

POST CLOSURE PLAN

CCR 257.104(d)

Gavin Residual Waste Landfill

Gavin Plant
Cheshire, Ohio

October, 2016

Prepared for: AEP Generation Resources – Gavin Plant

Cheshire, Ohio

Prepared by: American Electric Power Service Corporation

1 Riverside Plaza


Columbus, OH 43215

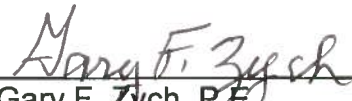


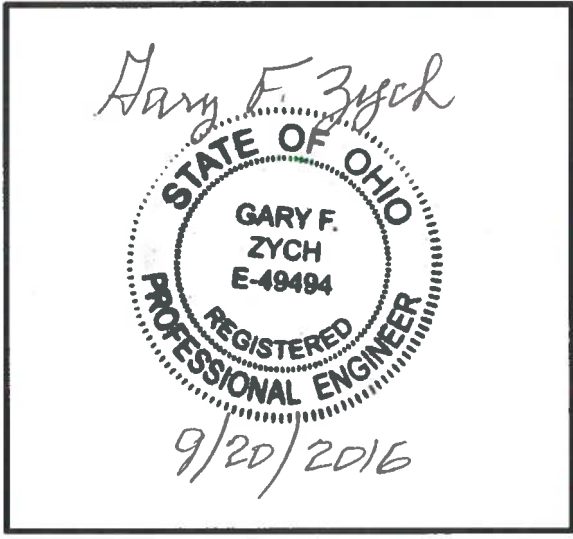
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POST CLOSURE PLAN
CCR 257.104(d)
GAVIN PLANT
RESIDUAL WASTE LANDFILL

PREPARED BY  DATE 9-20-16
Shah Baig, P.E.

REVIEWED BY  DATE 9/20/2016
Mohammad Ajlouni, Ph.D., P.E.

APPROVED BY  DATE 9/20/2016
Gary F. Zych, P.E.
Manager – AEP Geotechnical Engineering



I certify to the best of my knowledge, information, and belief that the information contained in this post closure plan meets the requirements of 40 CFR § 257.104

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1.0 OBJECTIVE

This report was prepared by AEP- Geotechnical Engineering Services (GES) section to fulfill requirements of CCR 257.104(d) for Post Closure Plans of CCR units.

2.0 DESCRIPTION OF THE CCR UNIT

The AEP-Generation Resources (GENCO) owns and operates the Gavin Plant Residual Waste Landfill and associated facilities located 1.25 miles northwest of the Gavin Plant at 7397 North State Route 7 in Cheshire, Ohio. The Gavin Plant consists of two 1,300-megawatt (MW) coal combustion units that began operation in 1974 (Unit 1) and 1975 (Unit 2). Coal combustion byproduct waste (residual waste) generated at the plant is currently placed in a 255-acre landfill located northwest of the plant that is expected to reach its capacity in 2016. AEP is currently constructing a lateral and vertical expansion to the existing residual waste landfill under a new Permit-to-Install (PTI).

The new landfill footprint covers approximately 404 acres of the existing landfill, and unreclaimed strip mined areas in three predominant valleys separated by ridges and hilltops. The disposal area or "footprint" of waste within the proposed expansion facility will cover 149 acres beyond the existing landfill.

The landfill is permitted by the Ohio Environmental Protection Agency (Ohio EPA) as a residual solid waste landfill under the following permits.

Landfill	OEPA PTI #
Existing	06-3764
New	06-08447

3.0 DESCRIPTION OF POST CLOSURE PLAN 275.104(d)(1)(i)

[A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed.]

The Gavin Residual Waste Landfill will be closed upon reaching either the life of plant or the life capacity of the facility. The post closure care plan is further discussed in the Ohio EPA approved Plan in Attachment A, with the exception that the post closure care period will be 30 years.

3.1 SECTION 275.104(b)(1)

[Maintaining the integrity and effectiveness of the final cover system including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.]

Inspections are performed for the items noted below. The inspection frequencies are scheduled to properly detect any issues so that repairs can be performed before significant harm occurs.

- Embankment: The entire waste embankment, including top surface and side-slopes, will be inspected for slides, settlement, subsidence, displacement, and cover condition (see below).
- Soil Dike: The soil dike will be inspected for slides, displacement, and erosion.
- Cover: The final cover will be inspected for erosion and for the condition of the vegetated cover, i.e., gaps in vegetation or presence of undesirable trees or brush. The integrity of the cover drainage system will also be inspected.
- Final Cover Surface: The Final Cover surface will be inspected for any ponding of water or flat areas.
- Surface Drainage System: The surface drainage system, including channels, culverts, slope drains, etc., will be inspected for erosion, integrity of channel lining, ponding, and accumulated sediment.
- Leachate Collection Piping: The discharge pipes of the Leachate Collection System at the Leachate Collection Pond will be inspected for clogging or damage. Other exposed portions of the Leachate Collection System including cleanouts will be inspected for damage. Similarly, the Leachate Collection Pond will be inspected for general damage to the pond and perimeter berms, and for accumulation of sediment in the pond.

