal erosion and infiltration of water through the cover material and cap system, and maintain the integrity of access roads and associated storm water ditches.

**Active License Disposal Area (ALDA):**

12. Prior to waste acceptance and continuing thereafter, Respondent shall mark the limits of the ALDA at the Facility with steel signposts and signs every 100 feet indicating "ALDA Limits." Respondent shall reposition the signposts whenever the ALDA changes in the approved license.

**Unloading Zone and Working Face:**

13. Respondent shall ensure the following:
  - a. there is a maximum of one (1) unloading zone and one (1) working face, unless otherwise authorized by Ohio EPA in writing.
  - b. the unloading zone is limited to 20,000 square feet and is clearly marked with at least four temporary markers.
  - c. the working face is limited to 20,000 square feet and is clearly marked with at least two (2) temporary markers apart from the unloading zone markers.
  - d. specific measures to control, collect, properly contain and dispose of scattered litter, including the use of portable wind screens, are implemented, as-needed.
  - e. the waste is not directly unloaded into the working face.
  - f. solid waste and other prohibited materials including scrap tires are not stockpiled on the ground.
  - g. at least one roll off container shall be placed immediately adjacent to the unloading zone and at least one roll off container shall be placed immediately adjacent to the working face for containerizing prohibited material (i.e. solid waste) that is picked out of the construction and demolition waste stream. At all times the containers located at the working face and unloading zone shall have available capacity to accept the prohibited materials.
  - h. the unloading zone shall have sufficient pickers actively working to remove prohibited materials at all times the Facility is operating to ensure prohibited materials do not reach the working face.
  - i. equipment (e.g. front-end loader, backhoe with bucket) shall be available and dedicated to assist pickers in the removal of prohibited material, if needed.
14. Respondent shall establish a Training and Compliance Assurance Program. Under the program all Facility staff, including pickers, equipment operators, and management will be trained and educated on the proper operational procedures, license, permits, these Orders, and other authorizations pertaining to the Facility, including procedures to reject prohibited materials such as solid waste, scrap tires, pulverized debris and unidentifiable material. A training manual, containing the contents of the training and a dated signature page of all the employees trained, shall be maintained at the Facility for inspections. Prior to the acceptance of new waste, all current employees shall be trained pursuant to this program.

**Cliffing:**

15. Prior to waste acceptance and continuing thereafter, Respondent shall maintain and operate a minimum of one (1) operable compactor in the working face to ensure that debris is spread evenly over the working face and compacted to the smallest practical volume (excluding asbestos). Respondent shall also ensure that it does not form an edge or cliff by the placement of debris at the working face without compacting. Respondent shall cease waste acceptance immediately when it has no operable compactor at the Facility.

**Weekly Cover:**

16. Commencing on the first day waste acceptance occurs at the Facility and continuing thereafter, Respondent shall ensure that weekly cover is placed at the facility and the placement of the weekly cover is documented by taking time stamped photos of the completed weekly cover. A copy of the time stamped photos shall be retained at the Facility for inspection by Ohio EPA.

**Drag-out of Mud/Soil:**

17. Prior to waste acceptance and continuing thereafter, Respondent shall:
  - a. ensure that the wheel wash is automated, operable and utilized at all times as needed for all waste hauling vehicles leaving the Facility;
  - b. install and maintain asphalt, or concrete pavement from the wheel wash to State Road 170 that is capable of handling the volume of incoming and outgoing traffic at the Facility; and
  - c. utilize a street sweeper or other equipment, as needed, to ensure that public roads are free from drag-out.

**Scales:**

18. Respondent shall use scales at the Facility as the sole means of determining gate receipts. Prior to the acceptance of waste and annually thereafter, Respondent shall ensure that all scales are inspected, tested, and approved by the Columbiana County Auditor or city sealer having jurisdiction where the scale is located and shall meet the specifications, tolerances, and regulatory requirements of section 1327.49 of the Revised Code.

**Record Keeping and Reporting:**

19. Respondent shall submit to Ohio EPA NEDO a monthly report that contains the following:
  - a. The amount of leachate pumped from each sump and disposed of at a waste water treatment plant; and

- b. Based upon the daily logs, the amount of waste received, the amount of solid waste disposed of at a solid waste landfill, the amount of scrap tires transported by a scrap tire transporter to a scrap tire storage, monofill, monocell, or recovery facility licensed under ORC Section 3734.81 in Ohio, to such a facility in another state operating in compliance with the laws of the state in which it is located, or to any other solid waste disposal facility in another state that is operating in compliance with the laws of that state.

#### **Overfill Remediation and Prevention:**

20. Respondent shall complete waste relocation of Overfilled Areas within ninety (90) days of certification of Cell 4A2 or December 31, 2022 whichever comes first. Waste relocation will occur in general accordance with the Waste Relocation Plan previously submitted to the Ohio EPA on January 6, 2020. Following completion of waste relocation, Respondent shall send Ohio EPA NEDO a survey of the Facility, prepared by a professional skilled in the appropriate disciplines, and provide a topographic map of the Facility, with updated contour lines on a plan drawing with the information, scale, and contour interval consistent with the approved plans for the Facility.

