

OHIO ENVIRONMENTAL PROTECTION AGENCY
PERMIT-TO-INSTALL

Application Number: 06-08263
Application Received: December 22, 2006
Permit Fee: \$80,000.00
Permit Fee Balance: \$79,600.00

Applicant: FirstEnergy Generation Corporation
Address: 1501 Commerce Drive
Stow, Ohio 44224

Name: Hollow Rock Facility

Location: The facility is located approximately three miles west of the W.H. Sammis Plant, which is located near Stratton, Ohio. The facility is within Knox Township, Jefferson County.

Permit: New Residual Solid Waste Facility

Issuance Date:

Effective Date:

The above-named entity is hereby issued a permit-to-install (permit) for the above-described source pursuant to Ohio Administrative Code (OAC) Rule 3745-27-02. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed and/or modified in accordance with the plans, specifications, and/or information accompanying the permit application, the above-described source of environmental pollutants will operate in compliance with applicable state and federal laws, rules, and regulations, and does not constitute expressed or implied assurances that, if constructed and/or modified in accordance with those plans, specifications, and/or information accompanying the permit application, the above-described source of environmental pollutants will be granted the necessary operating permits and/or licenses. This permit is issued subject to the attached conditions which are hereby incorporated and made a part hereof.

Ohio Environmental Protection Agency

Chris Korleski, Director

PERMIT SUMMARY

This is a **FINAL** permit (PTI Number 06-08263) which authorizes construction of Hollow Rock Facility (Facility), a proposed new residual solid waste landfill in Jefferson County. FirstEnergy Generation Corporation (FirstEnergy) is the applicant for the permit to install.

FirstEnergy proposes to construct a 141.6-acre disposal area which will have a capacity of approximately 26.5 million cubic yards. The projected total annual quantity of waste to be disposed of at the Facility is 1.2 million tons. The Facility's anticipated life is 21.5 years. The Facility's design includes the following: a composite liner system which consists of an eighteen-inch recompacted soil liner (RSL), a geosynthetic clay liner (GCL), and a 60 mil high density polyethylene (HDPE) geomembrane; a leachate collection system; a surface water management system; a ground water monitoring system; and a final closure cap system. The permit also incorporates 15 years of post-closure care and financial assurance for closure and post-closure care.

This permit grants FirstEnergy exemptions from the following rules: OAC Rule 3745-30-07(C)(3)(f)(iv), which requires that leachate pipelines be double-cased outside of the limits of solid waste placement; OAC Rule 3745-30-07(C)(4)(d)(iv), which requires that a sedimentation pond be lined; and OAC Rule 3745-30-06(H)(2)(e)(i), which requires five-foot isolation distance from the bottom of the RSL to the uppermost aquifer system.

This summary is provided solely for informational purposes and does not constitute a part of, or otherwise affect, the attached permit.

PERMIT CONDITIONS

1. The director of the Ohio Environmental Protection Agency (Ohio EPA), or an authorized representative, may enter upon the premises of the above-named applicant (permittee) at any reasonable time during construction and operation for the purpose of making inspections, conducting tests, or examining records or reports pertaining to the construction, modification, or installation of the above-described source of environmental pollutants (residual solid waste disposal facility).
2. The proposed facility shall be constructed in strict accordance with the plans, specifications, and information submitted as part of the permit application. There may be no deviation from the approved plans without the express, written approval of Ohio EPA. Any deviation from the approved plans or the permit conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facility will operate in compliance with all Ohio laws and regulations. Additional landfill components shall

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- be installed upon orders of Ohio EPA if the proposed residual solid waste disposal facility is inadequate or cannot meet applicable standards.
3. Issuance of this permit approval does not relieve the permittee of the duty to comply with all applicable federal, state, and local laws, ordinances, and regulations.
 4. This permit shall apply only to those facilities shown on the plans submitted as part of PTI Application Number 06-08263 as received on December 22, 2006, with subsequent revisions received on the following dates: May 24, 2007; October 9, 2007; and November 23, 2007.
 5. This permit may be modified, or alternatively revoked and reissued, to comply with any revisions to OAC Chapter 3745-30 applicable to this residual solid waste disposal facility.
 6. The permittee shall provide for the proper maintenance and operation of the residual solid waste disposal facility in accordance with the provisions of OAC Chapter 3745-30.
 7. Nothing in this permit shall be construed to authorize any waiver from the requirements of any applicable federal or state laws or regulations except as specified herein. This permit shall not be interpreted to release the permittee 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, 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.
 8. This permit does not authorize the acceptance of any hazardous or infectious wastes.
 9. This permit does not authorize the acceptance of any asbestos or asbestos-containing waste material that is subject to the provisions of NESHAP, 40 CFR Part 61, Subpart M. No such asbestos or asbestos-containing waste material may be accepted without first obtaining the necessary permits from Ohio EPA.
 10. Not later than seven days prior to starting any construction authorized by this permit, the permittee shall submit to Ohio EPA, Southeast District Office (SEDO) and the Jefferson County Health Department written notification of the anticipated construction start date so that construction of this Facility can be routinely inspected by Ohio EPA, SEDO and the Jefferson County Health Department before the Facility is placed into operation.