Maintenance during the post-closure care period will be performed as discussed below, based upon the facility inspections described above.

- Security Control Devices: Any portions of the roadway barricades which might be damaged will be repaired or replaced as necessary.
- Erosion Damage Repair: Any areas exhibiting erosion will be repaired by replacing and compacting the material in-kind to design grade/specifications, and reseeding the area to the specifications. Applications of additional fertilizer, selective herbicides, rodent control measures, etc. will be implemented as necessary. In the selection of fertilizers and herbicides, ensure their use will not impact the groundwater negatively. Follow-up monitoring of the repaired area will be conducted to ascertain the integrity of the repair.
- Settlement, Subsidence, Displacement: Any areas at the closed site exhibiting evidence of settlement, subsidence, or displacement will be examined to determine the cause of the movement. If backfilling or placing additional fill material is needed to maintain the integrity of the closed structure, it will be performed in accordance with the site/closure specifications, including seeding. If the condition reoccurs or persists, or if the severity of the condition initially is judged to warrant it, a detailed investigation of the cause will be performed and remedial action will be performed. Similarly, any areas of the soil dike exhibiting sliding, displacement, or seepage will be investigated. Repairs will be made as necessary. Follow-up monitoring of the area will be performed to ascertain that the problem has been corrected.
- Closure Cap Surface: Any areas that show signs of ponding water or flat contours will be examined and rectified.

- **Surface Water Drainage System:** The channel linings are designed to withstand the design velocities. Maintenance of the surface water drainage system will consist of removing sediment and/or undesirable vegetation from the surface water runoff control system (channels and culverts) as required. Eroded areas will be repaired by back-filling and reseeding according to the specifications. Damage to culverts will be repaired; structure replacement will be performed if needed.
- **Leachate Collection System:** Maintenance of the leachate collection system, collection sump, and leachate pumps will consist of repairing and/or replacing in-kind any damaged or eroded portions of the system and pond, cleaning pipes, and removing leachate and sediment from the collection sump and the Leachate Collection Pond, as needed.

3.1 SECTION 275.104(b)(3)

[Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of §§257.90 through 257.98.]

The groundwater monitoring system will be inspected for the general integrity of the wells, well casings and well protective casings. Any damaged portions of the monitoring wells and/or their protective casings will be replaced in-kind.

Monitoring the groundwater will be in accordance with the groundwater monitoring plan for this facility and in accordance with the requirements of §§257.90 through 257.98.

4.0 POST-CLOSURE CONTACT 275.104 (d)(1)(ii)

[The name, address, telephone number and email address of the person or office to contact about the facility during the post-closure care period.]

The name, address, and telephone number of the person to contact about the Facility during the post-closure period shall be provided upon notice of closure.

5.0 POST-CLOSURE PLANNED USE 275.104 (d)(1)(iii)

[A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the conatainment system, or the function of the monitoring systems unless necessary to comply with the requirements in this subpart...]

The post-closure use of the property will be undisturbed vacant land space. The only activities occurring on the closed CCR unit will be related to the Post-Closure care activities.

ATTACHMENT A

Post Closure Care Plan from approved landfill permit

Final Closure/Post-Closure Plan

OAC 3745-30-05 (C)(9)(d)/OAC 3745-30-09

**FINAL PERMIT-TO-INSTALL APPLICATION
EXPANSION OF THE GENERAL JAMES M. GAVIN PLANT RESIDUAL WASTE
LANDFILL FACILITY**

VOLUME 5

Submitted to

Ohio Environmental Protection Agency

Submitted and Owned by

Ohio Power Company

Cheshire, Ohio

Prepared by

American Electric Power Service Corporation

1 Riverside Plaza, Columbus Ohio 43215

and

Geosyntec Consultants

134 North LaSalle Street, Suite 300

Chicago, Illinois 60602

November 2, 2012



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Appendix B	Supporting Closure and Post-Closure Care Cost Calculations

LIST OF ACRONYMS

EPA	Environmental Protection Agency
HDPE	High Density Polyethylene
PVC	Polyvinyl Chloride
OAC	Ohio Administrative Code
QA/QC	Quality Assurance/Quality Control
RSB	Recompacted Soil Barrier
RSL	Recompacted Soil Liner
RWL	Residual Waste Landfill

1. INTRODUCTION

This residual waste facility Final Closure/Post-Closure Plan presents information for the closure and post-closure operations of the Ohio Power Company's Gavin Plant Residual Waste Landfill (RWL) Facility pursuant to Ohio Administrative Code (OAC) 3745-30-09 and OAC 3745-30-10. Drawings referenced herein are presented in the accompanying Permit-to-Install (PTI) drawing set.

