



State of Ohio Environmental Protection Agency

STREET ADDRESS:

MAILING ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

P.O. Box 1049
Columbus, Ohio 43216-1049

John Hart, P.E., City Engineer
City of Elyria, Elyria City Hall
131 Court Street, Suite 303
Elyria, Ohio 44035

**RE: Elyria City (Garden Street) Landfill, Lorain County
Ohio Administrative Code (OAC) Rule 3745-27-13 Authorization**

Dear Mr. Hart:

On October 6, 2004, the Ohio Environmental Protection Agency (Ohio EPA), Division of Solid and Infectious Waste Management (DSIWM), Northeast District Office (NEDO) received a request titled OAC 3745-27-13 Authorization Request for Installation of Methane Gas Monitoring Vents, Garden Street Sanitary Landfill, Lorain County Ohio, September 2004, dated October 5, 2004, from Metcalf & Eddy of Ohio, Inc. (M&E), on behalf of the City of Elyria (Elyria), pursuant to OAC Rule 3745-27-13, to engage in filling, grading, excavating, building, drilling, or mining activities at the closed Elyria City Landfill (Facility) located in Lorain County. Revisions to the document dated April 25, 2005, and April 28, 2005, were received on April 27, 2005, and May 2, 2005, respectively.

OAC Rule 3745-27-13 requires authorization from the director of Ohio EPA (Director) before engaging in filling, grading, excavating, building, drilling, or mining on land where a solid waste facility was operated. Specifically, Elyria is proposing to construct four (4) passive landfill gas vents in the southeastern portion of the Facility to mitigate landfill gas migration from the southeastern portion of the landfill footprint. The proposed activities will involve disturbance of a portion of the final cover system, but the cover system is proposed to be restored in accordance with specific material, construction, and testing specifications.

Based upon a review of the October 5, 2004, document, as revised on April 25, 2005, and April 28, 2005, I have determined, pursuant to OAC Rule 3745-27-13, that the proposed activities will not result in violation of applicable laws or regulations, will not create a nuisance, and are unlikely to adversely affect the public safety or health or the environment. Therefore, Elyria is hereby authorized to perform the activities outlined in this letter in accordance with the submitted and approved plans, specifications, and information.

As part of this authorization, Elyria is subject to the following conditions:

CONDITIONS

Bob Taft, Governor
Jennette Bradley, Lieutenant Governor
Joseph P. Koncelik, Director

1. This approval grants Elyria authorization to perform activities at the Facility in accordance with the document titled OAC 3745-27-13 Authorization Request for Installation of Methane Gas Monitoring Vents, Garden Street Sanitary Landfill, Lorain County Ohio, September 2004, dated October 5, 2004, and subsequent revisions dated April 25, 2005, and April 28, 2005. All activities shall be conducted in strict accordance with the plans, specifications, and other information submitted as part of this request. There may be no deviation from the approved plans without prior written authorization from Ohio EPA. Any future activities at the Facility may require additional Ohio EPA approval.
2. Not later than seven (7) days prior to the start of activities associated with this authorization, Elyria shall submit written notification, which specifies the anticipated date of work commencement, to Ohio EPA, NEDO and the Elyria City Health Department.
3. All on-site activities shall be accomplished in compliance with all applicable state and federal laws and regulations pertaining to environmental protection, including, but not limited to, the control of air pollution, leachate, surface water run-on and runoff, and protection of ground water.
4. All on-site activities shall be performed in a manner that prevents migration of leachate, explosive gas, or toxic gas from the Facility.
5. All activities undertaken shall not create a nuisance and shall not adversely affect the public safety or health or the environment.
6. Any portions of the landfill where the cap is removed by activities authorized by this approval shall have the final cap re-established in accordance with the following specifications:
 - A. Material specifications: The following material specifications shall apply to the material intended for use in cap construction. A representative sample of the material shall be evaluated at a frequency not less than once for every 3,000 cubic yards.
 1. 100% of the material particles shall pass a 10-inch screen, with no more than two (2) particles from a 50-cubic-foot sample retained on a 6-inch screen;
 2. At least 95% of the material, by weight, shall pass a 3-inch screen;
 3. At least 70% of the material, by weight, shall pass the Number 10 sieve;

4. The material that passes the Number 10 sieve (sand, silt, and clay fractions) shall be classified using the USDA textural classification chart as loam, sandy loam, silty loam, clay loam, silty clay, or sandy clay, or an acceptable alternative soil type.
- B. Construction Specifications:
1. The material shall be compacted to at least 95% of the maximum Standard Proctor Density (ASTM D-698) or 90% of the maximum Modified Proctor Density (ASTM D-1557).
 2. The material shall be compacted using loose lifts, no greater than eight (8) inches thick prior to compaction.
- C. Testing Specifications:
1. The suitability of the soils shall be determined prior to their intended use in cap construction. The following tests shall be performed on representative soil samples at least once for every 3,000 cubic yards of material intended for use.
 - a. Sieve and hydrometer testing (ASTM D-422) for particle size gradation; and
 - b. Moisture/density relationship using either Standard Proctor (ASTM D-698) or Modified Proctor (ASTM D-1557) method.