At a minimum, the map shall identify:

- a. The date of the survey.
  - b. The areal extent of each phase of construction.
  - c. The areal extent of closed areas of all units that have a final cap system.
  - d. Access roads and buildings.
  - e. On-site borrow areas and cover material stockpiles.
21. Respondent shall include with the survey sent to Ohio EPA NEDO a comparison of the actual vertical and horizontal limits of emplaced waste to the vertical and horizontal limits of waste placement authorized in the applicable authorizing documents. If emplaced waste exceeds the limits of vertical and horizontal waste placement authorized in the applicable authorizing documents, this comparison shall include a topographic map which delineates the areal extent of emplaced waste that exceeds approved limits specified in such authorizing documents. In addition, the topographic map shall contain notes that indicate the following information for waste exceeding authorized limits of waste placement: the maximum estimated volume, the maximum depth, and the average depth.
  22. Respondent shall complete a survey of the Facility which includes all items specified in paragraphs 20 and 21. Respondent shall submit the annual survey results to Ohio EPA NEDO with each renewal license application. Respondent shall include with the submittal an estimate of the remaining facility life in years and in terms of the remaining volume of the Facility to be filled in cubic yards.



**Division of Surface Water Orders:**

23. Respondent shall immediately comply with Ohio Revised Code Chapter 6111 and National Pollutant Discharge Elimination System Permit No. 3IN00360\*BD.
24. Respondent shall immediately cease all unauthorized discharges from the facility to "waters of the state" as defined in ORC 6111.01.
25. Within forty-five (45) days from the effective date of these Orders, Respondent shall develop and implement a storm water pollution prevention plan ("SWP3") for the facility that satisfies Parts II and III of Ohio EPA's Authorization to Discharge Storm Water Associated with Construction Activity Under the National Pollutant Discharge Elimination System.
26. Within forty-five (45) days from the effective date of the Orders, Respondent shall assign "qualified inspection personnel," as defined in Part VII of Ohio EPA's Authorization to Discharge Storm Water Associated with Construction Activity Under the National Pollutant Discharge Elimination System, to conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented or whether additional control measures are required. At a minimum, inspections shall be performed and recorded.
27. Within seven (7) days from the effective date of these Orders as weather allows, Respondent shall begin temporary and/or final stabilizing all idle areas associated with the facility outside of the ALDA. All idle areas of the facility that are at final grade shall achieve final stabilization within one year from the effective date of these Orders. Final stabilization shall be defined as all soil disturbing activities in an area of the facility are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment BMPs are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion.
28. Respondent shall pay the amount of nine thousand five hundred and seventy-six dollars (\$9,576.00) in settlement of Ohio EPA's claim for civil penalties, which may be assessed pursuant to ORC Chapter 6111. Within forty-five (45) days after the effective date of these Orders, payment to Ohio EPA shall be made by an official check made payable to "Treasurer, State of Ohio" for the total amount. The official check shall be submitted to Carol Butler, or her successor, together with a letter identifying Respondent and the site, to:

Ohio EPA  
Office of Fiscal Administration  
P.O. Box 1049  
Columbus, Ohio 43216-1049

A copy of the check shall be sent to Larry Reeder, Environmental Manager, Enforcement Section, or his successor, at the following address:

Ohio EPA  
Division of Surface Water  
P.O. Box 1049  
Columbus, Ohio 43216-1049

29. Respondent shall pay the amount of forty thousand dollars (\$40,000.00) in settlement of Ohio EPA Division of Materials and Waste Management's claims for civil penalties, which may be assessed pursuant to ORC Chapters 3714. and 3734. Ohio EPA agrees that the money shall be paid to the Middletown Township Trustees for the purpose of improving public health, safety and wellness in and around the Negley, Ohio community. Payment is due within forty-five (45) days of the effective date of this Order. Payment shall be sent to the Fiscal Officer, Middleton Township Trustees, 50738 Richardson Street, P.O. Box 295, Negley, Ohio 4441.

A copy of the checks shall be sent to:

Mr. Brian Dearth,  
Ohio EPA DMWM  
P.O. Box 1049,  
Columbus, OH 43216-1049

as well as the Ohio-EPA Northeast District Office as specified in Section X below.

## **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 Ohio EPA's Chief, 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 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 from Respondent: "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 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, Respondent or the Property.

#### **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 the Property.

#### **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  
Northeast District Office  
Division of Materials and Waste Management  
2110 East Aurora Road  
Twinsburg, Ohio 44087

Preferably submit documents electronically at the following file share website:  
[https://fileshare.epa.ohio.gov/filedrop/nedo\\_dmwm\\_submittals](https://fileshare.epa.ohio.gov/filedrop/nedo_dmwm_submittals)

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

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

Ohio EPA reserves its rights to seek civil or administrative penalties against Respondent for violations not specifically cited in these Orders. Ohio EPA and Respondent each reserve all other rights, privileges, and causes of actions, except as specifically waived in Section XII of these Orders. Ohio EPA reserves the right to require Respondent to take additional actions in future orders.