2. FACILITY LOCATION

The Gavin Plant Residual Waste Landfill (RWL) is located approximately 1.25 miles northwest of the Gavin Plant electrical generating facility located near the town of Cheshire in Cheshire Township, Gallia County, Ohio. More specifically, the RWL is located approximately 7,000 feet northwest of the intersection of State Highway 7 and State Highway 554.

3. VARIANCES /EXEMPTIONS

At this time Ohio Power Company and AEP are not requesting any variances or exemptions to the requirements specified in OAC 3745-30-09 or OAC 3745-30-10, for residual waste landfills.

4. FACILITY CONTACTS

Any questions regarding the Gavin Plant RWL during the final closure and post-closure care period should be directed to:

American Electric Power/Ohio Power Company
Land, Environment and Remediation Services Manager
1 Riverside Plaza
Columbus, Ohio 43215
Ph. (614) 716-1266

or

American Electric Power/Ohio Power Company
Gavin Plant
Landfill Operations Manager
7397 North State Route 7
Cheshire, Ohio 45620-0271
Ph. 740-925-3000 ext. 3135

5. PLANS AND DETAIL DRAWINGS

The plans showing the horizontal limits and top and bottom elevations of the waste and the final cover system are shown on Drawings 4F, 4G, and 4H, respectively. Drawings 4I and 4J, the stormwater management plans, show the permanent stormwater run-on and run-off controls including ditches and sedimentation ponds. Detail drawings of the RWL stormwater controls are included on Drawings 7E, 7F and 7G. Detail drawings of the cover system are included on Drawing 7M.

6. STATIC AND SEISMIC STABILITY ANALYSIS

The static and seismic stability analyses for the proposed completed landfill are provided in the *Settlement and Stability Analysis Report* (PTI Application Volume 3).

All factor of safety values calculated exceed the required minimum values of 1.50 for static conditions and 1.00 for seismic conditions, which are provided in OAC 3745-30-07(C)(11)(c) and OAC 3745-30-07(C)(11)(d) respectively, indicating that the proposed RWL is stable with respect to static and seismic conditions.

7. GROUNDWATER MONITORING PLAN

The *Groundwater Monitoring Plan* is included in Volume 5.

8. FINANCIAL ASSURANCE

Ohio Power Company will annually review, adjust and submit final closure and post-closure care cost estimates for the Gavin Plant RWL in accordance with OAC 3745-30-14(E)(14). The corporate guarantee will be used annually to demonstrate financial assurance for final closure and post-closure care. A draft copy of the financial assurance instrument is included in Appendix A.

The placement of final cover soils constitutes the most significant portion of final closure costs. The primary RWL closure components include placement and testing of the recompacted soil barrier (RSB), placement of the vegetative layer and establishing a vegetative cover, installing stormwater controls, and implementing erosion control measures. The final cover system has already been installed over portions of the existing RWL. The remaining portions of the existing and the proposed expansion Gavin Plant RWL will continue to be closed progressively over time as areas are filled to final waste grades.

At any point in time, the majority of the surface of the waste will have received either permanent cover or a temporary cover of six inches of clay soil that would meet the material characteristics of RSB. Therefore, if the landfill were to have to close prematurely, the remaining work would include compaction of the temporary cover to meet RSB criteria, installation of the final 18 inches of RSB or the full 24 inches of RSB, placement of the 12-inch thick vegetative layer and establishing a vegetative cover, installing stormwater controls, and implementing erosion control measures. As such, under normal conditions, the closure plan would involve a minimal amount of final cover system construction to satisfy final closure.

However, as described in the regulations, the closure cost estimate is to be based on the point in the operation life when the extent and manner of the operation would make the closure costs the most expensive. For this worst-case scenario, the phase drawings 6A through 6I were reviewed to identify the anticipated largest closure area. From this, the largest closure area will coincide with Stage 7 of operation. At Stage 7, there will be up to an estimated area of 170 acres needing closure. As summarized in Table 1, the final closure costs for the Gavin Plant RWL are estimated to be \$13,720,000. Supporting cost estimate calculations are included in Appendix B.

Post-closure care activities will begin following closure certification and will continue for 15 years. Post-closure care components will consist primarily of monitoring (groundwater, surface water and leachate) and maintenance (cover system, leachate and surface water control systems, monitoring wells and access controls). As summarized in Table 2, the total post-closure care costs for the Gavin Plant RWL are estimated to be \$6,115,000. Supporting cost estimate calculations are included in Appendix B.

