



State of Ohio Environmental Protection Agency

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Columbus, Ohio 43216-1049

Patrick Nortz, Environmental Manager
Browning-Ferris Industries of Ohio, Inc.
c/o BFI - Lorain County II Landfill
43502 Oberlin-Elyria Road
Oberlin, OH 44074

**Re: BFIO Willow Creek Landfill, Atwater Twp., Portage County
Ohio Administrative Code (OAC) Rule 3745-27-13 Authorization**

Dear Mr. Nortz:

On January 26, 2004, the Ohio Environmental Protection Agency (Ohio EPA) received a document titled *Rule 13 Application per OAC 3745-27-13, Leachate Toe Drain Installation and Leachate Storage System, Browning-Ferris Industries of Ohio, Inc., Willow Creek Landfill, Atwater, Ohio, January 2004*, pursuant to Ohio Administrative Code (OAC) Rule 3745-27-13. Revisions to the document dated June 25, 2004, and July 22, 2004, were received June 29, 2004, and July 26, 2004. The documents were submitted by Burgess & Niple Engineers (B&N) on behalf of Browning Ferris Industries of Ohio (BFIO). The BFI-Willowcreek Landfill (Facility) is a closed municipal solid waste disposal facility located at 1187 Alliance Road (SR 225), Atwater Township, Portage County. The landfill is owned and was last operated by BFIO. The Facility ceased operations on October 31, 1993, and completed closure on October 23, 1998.

The request specifically proposes to install a perimeter leachate collection system to collect leachate from the unlined facility and condensate from an existing gas extraction and control system. On-site leachate storage systems will be expanded. Construction activities will involve final cover disturbance and restoration of the 1976 cap.

Based upon a review of the document and subsequent revisions submitted to Ohio EPA, I have determined 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, BFIO is hereby authorized to perform the activities outlined in this letter in accordance with the submitted and approved plans, specifications, and information.

Bob Taft, Governor
Jennette Bradley, Lieutenant Governor
Christopher Jones, Director

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

CONDITIONS

1. This approval grants authorization to conduct activities at the BFI-Willowcreek Landfill, 1187 Alliance Road (SR 225), Atwater Township, Portage County in accordance with the document titled *Rule 13 Application per OAC 3745-27-13, Leachate Toe Drain Installation and Leachate Storage System, Browning-Ferris Industries of Ohio, Inc., WillowCreek Landfill, Atwater, Ohio, January 2004*, revised June 25, 2004, and July 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. Ohio EPA, Northeast District Office (NEDO), Division of Solid and Infectious Waste Management (DSIWM) and the Portage County Health Department (PCHD) shall receive written notice not later than 72 hours prior to commencement of the proposed activities.
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 activities undertaken shall not create a nuisance and shall not adversely affect the public safety or health or the environment.
5. All solid waste to be removed from the facility shall be containerized and securely stored until the materials are properly characterized and disposed in accordance with Chapter 3734 of the Ohio Revised Code (ORC) and the regulations promulgated thereunder.
6. 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.
7. If excavation occurs outside the limits of waste placement at the Facility, BFIO shall not use material consisting of solid or hazardous waste to backfill the excavated areas.

8. Any wastes that are suspected or known to be hazardous and that are removed from the limits of waste placement during the proposed activities shall be stored in accordance with ORC Chapter 3734 until they are properly characterized and treated or disposed. Any liquid wastes released during the proposed activities shall also be stored in accordance with ORC Chapter 3734 until they are properly characterized and treated or disposed.
9. All liquids, semi-solids, industrial wastes, and other wastes regulated by ORC Chapter 6111 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.
10. Prior to any removal of any waste or contaminated soil from the Facility, BFIO shall submit copies of sample analysis results, the treatment or disposal method selected, and a copy of a letter of acceptance from the disposal facility to Ohio EPA DSIWM, NEDO, pursuant to OAC Rule 3745-27-13(H)(4).
11. Not later than 30 days after the completion of any sampling activities, BFIO shall submit any analytical results to Ohio EPA DSIWM, NEDO.
12. BFIO shall take measures to minimize the possible increase in subsurface infiltration due to disturbance of the waste units and other authorized activities.
13. For the purposes of erosion control during all phases of construction and investigation of the landfill, BFIO shall use best management practices and standards as specified in the manual titled Rainwater and Land Development prepared by the Ohio Department of Natural Resources, Division of Soil and Water Conservation.
14. BFIO shall take measures to control fugitive dust and other air emissions due to disturbance of the waste units and other authorized activities.
15. This authorization shall not constitute approval of the detail engineering plans for any purpose other than construction of a perimeter leachate collection system, leachate storage system, and cap restoration.
16. Any portion of the landfill where the final cover system has been removed by activities authorized by this approval shall have a final cover system re-established in accordance with the following:
 - a. Soils utilized for the final cover system shall be pre-qualified not later than seven days prior to use to ensure they meet the requirements of this condition.