## **XII. WAIVER**

Respondent consents to the issuance of these Orders and agrees to comply with these Orders.

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**

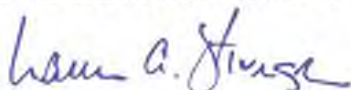
The effective date of the Orders is the date these Orders are entered into the Ohio EPA Director's Journal.

## **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 this Order 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**

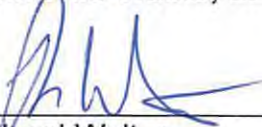


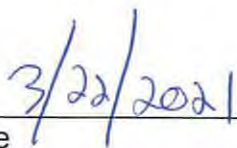
Laurie A. Stevenson  
Director

3/29/2021

Date

**IT IS SO AGREED:**  
**PennOhio Waste, LLC**

  
\_\_\_\_\_  
Richard Walton,  
President

  
\_\_\_\_\_  
Date

**ATTACHMENT 1**  
**PennOhio Landfill Facility**  
**Leachate Investigation Plan**

## **INTRODUCTION**

This Leachate Investigation Plan has been prepared by Penn Ohio for the PennOhio Landfill facility ("facility") for submission to Ohio EPA. Penn Ohio conducted the research to present the following facts. Ohio EPA has not verified the facts as presented. The purpose of the plan is to examine the potential for a buildup of leachate head within the landfill as well as the potential for seeps along the existing northern limit of Cell 4A1. Leachate levels at the landfill have been a topic of discussion among PennOhio and the Ohio EPA. This plan has been prepared to present a method for installing liquid observation wells within the landfill as an attempt to evaluate leachate levels as well as present criteria to evaluate the effectiveness of the leachate collection system. This Plan also presents Penn Ohio's brief summary of the pump testing previously performed at the facility as shared with the Ohio EPA in August, 2020.

## **OBSERVED CONDITIONS**

The primary observations which have led to concern of potential elevated leachate levels are high transducer readings and liquids within sumps (Cell 3A and Cell 4A1) and leachate seeps along the northeastern limit of Cell 4A1. Additionally, the facility's leachate disposal records contained data gaps which appeared to be inconsistent with anticipated leachate generation. The following sections present a description for each of these conditions.

### Cell 3A and Cell 4A1 Leachate Levels

The existing configurations, pumps, transducers and display readouts for Cell 3A and Cell 4A1 have been reviewed by PennOhio personnel extensively. The transducers have historically yielded readings representative of elevated leachate levels and liquids have been observed within the sump risers. After many field observations, review of existing as-builts and camera inspections of the sump risers by third party contractors, PennOhio came to the conclusion to replace the pumps, transducers and readouts within all sump areas. Pumps and transducers for all sumps (Cell 1A, 2A, 3A and 4A1) were replaced in 2020 and pump testing was performed as follows.

### Pump Testing Summary

Pump testing was performed for each sump between July 27, 2020 and August 1, 2020. A complete summary of the pump testing results was provided to the EPA via Email on August 18, 2020. The pump testing included setting the pump "on" depth to 12-inches and the pump "off" depth to 6-inches for all sumps. Daily readings were taken from each sump as well as the corresponding tank that each pumped to. Readings were taken at approximately 8am and 3pm each day for a total of 6-days. The following information was obtained from the pump tests.

- Following setting the pump "on" depth in each sump to 12-inches and pump "off" depth to 6-inches (Monday, July 27, 2020) the liquid level in the sumps did not exceed 12-inches during the 6-day testing period.
- The overall average combined leachate removed from the sump areas including the exterior of Cell 4A1 during the 6-day period was 10,390-gallons, resulting in an average daily volume of 1,731-gal/day. It should be noted that of the 10,390-

gallons, 2,200-gallons were removed from the area between Cell 4A1 and the soil berm. It is believed that the majority of this 2,200-gal was stormwater. Excluding this 2,200-gallons results in an estimated 8,190-gallons of leachate removed or approximately 1,365-gal/day.

- Leachate was not freely discharging from Cell 4A1. During the majority of the pump testing, the area outside Cell 4A1 was dry with the exception of Saturday August 1, 2020 where there had been a significant rain event.

#### Cell 4A1 Leachate Seep

PennOhio started construction of Cell 4A2 to the immediate north and adjacent to Cell 4A1 at the end of 2019. The facility faced many weather obstacles attempting to construct during the winter months including cold weather, rain and snow. In the beginning of 2020, the facility began working to expose the sand / subgrade components as well as an existing pipe in Cell 4A1 to prepare for tie-in of the new Cell 4A2. During this time, a leachate seep was observed along the northeastern limit of the Cell 4A1 floor area. The cover soils along the outer slope of 4A1 have led to sedimentation build-up in this low area which has covered the outside edge of the Cell 4A1 sand making it difficult for any seeps or new stormwater contacting this location to drain back into the Cell 4A1 sump.