9. CLAY RESOURCES

The primary source of clay for the Gavin Plant RWL closure will originate from on-site borrow areas, which may include re-using the material excavated for subgrade construction, and near-site borrow areas on property owned by AEP. If on-site clay resources do not yield sufficient materials, similar soil conditions exist on other nearby company-owned property. From these sources, it is anticipated that adequate resources will be available to satisfy the needs of the RWL through final closure and the post-closure care period.

The total combined surface area of the Gavin Plant RWL final cover grading plan is approximately 404 acres. Of this, approximately 78 acres of exterior slopes have already been closed (2011), leaving approximately 326 acres that, once filled to final waste grades, will be closed incrementally from now until Stage 7 is reached. This equates to an estimated 630,000 cubic yards of RSB material and 315,000 cubic yards of vegetative cover soil would be required to construct a final cover system of the residual waste landfill over Stage 7.¹

¹ The volume of RSB is calculated as 50% of 170 acres requiring 2 feet of cover plus 50% requiring 1.5 feet of cover because temporary cover equivalent to 0.5 feet of acceptable RSB will be in place for the other ½ of the area that has not received final cover.

10. QUALITY ASSURANCE/QUALITY CONTROL PLAN

The *Quality Assurance and Quality Control Plan* is included in Volume 5. Section 5 of the *Quality Assurance/Quality Control Plan* addresses the material qualification, test pad construction, and material placement specifications to ensure that the cover system is constructed in a manner consistent with the performance standards established in OAC 3745-30.

11. EROSION CONTROL

Erosion and sediment control procedures are detailed on Drawings 4I, Series 6 Drawings, and Drawings 7C, 7D and 7E. Soil erosion and sediment control practices will be implemented pursuant to an approved Stormwater Pollution Prevention Plan (SWP3) and erosion and sediment controls will be maintained until construction is completed and/or the area is stabilized (i.e. vegetation is established).

At the time of closure at Stage 7, all of the permanent conveyances and erosion controls (ditches, downchutes, culverts, ponds, etc.) will have been installed except for the 170 acre area of Stage 7. Supporting stormwater/surface water calculations are included in Volume 4.

12. MANDATORY CLOSURE CONDITIONS/NOTIFICATIONS

Final Closure will be completed in a manner that minimizes the need for maintenance activities. Final Closure will be initiated when one of the following conditions have occurred:

1. Ohio Power Company declares that no more residual waste will be accepted at the facility;
2. The facility's solid waste license has expired and another license has not been applied for;
3. All approved limits of waste placement have been reached;
4. The facility's solid waste license has expired and another license has been applied for and denied as a final action;
5. The facility's solid waste license has been revoked as a final action; or
6. The facility's solid waste license has been suspended as a final action.

Ohio Power Company will provide written notice by certified mail to Ohio EPA, the Gallia County General Health District, and the Gallia-Jackson-Meigs-Vinton Joint Solid Waste District at least ninety (90) days in advance of commencing final closure if initiated by condition numbers 1, 2, or 3 above. Any changes to the information that identifies the facility's contact person will be provided to the Ohio EPA in writing by certified mail at least thirty (30) days prior to commencing final closure. Within seven (7) days of the date that the facility actually ceases to accept waste, written notice by certified mail will be provided to the Ohio EPA, the Gallia-Jackson-Meigs-Vinton Joint Solid Waste District, and the Gallia County General Health District, informing the agency of the actual date.

13. FINAL CLOSURE ACTIVITIES

Final closure activities will begin within seven (7) days of the date that the facility has ceased to accept waste. Final closure activities include:

1. Constructing the final cover system;
2. Establishing vegetative cover;
3. Constructing and maintaining drainage and erosion/sediment controls on top of the cover;
4. Operating and maintaining treatment and monitoring systems;
5. Securing the facility; and
6. Closure certification and deed notation.

The primary closure activity is the placement of the cover system that will consist of a minimum two (2) foot thick low permeable RSB, and twelve (12) inches of soil to support a vegetative cover. The material used to construct the RSB will be qualified, placed and tested in accordance with the approved *Quality Assurance/Quality Control Plan* (Volume 5). The final grades of the completed cover system are shown on Drawing 4H. The benches the cover system will have minimum slopes of three (3) percent to minimize the potential for standing water and maximum slopes of thirty-three (33) percent to promote drainage off of the cover system.

The final cover system will be constructed in a progressive manner. As outer slopes reach final waste grades, the final cover system will be progressively constructed in stages and seeded. Final cover system construction will generally be planned for the summer/early fall months.

Slope drains and benches will be constructed on the cover system and maintained to efficiently collect and convey surface water run-off to storm water ponds. Temporary sediment and erosion control measures will be installed, as necessary, until a dense vegetative cover is established. Surface water control structures will be inspected routinely to monitor erosion or blockage of flow. All permanent benches, ditches and culverts outside of the cover system will have already been constructed.