- b. Capping materials shall be placed only when temperatures are 40 degrees F or above, unless a specific QA/QC plan which includes cold weather procedures is submitted to, and concurred by, Ohio EPA.
- c. Information documenting construction activities, including all laboratory and/or field data, shall be submitted to Ohio EPA, DSIWM, NEDO not later than 30 days following completion of authorized activities. The information shall document that material specifications have been met, that the cap has been constructed to adequate thickness, and that appropriate testing has been performed at the minimum specified frequencies.
- d. The following tests shall be performed on representative soil samples at least once for every 3,000 cubic yards of material intended for use:
 - i. On a representative sample of not less than fifty (50) cubic feet, screening with both a 10-inch and 6-inch screen.
 - ii. Sieve and hydrometer testing (ASTM D-422), for particle size and gradation; and
 - iii. Moisture/density relationship, including establishment of maximum dry density at optimum moisture content using either Standard Proctor (ASTM D-698) or Modified Proctor (ASTM D-1557) method.
 - iv. Permeability, using either laboratory permeability testing (ASTM D-5084) or field permeability testing (ASTM D-6391, D-3385, or D-5093).
- e. Soil particles used in construction of the final cover system shall meet the following specifications:
 - i. For the sample screened in accordance with condition Number 16.d.i., above, 100 percent of the particles shall pass through a 10-inch screen, with not more than two (2) particles retained on the 6-inch screen;
 - ii. At least 95 percent shall pass a three-inch screen;
 - iii. At least 70 percent shall pass a #10 sieve, and shall be classified using the USDA textural classification chart, and shall be a soil type specified in OAC 3745-27-09(F)(4), as effective July 29, 1976, or an acceptable alternative soil type as allowed by the referenced rule.

- f. The final cover soil shall be constructed with a lift thickness not greater than eight inches. Clod size shall not exceed one half the designated lift thickness.
- g. Minimum compaction effort shall be at least 95 percent of maximum dry density utilizing a Standard Proctor (ASTM D-698) test or 90 percent of maximum dry density utilizing a Modified Proctor (ASTM D-1557) test. Compaction shall be monitored utilizing one of the following:
 - i. Nuclear densimeter (ASTM D-2922) at a minimum frequency of five times per acre per lift, or;
 - ii. Sand cone (ASTM D-1556) at a minimum frequency of three times per acre per lift, or;
 - iii. Rubber balloon (ASTM D-2167) at a minimum frequency of three times per acre per lift.
- h. Upon completion of construction, the permeability of the installed final cover system shall be determined through one of the following techniques:
 - i. Field permeability testing (ASTM D-6391, D-3385, or D-5093) at a minimum frequency of one test per 10,000 cubic yards of installed final cover material. Maximum allowable permeability utilizing these methods is 1×10^{-5} cm/s.
 - ii. Laboratory permeability testing (ASTM D-5084) utilizing ShelbyTM tubes or soil blocks to obtain an undisturbed representative sample at a minimum frequency of one test per 10,000 cubic yards of installed final cover material. Maximum allowable permeability utilizing these methods is 1×10^{-6} cm/s.
- i. Any penetrations into the reconstructed final cover system shall be repaired using bentonite or a soil-bentonite mixture.
- j. A dense healthy vegetation layer shall be established and the final cover system shall be stabilized in accordance with best management practices until the vegetation layer is established. The reconstructed final cover system and all disturbed areas shall be re-seeded as many times as necessary to establish a healthy vegetation layer.

17. Not later than 30 days after the effective date of this authorization, BFIO shall revise its final closure and post-closure care cost estimates to reflect the collection, management, and disposal of leachate and maintenance and operation of the leachate collection, management and control system throughout the post-closure care period of this facility. Upon written concurrence of the estimates by Ohio EPA, BFIO shall execute and fund revised financial assurance instruments reflecting these changes.
18. Not later than sixty (60) days after completing the activities authorized through this approval, BFIO shall submit to Ohio EPA a certification report in accordance with OAC Rule 3745-27-13(H)(10).
19. In accordance with OAC Rule 3745-27-13(M), this authorization shall terminate three (3) years after its effective date if BFIO has not begun the activities authorized herein.
20. The director may revoke this authorization if BFIO 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.
21. Nothing in this letter shall be construed to authorize any waiver from any requirements of applicable state solid waste laws or regulations. This authorization shall not be interpreted to release BFIO or others from responsibility under Ohio Revised Code 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 from the facility to the environment.

END OF CONDITIONS

You are hereby notified that this action of the Director of Environmental Protection 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. The appeal must be filed with the Commission within 30 days after notice of the director's action. A copy of the appeal shall be served on the director within three days of filing with the Commission. An appeal may be filed with the Commission at the following address:

Patrick Nortz, Environmental Manager
Browning-Ferris Industries of Ohio, Inc.
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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's NEDO at (330) 963-1175.

Sincerely,

Patrick Nortz, Environmental Manager
Browning-Ferris Industries of Ohio, Inc.
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Christopher Jones
Director

CJ/KM/sw

cc: Scott Hester, DSIWM-CO
Murat Tukul, DSIWM-NEDO
Duwayne Porter, Portage County Health Department
Curt Gray, Burgess & Niple Engineers