Liquids in this area have been contained through the use of a soil berm installed between Cell 4A1 and Cell 4A2. Additionally, surface water runoff which flows over the existing Cell 4A1 outer slope face collects in this area and as a result of exposing the tie-in during cell construction activities has mixed with waste exposed during tie-in preparation. All of the collected water is treated as leachate. It is anticipated that drainage along the Cell 4A1 outer edge will greatly improve once the Cell 4A1 tie-in preparation is completed. In the interim, the facility will continue to actively pump liquids between the berm and Cell 4A1 and haul the liquids to an appropriately permitted POTW.

#### Leachate Disposal Records

The facility has utilized several third-party haulers as well as several different treatment facilities for treatment and disposal of leachate generated at the PennOhio landfill facility. The site has also utilized internal hauling trucks owned by the same parent company as PennOhio landfill. Due to the multiple haulers and disposal sites paired with the site's recent employee turnover, prior leachate disposal records have included data gaps.

Following a review of invoices from third-party haulers, treatment facilities and Bill of Ladings (BOLs) from internal trucks, an updated leachate disposal summary has been prepared and is included in Exhibit 1 for the period of January 2018 through October 2020. As demonstrated by this data, leachate disposal has occurred for all months with the exception of January, February and July 2018. A graph has also been included in Exhibit 1 which presents the monthly disposal volumes as well as some milestones which have occurred during this time period.



The Comments / Milestones column of table presents information relative to the trend in disposal volumes that can be observed. In particular, leachate disposal trends tend to significantly drop off following the completion (Cert Submitted) of Cell 3D and Cell 4A1. Additionally, leachate disposal volumes significantly reduced following the re-establishment of the soil berm between Cell 4A1 and Cell 4A2 in July 2020. The cell and soil berm milestones are shown on the graph as a red line for their respective month / year extending from the origin to the top of the y-axis. From a review of this data, as well as an in-depth review and observation of recent leachate disposal volumes at the site, it is apparent that a significant portion of leachate disposal during construction of a new cell is related to stormwater. Therefore, during construction and just prior to a cell being certified, higher leachate volumes will be observed and following approval when waste acceptance begins, leachate disposal volumes tend to decrease. This same trend was observed with the installation of the berm between Cell 4A1 and Cell 4A2 in July 2020 which allowed the site to divert stormwater away from Cell 4A1 thereby reducing leachate disposal volumes.

### TESTING PROCEDURES

The facility will perform the following testing procedure for the installation of observation wells to investigate the potential for elevated leachate levels within the landfill. A total of five (5) observation wells will be installed. One well with liquid extraction capabilities will be installed within Cell 3A and one observation well each will be installed in Cell 1A and Cell 2A and two observation wells will be installed in Cell 4A1. The following general guidelines will be utilized for the installation of wells. Deviations from this Plan may occur based upon field observations during the drilling / well installation process, and in consultation with the Ohio EPA field personnel.

1. A third-party contractor with experience in well drilling will be utilized to install the wells. The contractor will utilize appropriate drilling methods (roto sonic.).
2. PennOhio will provide a minimum 3-day notice to the Ohio EPA prior to the start of drilling.
3. Each well location will be surveyed and staked out prior to drilling. Following completion of the well installation, the top of the well casing (obtained from ground survey and stickup measurements or a new survey of the top of the casing) for each well will be provided to the Ohio EPA within 1 working day of well construction.
4. No leachate will be removed from the wells without prior authorization from the Ohio EPA.

#### Cell 3A Drilled Extraction Well (Cased Hole in Waste Mass with Pump)

The typical drilled extraction well will be installed as follows. Should obstructions related to drilling through C&DD materials prohibit the installation of an extraction hole, an alternative method may be developed.

- Step 1: Review available design and as-built base grades as well as existing ground surface. Select a design drill hole length approximately 2-ft above the base of the

landfill (1-ft above collection zone) within the Cell 3A Sump Area within 25-ft laterally of the mapped location of the horizontal portion of the sump riser. The anticipated location of the extraction well is presented on the drawings included with this plan. The anticipated target elevation of the base of the well is 1036-ft-msl which is 2-ft above sump area subgrade elevation of 1034-ft-msl.

- Step 2: Sampling and documentation of borehole observations will begin 10-ft above the base of the landfill and will continue to the bottom of the hole to help locate the target depth. Measure and document the drilled depth and observations.
- Step 3: Install a minimum of 10-ft of 6-inch diameter (PVC Sch 80 or HDPE SDR11) slotted or perforated piping followed by solid piping (PVC Sch 80 or HDPE SDR11) to the top of the drill hole allowing sufficient stickup for access. A gravel pack shall be installed to a minimum 1-ft above the top of the perforated / slotted zone. Bentonite chips will be installed to just below the ground surface. Site soil may be utilized as backfill from the top of the gravel pack to within 3-ft of ground surface. The upper 3-ft shall be bentonite chips.
- Step 4: Let any liquids that may be entering the casing pipe equalize for a minimum of one (1) day. Record the liquid level. Present installation and liquid level data to the Ohio EPA and request approval to begin pump testing.
- Step 5: Daily, for a period of five (5) weeks after well installation, static liquid levels will be measured and recorded immediately prior and after pumping leachate. Pumps shall be operated manually during the five (5) week period unless authorized by the Ohio EPA in writing to stop. Leachate levels will be recorded twice daily (Monday through Friday) with the first reading being between 6am and 10am and the second reading between 3pm and 7pm.
- Step 6: Inspect Cell 4A1 / Cell 4A2 interface daily (Monday through Friday) and take photographs of any leachate discharge and leachate ponding areas and the overall conditions of the interface and the integrity of the earthen berm. Photographs will be included in the Leachate Investigation Report described under the Evaluation of Results section.