The security of the RWL will be maintained during the closure period unless the facility is to be used for other purposes as deemed acceptable by the Ohio EPA. Access will be maintained to all active monitoring sites throughout the post-closure care period.

All final closure activities will be completed with one (1) year of the date that the facility ceased accepting waste unless an alternative schedule has been approved by the Ohio EPA. Within ninety (90) days of completing final closure activities, the final closure certification report will be submitted to the Ohio EPA and will include:

1. Documentation on the construction of the final cover system;
2. A topographic map of the closed facility showing the information specified in OAC 3745-30-09(H)(1);
3. Documentation on the groundwater monitoring system;
4. A copy of the plat and deed notation filed with the County Recorder; and
5. Documentation that the facility is protected from unauthorized access.

14. POST-CLOSURE CARE ACTIVITIES

Post-closure care activities will begin upon submittal of the final closure certification and will continue for a period of fifteen (15) years unless shortened or extended in accordance with OAC 3745-30-10(B). Post-closure care activities will include:

1. Continued operation and maintenance of the leachate management system, the stormwater/surface water management system and the groundwater monitoring program;
2. Maintenance of the final cover system;
3. Monitoring for leachate outbreaks and implementing remedial actions as necessary;
4. Fulfilling all inspection, monitoring, and reporting requirements; and
5. Submitting a post-closure care certification.

Inspections of the closed RWL facility will be conducted quarterly throughout the post-closure care period. A written summary of the inspection will be submitted to the Ohio EPA within fifteen (15) days of conducting the inspection. The inspection report will document the nature and extent of any problem areas identified, as well as provide an estimated starting and completion date for required corrective measures to be taken.

The leachate and stormwater/surface water management systems, including piping, ditches, berms, and culverts, will be inspected for erosion, ponding, blockage of flow, sediment accumulation, and other evidence of improper performance. Discharge structures associated with sedimentation basins will also be inspected.

Groundwater monitoring well and pipe locks, casing protectors and surface seals will be visually inspected during each sampling event and any unusual operational problems will be described in the groundwater reports submitted to the Ohio EPA.

The final cover system will be inspected for evidence of ponding, settlement and erosion, as well as damage caused by burrowing animals. Any damaged areas will be repaired by replacing the materials and restoring the site to final grade. If a condition reoccurs or persists, an investigation will be conducted to determine if a more permanent solution is warranted. Any permanent corrective measures that involve revisions to the facility's authorizing documents will be submitted to the Ohio EPA for review.

The condition of the vegetative cover will be evaluated (i.e. thickness, bare spots, invasive woody species) during each inspection. Corrective actions such as reseeded, fertilizing and selective herbicide applications will be implemented as necessary. Maintenance mowing will be conducted as necessary to discourage woody plant growth and to maintain the appearance and health of the vegetation.

In addition to the quarterly inspection reports, the facility will continue to monitor and report stormwater/surface water discharges during the post-closure care period in accordance with the facility's NPDES permit. It is anticipated that groundwater monitoring and reporting will continue on a semiannual basis. An annual report will be submitted containing a summary of the quantity of leachate generated, characteristics of the leachate and treatment received. The annual report will also update post-closure cost estimates.

Upon completion of the post-closure care period, a written certification will be prepared and submitted to the Ohio EPA with supporting documentation that all post-closure care activities have been completed in accordance with OAC 3745-30-10(D). The certification will be signed and sealed by a professional engineer registered in Ohio.

Table 1
Closure Cost Summary

Final Closure/Post-Closure Plan
Permit-to-Install Application
Gavin Plant Residual Waste Landfill Facility

Closure Component	Cost
Cap System Components	\$11,090,000
Permanent Surface Water Structures (Outside of Cap)	\$0
Site Access Control	\$0
Engineering	\$320,000
Subtotal of Closure Cost	\$11,410,000
Administration	10 % of subtotal: \$1,410,000
Certification of Closure	\$30,000
Contingency	10 % of subtotal: \$1,140,000
TOTAL COST OF CLOSURE	\$13,720,000

Table 2
Post-Closure Care Cost Summary

Final Closure/Post-Closure Plan
Permit-to-Install Application
Gavin Plant Residual Waste Landfill Facility

Post-Closure Component	Cost
Ground Water Monitoring	\$35,000
Leachate Monitoring	\$2,000
Surface Water Monitoring	\$2,000
Operation and Maintenance of Leachate Collection/Treatment Systems	\$10,000
Operation, Maintenance and Abandonment of Ground Water Monitoring Wells	\$21,000
Utilities for Operation	\$7,000
Maintenance of Cover System	\$219,000
Operation and Maintenance of Surface Water Management System	\$14,000
Operation and Maintenance of Access Control Structures	\$15,000
Subtotal of Annual Post-Closure Care Costs	\$325,000
Subtotal of 15 Years of Post-Closure Care Costs	\$4,875,000
Administration 10 % of subtotal:	\$ 487,000
Final Certification Upon Completion of Post-Closure Care Period:	\$30,000
Remedial Costs 15 % of subtotal:	\$730,000
TOTAL COST OF POST CLOSURE CARE	\$6,122,000²

² The values in this table were rounded to the nearest \$1,000. Consequently, there will be some small differences for costs and sums of costs that are fractions of \$1,000 that are not seen in the rounded values.