11. The permittee shall perform the following activities during construction and operation of the Facility in accordance with the cited provisions of OAC Chapter 3745-30 as follows:
 - a. The test pad required by OAC Rule 3745-30-07(F)(1) shall be constructed, as necessary, and a report containing the test results shall be submitted to Ohio EPA, SEDO not later than 14 days prior to the initial construction date of the landfill component that the test pad models.
 - b. The pre-construction tests required by OAC Rule 3745-30-07(D) shall be performed and the test results submitted to Ohio EPA, SEDO not later than seven days prior to the intended use of the materials in construction.
12. The recompacted soil barrier of the final cap system shall be a minimum of two feet thick, constructed in accordance with the specifications in OAC Rules 3745-30-07(C)(1)(a) to (C)(1)(e), and modeled by the construction of a test pad in accordance with OAC Rules 3745-30-07(F)(1) to (F)(3).
13. Not later than 90 days after issuance of this permit, the permittee shall submit to Ohio EPA a work plan to provide remediation of the acid mine drainage seeps located immediately adjacent to the landfill footprint as identified within the PTI Application's Narrative Section 8.6 or for alternative acid mine drainage remediation projects within the Yellow Creek watershed. Upon notice of acceptance by Ohio EPA, the acid mine drainage seep remediation work plan shall be implemented during the construction of Phase I of the landfill.
14. Throughout the construction of all phases of the landfill, the permittee shall provide enhanced management of excess spoil materials from the development of the Hollow Rock Facility to improve reclamation and aid the mitigation of acid mine drainage resulting from former mining activities as identified within the PTI Application's Narrative Section 8.5. Each year, as part of the Facility's annual operational report submission pursuant to OAC Rule 3745-30-14(M), the permittee shall submit a reclamation work plan for the management of excess spoil materials for the current calendar year's construction and reclamation activities. Implementation of the annual reclamation work plan for spoil materials management shall be performed in association with the phased development of the landfill and the generation of excess spoil materials.

15. The permittee shall provide for the following inspections and facility maintenance:
 - a. The permittee shall provide for daily inspection of the disposal facility and completion of the Residual Solid Waste Landfill Facility Inspection Checklist. Written results of the inspections, including any corrective measures employed, shall be made available to Ohio EPA or the Jefferson County Health Department upon request.
 - b. Surface water control structures, including sedimentation ponds, sedimentation pond discharge structures, pipes, ditches, and culverts, shall be inspected at least monthly for erosion, clogging, or failure, and prompt corrective action shall be taken, if necessary. A log documenting inspection results, any corrective measures taken, any water quality samples taken, and the date and weather conditions during any water quality sampling shall be maintained on site and submitted to Ohio EPA, SEDO or the Jefferson County Health Department upon request.
16. The permittee shall execute and fund a financial assurance instrument meeting the requirements of OAC Rules 3745-27-15, 3745-27-16, and 3745-27-17 prior to waste acceptance.
17. Pursuant to ORC Sections 3745.11(Q) and (V), payment of the solid waste permit to install fee balance, in the amount of \$79,600.00 payable to "Treasurer, State of Ohio," shall be submitted to Ohio EPA, Attn: Fiscal Administration, P.O. Box 1049, Columbus, Ohio 43216-1049. The fee balance shall be submitted within 30 days of the effective date of this permit. Failure to timely submit the required permit fee balance will result in assessment of late penalties in accordance with ORC Sections 3745.11(Q) and (V).

END OF PERMIT CONDITIONS

ORC Section 3734.02(G) Exemption from OAC Rule 3745-30-07(C)(3)(f)(iv)

The permittee has requested an exemption from OAC Rule 3745-30-07(C)(3)(f)(iv), which requires that leachate pipelines be double-cased outside of the limits of solid waste placement.

All leachate force main pipelines at the Facility are to be six-inch diameter, SDR-11, solid (non-perforated) HDPE pipe with segments joined by butt-welding or prefabricated couplers. At the time of installation, all pipelines will be pressure tested and visually examined prior to backfilling to verify no leakage. The permit application calculations demonstrate adequate factors of safety based on pipe strength calculations. The permittee

has also predicted that the leachate will contain relatively low concentrations of pollutants. The proposed leachate pipelines will adequately contain and convey leachate outside the limits of residual solid waste placement to the leachate storage facility on-site.

Pursuant to ORC Section 3734.02(G), the director may, by order, exempt any person generating, collecting, storing, treating, disposing of, or transporting solid wastes, or processing solid wastes that consist of scrap tires, in such quantities or under such circumstances that, in the determination of the director, are unlikely to adversely affect the public health or safety or the environment from any requirement to obtain a registration certificate, permit, or license or comply with other requirements of ORC Chapter 3734.