#### Cell 1A, 2A and Cell 4A1 Drilled Observation Wells (Cased Hole in Waste Mass)

The typical observation well will be installed as follows. Should obstructions related to drilling through C&DD materials prohibit the installation of an observation hole, an alternative method may be developed. Note that the landfill facility may determine at any time during the installation of the drilled observation wells to install one or all of these wells as extraction wells following the guideline above.

- **Step 1:** Review available design and as-built base grades as well as existing ground surface. Select a design drill hole length approximately 2-ft above the base of the landfill (1-ft above collection zone) within the sump areas, within 25-ft laterally of the mapped location of the horizontal portion of the sump riser. One well will be installed within the Cell 1A and Cell 2A sump areas and two wells will be installed within the Cell 4A1 sump area. The anticipated locations of the observation wells are presented on the drawings included with this plan. The anticipated target elevations of the base of the wells are 1037.1-ft-msl (Cell 1A), 1038-ft-msl (Cell 2A), and 1039.5-ft-msl (Cell 4A1) which are 2-ft above mapped sump area subgrade elevations.
- **Step 2:** Sampling and documentation of borehole observations will begin 10-ft above the base of the landfill and will continue to the bottom of the hole to help locate the target depth. Measure and document the drilled depth and observations.
- **Step 3:** Install a minimum of 10-ft of 2-inch diameter (PVC Sch 80) slotted or perforated piping followed by solid piping (PVC Sch 80) to the top of the drill hole allowing sufficient stickup for access. A gravel pack shall be installed to a minimum 1-ft above the top of the perforated / slotted zone. Bentonite chips will be installed to the ground surface. Site soil may be utilized as backfill from the top of the gravel pack to within 3-ft of ground surface. The upper 3-ft shall be bentonite chips.
- **Step 4:** Let any liquids that may be entering the casing pipe equalize for a minimum of one (1) day. Record the liquid level. Present installation and liquid level data to the Ohio EPA.
- **Step 5:** Daily, for a period of five (5) weeks after well installation, static liquid levels will be measured and recorded twice daily (Monday through Friday) with the first reading being between 6am and 10am and the second reading between 3pm and 7pm.

### **EVALUATION OF RESULTS**

Following completion of the tests presented above, PennOhio will review and evaluate potential liquid levels within the landfill. A summary of the testing procedures, the field observations and an evaluation of the results will be summarized in a Leachate Investigation Report to be shared with the Ohio EPA within four (4) weeks of completion of all testing. The leachate collection system is considered to be ineffective if any of the following exists.

- There exists greater than one (1) foot of head anywhere on the in situ or added geologic material or constructed liner and the system does not have the ability to lower the liquid

level, with the exception of the sump areas and the Cell 4A1 / 4A2 interface while the earthen berm remains in place.

- Liquid is freely and actively discharging from any seep in cell 4A1 along the toe of waste adjacent to proposed Cell 4A2.
- The leachate removed exclusively from the four constructed cells is not comparable to approximately 1,500 gallons per day or 45,000 gallons per month.
- Leachate within the cells does not reach the leachate collection system.

**Penn Ohio Landfill  
Leachate Investigation Plan**

**Exhibit 1  
Summary of Leachate Disposal**

The following table presents a summary of leachate disposal for the facility between January 2018 and October 2020. The data was obtained from a review of site disposal records, invoices from haulers and permitted treatment facilities, bill of ladings from internal trucking and data previously submitted to the Ohio EPA. A plot is included to present a monthly timeline of leachate disposal as well as construction milestones during this period.