APPENDIX A

DRAFT FINANCIAL ASSURANCE INSTRUMENT



American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

March 29, 2011

Mr. Scott J. Nally
Director
Ohio Environmental Protection Agency
50 West Town St. Suite 700
Columbus, Ohio 43215

Dear Mr. Nally:

In compliance with Paragraphs (G) and (M) of Rule 3745-30-11 of the Ohio Administrative Code (OAC), the following information is enclosed to demonstrate that Ohio Power Company (dba American Electric Power), meets the appropriate financial tests for closure and post-closure care coverage:

1. A signed Financial Officer letter worded as specified in OAC 3745-27-17(F);
2. A copy of the independent certified public accountant's report covering the owner's latest completed fiscal year; and
3. A letter from the owner's independent certified public accountant stating that he has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited year-end financial statements for the most recent fiscal year with the amounts in such financial statements and in connection with that procedure, found them to be in agreement.

Very truly yours,

Kevin D. Mack
Counsel for Ohio Power Company

Enclosures

cc: Thomas Webb/ Dana Sheets
David P. Hoffman, Plant Manager, Gavin Plant



American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

March 28, 2011

Mr. Scott J. Nally
Director
Ohio Environmental Protection Agency
50 West Town St. Suite 700
Columbus, Ohio 43215

**RE: Financial Officer Letter, as specified in Chapter 3745-27
of the Ohio Administrative Code**

Dear Mr. Nally:

I am the chief financial officer of Ohio Power Company (d/b/a American Electric Power), 1 Riverside Plaza, Columbus, Ohio 43215. This letter is in support of use by Ohio Power Company (hereafter referred to as "this company") of the financial test to demonstrate financial assurance, as specified in Chapter 3745-27 of the Administrative Code.

1. This company is the owner or operator of the following facilities for which financial assurance for final closure or post-closure care is demonstrated through the financial test specified in Chapter 3745-27 of the Administrative Code. The current final closure and/or post-closure cost estimates provided for by the test are shown for each facility:

James M. Gavin Plant Residual Waste Landfill, P.O. Box 271, State Route 7, Cheshire, Gallia County, Ohio 45620. Estimated current closure cost for this facility is \$6,758,086 and estimated current cost of post-closure care is \$2,749,658.

2. This company guarantees, through the corporate guarantee specified in Chapter 3745-27 of the Administrative Code, the final closure or post-closure care of the following facilities permitted by subsidiaries of this company: Cardinal Operating Company Cardinal Plant FAR 1 Residual Waste Landfill.

The current cost estimates for the final closure and post-closure care so guaranteed are shown for each facility: Cardinal Plant FAR 1 Residual Waste Landfill, 306 County Road 7E, Brilliant, Ohio 43913. Estimated current final closure cost is \$9,241,488 and estimated present cost of post-closure costs is \$4,922,654

3. This company is the owner or operator of the following facilities for which financial assurance for final closure or, if a disposal facility, post-closure care, is not demonstrated to the Ohio Environmental Protection Agency through the financial test or any other financial assurance mechanism specified in Chapter 3745-27 of the Administrative Code. None

The current final closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: None.

This company is required to file a Form 10-K with the Securities and Exchange Commission (SEC) for the most recent fiscal year.

The fiscal year of this firm ends on December 31. The figures for the following items marked with an asterisk (*) are derived from this company's independently audited, year-end financial statements for the fiscal year ended December 31, 2010.

ALTERNATIVE II

1. Sum of current final closure and post-closure cost estimates (total of all cost estimates shown in the three paragraphs above): \$23,671,886.
2. Current bond rating of most recent issuance of this firm and name of rating service: Standard & Poor's, BBB
Moody's, Baal.
3. Date of issuance of bond: March 10, 2011
4. Date of maturity of bond: July 1, 2014
- 5.* Tangible net worth (if any portion of the final closure and post-closure cost estimates is included in "Total Liabilities" on your firm's financial statements, you may add the amount of that portion to this line):
\$3,168,424,000
- 6.* Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.): Not Applicable.