For the reasons noted above, the proposed leachate force main pipelines will adequately contain and convey leachate outside the limits of solid waste placement, and granting an exemption from OAC Rule 3745-30-07(C)(3)(f)(iv) is unlikely to adversely affect the public health or safety or the environment. Therefore, pursuant to ORC Section 3734.02(G), the permittee is hereby granted an exemption from OAC Rule 3745-30-07(C)(3)(f)(iv), which requires that leachate pipelines be double-cased outside of the limits of solid waste placement. This exemption shall remain in effect throughout the effective period of this permit unless otherwise revoked.

ORC Section 3734.02(G) Exemption from OAC Rule 3745-30-07(C)(4)(d)(iv)

The permittee has requested an exemption from OAC Rule 3745-30-07(C)(4)(d)(iv), which requires that a sedimentation pond be lined.

This sedimentation pond liner requirement is stricter than the similar requirement in the municipal solid waste rules. Specifically, OAC Rule 3745-27-08 does not require a sedimentation pond to be lined at municipal solid waste landfills. There are five proposed sedimentation ponds for the Facility. Except for the lack of a constructed liner, their designs meet all other criteria specified in OAC Rule 3745-30-07(C)(4)(d) for storage volume and spillway design. The ponds are to retain only non-contact storm water runoff. The ponds are not to receive any leachate or storm water that comes in contact with waste. The outfalls of the sedimentation ponds will be monitored through an NPDES discharge permit.

Pursuant to ORC Section 3734.02(G), the director may, by order, exempt any person generating, collecting, storing, treating, disposing of, or transporting solid wastes, or processing solid wastes that consist of scrap tires, in such quantities or under such circumstances that, in the determination of the director, are unlikely to adversely affect the public health or safety or the environment from any requirement to obtain a registration certificate, permit, or license or comply with other requirements of ORC Chapter 3734.

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Because the sedimentation ponds are designed to meet all storage volume and spillway design requirements, and because the sedimentation ponds are to retain only storm water runoff that does not contact waste, granting an exemption from OAC Rule 3745-30-07(C)(4)(d)(iv) is unlikely to adversely affect the public health or safety or the environment. Therefore, pursuant to ORC Section 3734.02(G), the permittee is hereby granted an exemption from OAC Rule 3745-30-07(C)(4)(d)(iv), which requires that a sedimentation pond be lined. This exemption shall remain in effect throughout the effective period of this permit unless otherwise revoked.

ORC Section 3734.02(G) Exemption from OAC Rule 3745-30-06(H)(2)(e)(i)

The permittee has requested an exemption from OAC Rule 3745-30-06(H)(2)(e)(i), which requires that the isolation distance between the uppermost aquifer system and the bottom of the recompacted soil liner shall not be less than five feet of in-situ geologic material or added geologic material (AGM) constructed in accordance with OAC Rule 3745-30-07. The Facility is proposed to be constructed within the mine spoil, utilized to reclaim the mine, which constitutes the uppermost aquifer system at the site.

The proposed site was previously strip mined for coal and then was reclaimed by regrading the spoil, spreading a thin veneer of soil, and re-establishing a vegetative cover. The Facility's hydrogeologic site investigation has determined that all of the mine spoil is part of the uppermost aquifer system. Therefore, five feet of added geologic material (AGM) is required to be installed above the mine spoil and below the recompacted soil liner (RSL) according to OAC Rule 3745-30-06(H)(2)(e)(i). The excavation plan for the facility shows that at least twenty feet of unsaturated mine spoil will remain between the bottom of the liner system and the existing water table. As an alternative to constructing the five feet of AGM, the permittee has proposed to enhance the Facility design and construction and testing of the liner system above the current rule requirements in OAC Rule 3745-30-07. The permittee has also proposed to perform acid mine drainage seep remediation and enhanced spoil materials management for reclamation.

Pursuant to ORC Section 3734.02(G), the director may, by order, exempt any person generating, collecting, storing, treating, disposing of, or transporting solid wastes, or processing solid wastes that consist of scrap tires, in such quantities or under such circumstances that, in the determination of the director, are unlikely to adversely affect the public health or safety or the environment from any requirement to obtain a registration certificate, permit, or license or comply with other requirements of ORC Chapter 3734.

Because the enhanced design of the liner system and enhanced construction and testing requirements will provide additional protection above the uppermost aquifer system, and because enhanced spoil materials management will aid the mitigation of acid mine drainage and provide improvements to ground and surface water quality, granting an

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exemption from OAC Rule 3745-30-06(H)(2)(e)(i) is unlikely to adversely affect the public health or safety or the environment. In addition, the permittee has proposed to perform remediation of acid mine drainage seeps. Therefore, pursuant to ORC Section 3734.02(G), the permittee is hereby granted an exemption from OAC Rule 3745-30-06(H)(2)(e)(i), which requires that the isolation distance between the uppermost aquifer system and the recompacted soil liner shall not be less than five feet of in-situ or added geologic material. This exemption shall remain in effect throughout the effective period of this permit unless otherwise revoked.

END OF PERMIT EXEMPTIONS