Prior to testing, the samples shall be screened to remove any particles larger than three (3) inches. Written results of this testing shall be submitted to Ohio EPA, NEDO not later than seven (7) days prior to its intended use in cap construction.
 2. During construction of the cap, compaction shall be monitored to ensure that the proper specifications are met. This can be accomplished by a number of methods, including nuclear densimeter (ASTM D-2922), sand cone (ASTM D-1556), and rubber balloon (ASTM D-2167). The nuclear densimeter test, if used, shall be performed at least five (5) times per acre per lift. The sand cone or rubber balloon methods shall be performed at least three (3) times per acre per lift. The sampling rate for other methods shall be determined on an individual basis with concurrence from Ohio EPA.

3. Upon completion of construction, the permeability of the cap shall be determined through either field permeability testing (ASTM D-6391: Boutwell two-stage permeameter, ASTM D-5093: SDRI) or through laboratory testing of cap samples brought to the lab for analysis (ASTM D-5084: Shelby tubes, soil blocks). The permeability requirements for each type of permeability determination are as follows:
 - a. For field permeability tests (ASTM D-6391, ASTM D-5093), the required permeability of the cap is 1×10^{-5} cm/sec.
 - b. For laboratory permeability tests (ASTM D-5084: Shelby tubes, soil blocks), the required permeability of the cap is 1×10^{-6} cm/sec.
 4. Any penetrations into the cap layer resulting from either compaction or permeability testing shall be repaired using bentonite or a bentonite/soil mixture.
7. All solid and hazardous waste to be removed from the Facility shall be containerized and securely stored until these materials are properly characterized and disposed in accordance with Ohio Revised Code (ORC) Chapter 3734 and the regulations promulgated thereunder.
8. All liquids, semi-solids, industrial wastes, and other wastes regulated by ORC Chapter 6111 that are removed during intrusive activities shall be containerized and securely stored until these materials are properly characterized and disposed in accordance with ORC Chapter 6111 and regulations promulgated thereunder.
9. Prior to any removal of waste or contaminated soil from the property, Elyria shall submit copies of sample analysis results, the treatment or disposal method selected, and a letter of acceptance from the treatment or disposal facility to Ohio EPA, NEDO pursuant to OAC Rule 3745-27-13(H)(4).
10. For the purposes of erosion control during all phases of construction and investigation of the landfill, Elyria shall use best management practices and standards as specified in the Ohio Department of Natural Resources manual titled Rainwater and Land Development.
11. No excavation of waste shall occur unless the excavated waste is replaced within previously existing horizontal and vertical limits of waste placement or is treated or disposed of at a licensed, permitted treatment or disposal facility, in accordance with ORC Chapter 3734 and the regulations promulgated thereunder.
12. If excavation occurs outside the limits of waste placement at the Facility, Elyria shall not use material consisting of solid or hazardous waste to backfill the excavated areas.

13. Not later than sixty (60) days after completing the activities authorized through this approval, Elyria shall submit to Ohio EPA a certification report in accordance with OAC Rule 3745-27-13(H)(10). In addition to the items specified in OAC Rule 3745-27-13(H)(10), Elyria shall document the construction of the passive gas vent system and final cap restoration in the certification report.
14. In accordance with OAC Rule 3745-27-13(M), this authorization shall terminate three (3) years after its effective date if Elyria has not begun the activities authorized herein.
15. The director may revoke this authorization if Elyria violates, or is likely to violate, any applicable law or if the continued implementation of the approved plans causes a threat to human health or safety or the environment.
16. Nothing in this letter shall be construed to authorize any waiver from the requirements of any applicable state solid waste laws or regulations. This letter shall not be interpreted to release Elyria from responsibility under ORC Chapters 3704, 3714, 3734, or 6111; under the Federal Clean Water Act, the Resource Conservation and Recovery Act, the Toxic Substances Control Act, or the Comprehensive Environmental Response, Compensation, and Liability Act; or from other applicable requirements for remedying conditions resulting from any release of contaminants to the environment.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission (Commission) pursuant to ORC Section 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director within three (3) days of filing with the Commission. An appeal may be filed with the Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street
Room 222
Columbus, Ohio 43215

If you have any questions concerning this authorization, please contact John Schmidt of Ohio EPA, NEDO at (330) 963-1175.

Sincerely,

John Hart, P.E., City Engineer
City of Elyria
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Joseph P. Koncelik
Director

JP/MM/kd

cc: Murat Tukul, DSIWM-NEDO
Scott Hester, DSIWM-CO
Dave Oakes, City of Elyria Department of Health
Frank Pempek, Metcalf & Eddy, Inc.