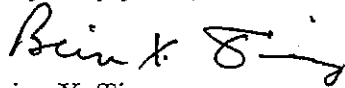
- | | <u>Yes</u> | <u>No</u> |
|---------------------------------------|------------|-----------|
| 7. Is line 5 at least \$10 million | <u>X</u> | |
| 8. Is line 5 at least 6 times line 1? | <u>X</u> | |

Scott Nally
Page 3
March 28, 2011

- 9.* Are at least 90% of firm's assets
located in the U.S.? X
If not, complete line 10.
10. Is line 6 at least 6 times line 1? Not Applicable.

I hereby certify that the wording of this letter is substantially identical to the wording specified in paragraph (F) of Rule 3745-27-17 of the Administrative Code as such rule was constituted on the date shown above.

Very truly yours,



Brian X. Tierney
Chief Financial Officer, Ohio Power Company



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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON APPLYING AGREED-UPON PROCEDURES

To the Board of Directors and Shareholders of
Ohio Power Company
Columbus, Ohio

We have performed the procedures included in the Ohio Administrative Code Rule, 3745-27-15 (K)(3)(c) ("Regulations"), which were agreed to by the Ohio Environmental Protection Agency and Ohio Power Company (the "Company"), solely to assist the specified parties in evaluating the Company's compliance with the financial test option as of December 31, 2010, included in the accompanying letter dated March 28, 2011 from Mr. Brian X. Tierney, Chief Financial Officer of the Company. Management is responsible for the Company's compliance with those requirements. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants, as adopted by the Public Company Accounting Oversight Board (United States). The sufficiency of these procedures is solely the responsibility of the parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

The procedures that we performed and related findings are as follows:

1. We compared the amount included in item 5. under the caption Alternative II in the letter referred to above with the corresponding amount in the audited consolidated financial statements of Ohio Power Company Consolidated as of and for the year ended December 31, 2010, on which we have issued our report dated February 25, 2011, and noted that such amount was in agreement (Officials of the Company have informed us that based on their interpretation of the Regulations, they are not aware of any adjustments required of total equity to compute tangible net worth at December 31, 2010).
2. We compared the information included in items 6. and 9. under the caption Alternative II in the letter referred to above to a similar disclosure contained in the financial statements referred to in procedure 1. and noted such information was in agreement.

We were not engaged to, and did not, perform an examination, the objective of which would be the expression of an opinion on the accompanying letter dated March 28, 2011. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of the Board of Directors and management of the Company and the Ohio Environmental Protection Agency, and is not intended to be and should not be used by anyone other than these specified parties.

Deloitte + Touche LLP

March 28, 2011

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
Ohio Power Company:

We have audited the accompanying consolidated balance sheets of Ohio Power Company Consolidated (the "Company") as of December 31, 2010 and 2009, and the related consolidated statements of income, changes in equity and comprehensive income (loss), and cash flows for each of the three years in the period ended December 31, 2010. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Ohio Power Company Consolidated as of December 31, 2010 and 2009, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2010, in conformity with accounting principles generally accepted in the United States of America.

/s/ Deloitte & Touche LLP

Columbus, Ohio
February 25, 2011

APPENDIX B

**SUPPORTING CLOSURE AND POST-CLOSURE CARE COST
CALCULATIONS**

APPENDIX B

CLOSURE COST SUMMARY

Activity		Cost
I	Ground Water Monitoring Wells	\$ NA
II	Slope and Fill (for premature closure)	\$ NA
III	Cap System Components	\$11,090,000
IV	Permanent Surface Water Structures (Outside of Cap)	0
V	Explosive Gas Extraction/Control System	\$ NA
VI	Explosive Gas Monitoring System	\$ NA
VII	Site Access Control	0
VIII	Engineering	\$320,000
IX	Other Costs	\$ NA
	Subtotal	\$11,410,000
	Administration 10%	\$1,141,000
	Certification of Closure	\$30,000
	Contingency 10%	\$1,141,000
	TOTAL COST OF CLOSURE	\$13,722,000

POST-CLOSURE CARE COST SUMMARY

Activity		Cost
I	Ground Water Monitoring	\$525,000
II	Explosive Gas Migration Monitoring	\$ NA
III	Leachate Monitoring	\$33,000
IV	Surface Water Monitoring	\$33,000
V	Operation and Maintenance of Leachate Collection/Treatment Systems	\$150,000
VI	Operation and Maintenance of Ground Water Monitoring Wells	\$313,000
VII	Operation and Maintenance of Explosive Gas Extraction and/ or Control System	\$ NA
VIII	Operation and Maintenance of Explosive Gas Monitoring System	\$ NA
IX	Utilities for Operation	\$98,000
X	Maintenance of Cover System	\$3,285,000
XI	Operation and Maintenance of Surface Water Management System	\$210,000
XII	Operation and Maintenance of Access Control Structures	\$225,000
	Subtotal	\$4,872,000
	Administration 10 % of subtotal:	\$487,000
	Final Certification Upon Completion of Post-Closure Care Period	\$25,000
	Remedial Costs 15 % of subtotal:	\$731,000
	TOTAL COST OF POST CLOSURE CARE	\$6,115,000

NOTE: Values rounded to nearest \$1,000. Consequently, there can be some rounding differences in additions of rounded numbers.

