



State of Ohio Environmental Protection Agency

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Mr. Thomas Lescher
City of Avon Lake
150 Avon Belden Road
Avon Lake, Ohio 44012

**RE: Avon Lake Municipal Landfill, Lorain County
Ohio Administrative Code (OAC) Rule 3745-27-13 Authorization**

Dear Mr. Lescher:

On February 27, 2004, the Ohio Environmental Protection Agency (Ohio EPA), Division of Solid and Infectious Waste Management (DSIWM), Northeast District Office (NEDO) received a request, dated February 2004, from CT Consultants on behalf of the City of Avon Lake (City), pursuant to OAC Rule 3745-27-13, to engage in filling, grading, excavating, building, drilling, or mining activities in order to conduct composting operations at the closed Avon Lake Municipal Landfill (Facility) located in Lorain County. Ohio EPA, NEDO received an addendum to the request on October 22, 2004.

OAC Rule 3745-27-13 requires authorization from the director of Ohio EPA before engaging in filling, grading, excavating, building, drilling, or mining on land where a solid waste facility was operated. Specifically, the City is proposing to conduct Class IV composting on the existing landfill cap. Currently, the area immediately west of the landfill is being used by the City for Class IV composting, so the proposed composting activities will be performed in conjunction with the existing operations. The material to be composted will be placed in a windrow composting formation. No solid waste from the landfill facility or existing cover soil materials will be removed during the proposed activities. The City will also construct engineering controls, including a containment area. Any leachate produced by the composting operation will either be recirculated into the windrows by pumping or removed by a pump truck and transferred to a wastewater treatment plant.

Based upon review of the February 27, 2004, document, as amended on October 22, 2004, I have determined, pursuant to OAC Rule 3745-27-13, that the proposed activities will not result in a 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, the City is hereby authorized to perform the activities outlined in this letter in accordance with submitted and approved plans, specifications, and information.

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

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

CONDITIONS

1. This approval grants authorization to perform activities at the Facility in accordance with the February 27, 2004, request, as amended on October 22, 2004, only. 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 seventy-two (72) hours prior to the start of activities associated with this authorization, the City shall submit written notification, which specifies the anticipated date of commencement, to Ohio EPA, NEDO and the Lorain 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 run-off, 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" screen, with no more than two (2) particles from a 50 cubic foot sample retained on a 6" screen;
 2. At least 95% of the material, by weight, shall pass a 3" screen;
 3. At least 70% of the material, by weight, shall pass the #10 sieve;

4. The material that passes the #10 sieve (sand, silt, and clay fractions) shall be classified using the USDA textural classification chart as loam, sandyloam, 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 times per acre per lift. The sampling rate for other methods must 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. The City shall accept only source-separated yard waste and source-separated bulking agents, as defined in OAC Rule 3745-27-01, at the Facility. These materials shall only be accepted for composting.

8. The City shall maintain compliance with the requirements of OAC Rules 3734-27-40, 3745-27-41, 3745-27-45, and 3745-27-47 for the Avon Lake Class IV Composting Facility.

9. All composting activities shall follow methods (e.g., aerated static piles, windrows) that result in controlled biological decomposition under aerobic conditions. Yard wastes (e.g., leaves and grass clippings) shall not be placed in static piles. Yard wastes and bulking agents shall be stored under conditions that minimize the production of odor or leachate.

10. The City shall control drainage at the Facility to prevent any ponding or leachate run-off from the site. The City shall divert surface water drainage away from the material placement area.

11. The City shall contain any leachate produced from composting operations for reintroduction into the composting process or for transportation and discharge to an approved treatment facility.

12. The City shall conduct operations at the Facility in a manner that does not result in the generation and/or off-site migration of objectionable odors. If Facility operations result in the production and/or off-site migration of objectionable odors, the City shall initiate effective odor control measures as deemed necessary by the Lorain City Health Department or Ohio EPA. If Ohio EPA determines that objectionable odors continue to be generated at the Facility and/or migrate off-site, then permission to conduct composting activities at the Facility may be revoked upon written

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notification from the director of Ohio EPA. Immediately upon such revocation, the City shall cease composting activities at the Facility.

13. Nothing in this letter shall be construed to authorize any waiver from any requirements of applicable state solid waste laws or regulations. This letter shall not be interpreted to release the City from responsibility under Ohio Revised Code (ORC) Chapters 3704, 3714, 3734, or 6111; under the Federal Clean Water Act, the Resource Conservation and Recovery Act, 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.

14. The director may revoke this authorization if the City 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.

You are hereby notified that this action of the director of Ohio EPA 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 after 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 regarding this authorization, please contact Clarissa Gereby of Ohio EPA, NEDO at (330) 963-1224.

Sincerely,

Joseph P. Koncelik
Director

JPK/sw

cc: Murat Tukel, DSIWM-NEDO
Scott Hester, DSIWM-CO
Jack Kurowski, Lorain City Health Department