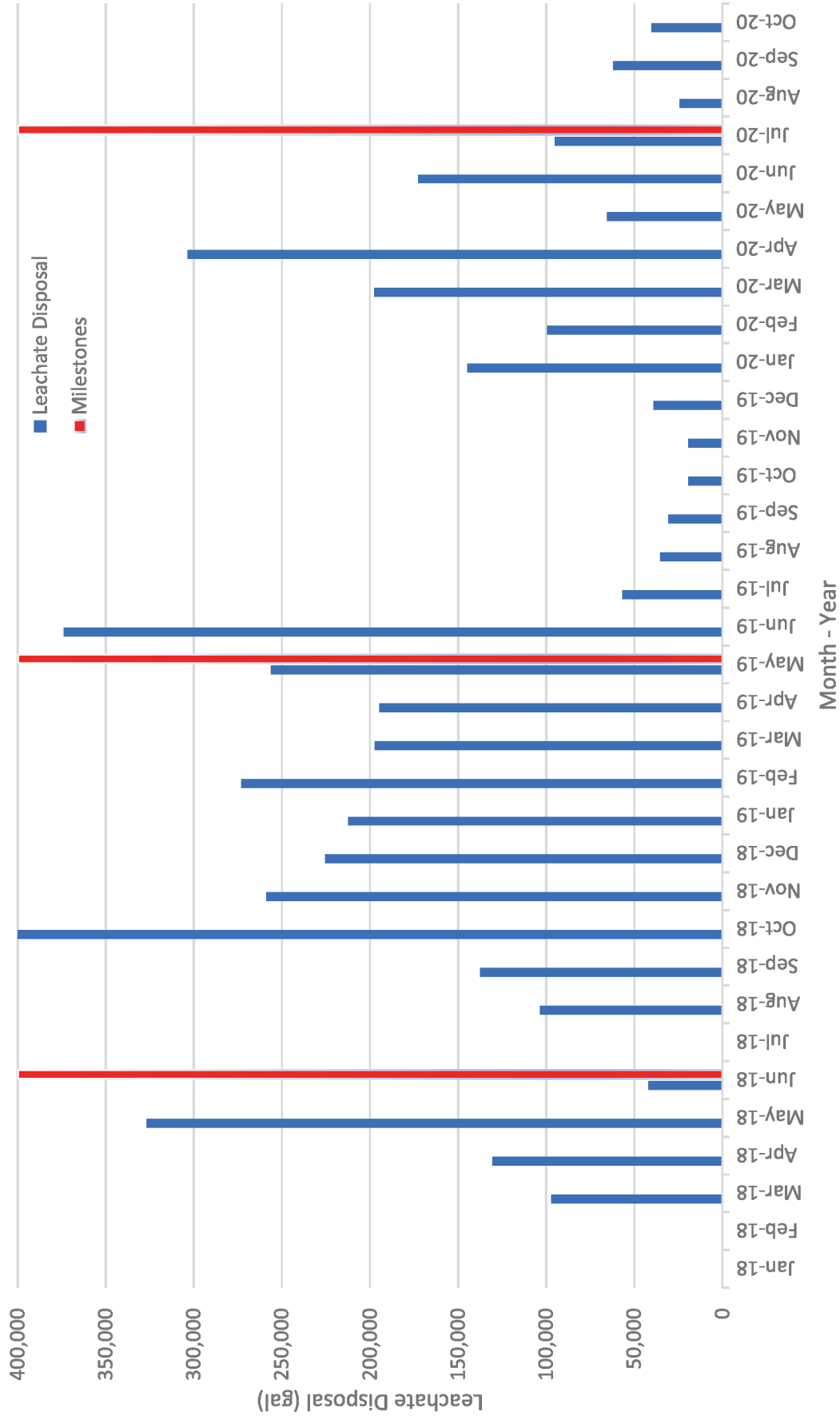
**PennOhio Landfill  
Summary of Leachate Disposal**

<b>Month</b>	<b>Monthly Leachate Disposal (gal)</b>	<b>Comments / Milestones</b>
Jan-18	0	
Feb-18	0	
Mar-18	97,100	
Apr-18	130,500	
May-18	326,800	
Jun-18	42,100	June 12, 2018 Cell 3D Cert Submitted
Jul-18	0	
Aug-18	103,500	
Sep-18	137,600	
Oct-18	543,300	
Nov-18	258,780	
Dec-18	225,540	
Jan-19	212,310	
Feb-19	273,000	
Mar-19	197,400	
Apr-19	194,670	
May-19	256,200	5/28/2019 Cell 4A1 Cert Submitted
Jun-19	373,800	
Jul-19	56,700	
Aug-19	35,180	
Sep-19	30,800	
Oct-19	19,320	
Nov-19	19,320	
Dec-19	39,060	CDS Started Cell 4A2 CQA
Jan-20	144,622	
Feb-20	99,540	
Mar-20	197,520	
Apr-20	303,700	All Liquids from Frac Tank
May-20	65,480	Most Liquids from Frac Tank
Jun-20	172,720	
Jul-20	95,000	July 15 Berm Re-establishment Started
Aug-20	24,200	
Sep-20	62,060	
Oct-20	40,300	

**Notes:**

- (1) Leachate data for January 2018 through March 2020 obtained from a review of Bill of Ladings, Site Tracking, disposal invoices as well as information previously shared with Ohio EPA.
- (2) Leachate data from April 2020 through October 2020 represents estimated disposal volumes as obtained from trucking bill of lading slips and is consistent with data previously provided to Ohio EPA through weekly emails.

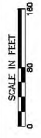
# PennOhio Landfill - Leachate Disposal



**Penn Ohio Landfill  
Leachate Investigation Plan**

**Exhibit 2  
FIGURES**





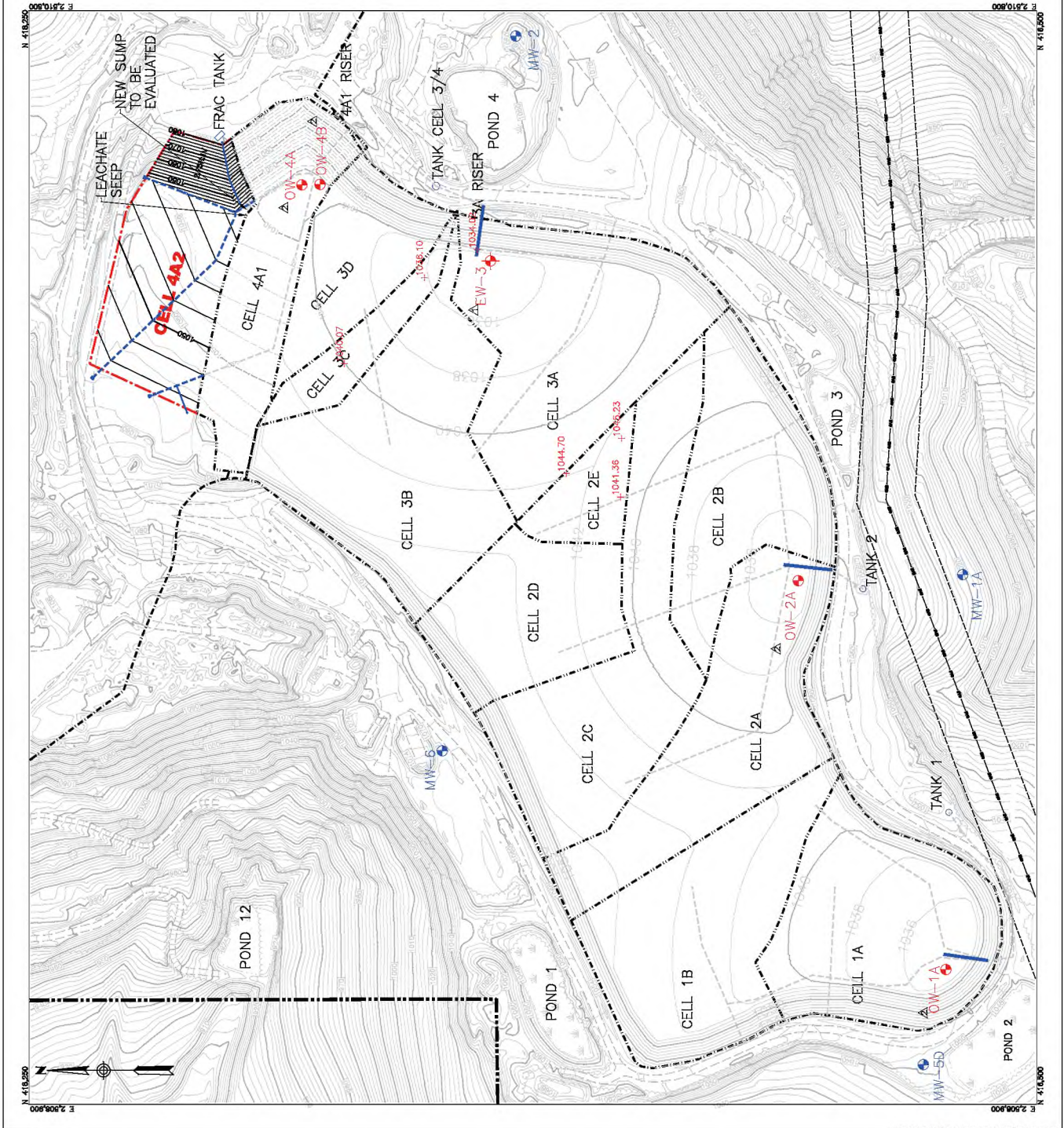
**LEGEND**

- 1150- PERMITS/2020 PERMITS/2020 SURVEY CONTOUR
- 1150- CELL 4A1 AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- CELL 3D AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- CELL 3A AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- CELL 2A AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- PERMITTED LANDFILL LIMIT (SEE NOTE 2)
- 1150- LIMIT OF EXISTING CELL
- 1150- MONITORING WELL
- 1150- PROPERTY LINE
- 1150- PREVIOUSLY CONSTRUCTED CELLS
- 1150- PROPOSED LIMIT OF CELL 4A2 (1.5'-AG, UNDER CONSTRUCTION)
- 1150- CELL 4A2 PROPOSED LEACHATE COLLECTION PIPING
- 1150- CELL 4A2 PROPOSED LEACHATE CLEANOUT PIPING
- 1150- EXISTING LEACHATE COLLECTION PIPING (APPROXIMATE)
- 1150- AS-BUILT SUBGRADE FROM OLD AS-BUILTS
- 1150- PROPOSED OBSERVATION WELLS (ANTICIPATED LOCATION)
- 1150- PROPOSED EXTRACTION WELL (ANTICIPATED LOCATION)

**NOTES**

1. EXISTING TOPOGRAPHY TAKEN FROM 1978 SURVEY PREPARED BY SOUTHERN SURVEYING AND ENGINEERING, INC. (SSEI). ALL AS-BUILT SUBGRADE CONTOURS WERE SURVEYED FOR LINE EARTH INDUSTRIES, L.P.'S DRAWING NO. 12-038-A, AND 12-038-B. LAST REVISION 06/12.
2. 100'-FT GAS LINE EASEMENT WAS TAKEN FROM USE DRAWING FACILITY ENVIRONMENT DRAWING NO. 2A1.
3. AS-BUILT SUBGRADE PIPING AND SURVEY TAKEN FROM PREVIOUSLY APPROVED CELL EXTRACTION DRAWINGS.
4. PROPOSED OBSERVATION WELLS AND EXTRACTION WELLS LOCATIONS ARE DRILLED LOCATIONS MAY VARY SLIGHTLY FROM THAT SHOWN HERE.

REV	DATE	DESCRIPTION	BY	CHK
A	02/10/21	MOVED WELLS WITHIN 25'-FT OF SUMP	MEZ	MEZ
A	12/21/20	REVISED WELL LOCATIONS	MEZ	MEZ
DES	MEZ 11/24/20	PROJECT: FRANK-OHIO FACILITY		
CHECK	MEZ 11/24/20	LEACHATE INVESTIGATION PLAN		
APPROVED	MEZ 11/24/20	LEACHATE INVESTIGATION PLAN		
SCALE	1" = 80'	SHEET TITLE		
ISSUED	11/20/20	LEACHATE INVESTIGATION PUMP TEST		
REVISION	2	DRAWING SHEET:		





**LEGEND**

- 1150- PERMITS/2020 PERMITS/2020 SURVEY CONTOUR
- 1150- CELL 4A1 AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- CELL 3D AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- CELL 3B AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- CELL 2E AS-BUILT SUBGRADE CONTOUR (C.L. ± 2'-0")
- 1150- PERMITTED LANDFILL LIMIT (SEE NOTE 2)
- 1150- LIMIT OF EXISTING CELL
- 1150- MONITORING WELL
- 1150- PROPERTY LINE
- 1150- PREVIOUSLY CONSTRUCTED CELLS
- 1150- PROPOSED LIMIT OF CELL 4A2 (1.5'-AG, UNDER CONSTRUCTION)
- 1150- CELL 4A2 PROPOSED LEACHATE COLLECTION PIPING
- 1150- CELL 4A2 PROPOSED LEACHATE CLEANOUT PIPING
- 1150- EXISTING LEACHATE COLLECTION PIPING (APPROXIMATE)
- 1150- AS-BUILT SUBGRADE FROM OLD AS-BUILTS
- 1150- PROPOSED OBSERVATION WELLS (ANTICIPATED LOCATION)
- 1150- PROPOSED EXTRACTION WELL (ANTICIPATED LOCATION)

**NOTES**

1. EXISTING TOPOGRAPHY TAKEN FROM 1978 SURVEY PREPARED BY SOUTHERN SURVEYING AND ENGINEERING, INC. (SEE DRAWING NO. 12-038-A).
2. PROPOSED SUBGRADE TAKEN FROM 1978 SURVEY AND 1998 SURVEY TAKEN FROM 1998 SURVEY FOR LINE EARTH ADJUSTMENTS. LUIS DRAWING NO. 12-038-A AND 12-038-B. LAST REVISED 06/12.
3. 100'-FT GAS LINE EASEMENT WAS TAKEN FROM URS DRAWING FACILITY ENVIRONMENT DRAWING NO. 2A1.
4. AS-BUILT SUBGRADE PIPING AND SURVEY TAKEN FROM PREVIOUSLY APPROVED CELL CONSTRUCTION DRAWINGS.
5. PROPOSED SUBGRADE WELLS AND OBSERVATION WELLS LOCATIONS ARE APPROXIMATE. ACTUAL WELLS SHOULD BE DRILLED AT LOCATIONS SHOWN ON THIS DRAWING. ACTUAL DRILLED LOCATIONS MAY VARY SLIGHTLY FROM THAT SHOWN HERE.

REV	DATE	DESCRIPTION	BY	CHK
A	02/10/21	MOVED WELLS WITHIN 25'-FT OF SUMP	MEZ	MEZ
A	12/21/20	REVISED WELL LOCATIONS	MEZ	MEZ
DES	MEZ 11/24/20	PROJECT: FRANK-OHIO FACILITY		
CHECK	MEZ 11/24/20	LEACHATE INVESTIGATION PLAN		
APPROVED	MEZ 11/24/20	LEACHATE INVESTIGATION PLAN		
SCALE	1" = 80'	SHEET TITLE		
ISSUED	11/2020			
REVISION	2			

**LEACHATE INVESTIGATION PUMP TEST**

DRAWING SHEET: (2020-006)-02  
 NOBLE ENVIRONMENTAL