CLOSURE COST ESTIMATE SUMMARY WORKSHEETS

Premature Closure Scenario: A condition was selected where the surface area of waste without final cover was approximately a maximum was selected. This corresponds to Construction/Operation Stage 7 of the PTI drawings. At this point, there would be approximately 170 acres that has no final cover (there would be some temporary cover and remaining active disposal area).

III	Cap System Components			
	Item Description	Quantity	Unit Cost	Item Cost
	Recompacted Soil Barrier (RSB)			\$7,700,000
	Vegetative Layer			\$3,210,000
	Surface Water Control System (on the cap)			\$60,000
	Perimeter Access Road			\$0
	Mobilization/Demobilization for Earthwork (LS)			\$100,000
	Mobilization/Demobilization for Geosynthetics (LS)			\$6,000
	Temporary Erosion Control: Silt Fences (LF)	\$13,000	\$1	\$13,000
			Subtotal	\$11,090,000

IV	Permanent Surface Water Structures (outside limits of the cap)		
	Item Description		Item Cost
	Surface Water Conveyance Structures		\$0
	Mobilization/Demobilization		\$0
			Subtotal
			\$0

VII	Site Access Control			
	Item Description	Quantity	Unit Cost	Item Cost
	Fencing (LF) (entire facility boundary of Gavin Plant RWL)	0	\$24.50	\$0
	Gate (EA)	0	\$1,350	\$0
	Sign (EA) (every 500 ft)	0	\$100	\$0
			Subtotal	\$0

VIII	Engineering			
	Item Description	Quantity	Unit Cost	Item Cost
	Revisions to Closure Plan Report (LS)	1	\$18,000	\$20,000
	Certified engineering designs and calculations for construction (LS)	1	\$36,000	\$40,000
	Surveying (AC)	170	\$1,500	\$260,000
	Benchmark Installation/Survey (EA)	0	\$1,000	\$0
			Subtotal	\$320,000

Section III: Cap System Components
Detail Worksheets

Recompacted Soil Barrier (RSB)

	Item	Quantity	Unit Cost	Item Cost
	Material (CY) -Note 1	480,000	\$15.00	\$7,200,000
	Excavation (CY)			
	Transportation (CY)			
	Placement (CY)			
	Testing and Qualification (Field)		5%	\$360,000
	Testing and Qualification (Lab)		1%	\$70,000
	Certification (LS)		1%	\$70,000
Subtotal				\$7,700,000

Note 1- Assumes 50% of remaining area has 6 inches of acceptable clay temporary cover.

Vegetative Layer

	Item	Quantity	Unit Cost	Item Cost
	Material (CY)	270,000	\$10.00	\$2,700,000
	Excavation (CY)			
	Transportation (CY)			
	Placement (CY)			
	Seeding, Fertilizer, Mulching (AC)	170.0	\$3,000	\$510,000
Subtotal				\$3,210,000

Surface Water Control Structures (on the cap)

	Item	Quantity	Type	Unit Cost	Item Cost
	Erosion Fabrics (SY)	630,000	Type II	\$1.47	\$0
	Erosion Fabrics (SY)	0	Type III	\$4.02	\$0
	Trapezoidal "Smart-Ditch" Let-Down Channels	900	HDPE	\$72	\$60,000
	48" ϕ Water Conveyence Strutures	0	HDPE	\$90	\$0
Subtotal					\$60,000

Perimeter Access Road

	Item	Quantity	Type	Unit Cost	Item Cost
	AC, Base, and Subbase (LF)	0	-	\$98.83	\$0

Section IV: Permanent Surface Water Control System

Detail Worksheet

Permanent Surface Water Conveyance Structures (outside Limits of Waste Placement)

	Item	Quantity	Type	Unit Cost	Item Cost
	Excavation and Stockpiling Earth Material (CY)	0	-	\$4.50	\$0
	Excavation and Stockpiling Rock Material (CY)	0	-	\$7.00	\$0
	Material (CY)	0	-	\$15.00	\$0
	Excavation (CY)				
	Transportation (CY)				
	Placement (CY)				
	42" Water Conveyance Structures (LF)	0	-	\$68.00	\$0
	36" Water Conveyance Structures (LF)	0	-	\$72.00	\$0
	24" Water Conveyance Structures (LF)	0	-	\$23.00	\$0
	18" Water Conveyance Structures (LF)	0	-	\$17.65	\$0
	Rip Rap (CY)	0	-	\$55.00	\$0
	Erosion Fanrics (SY) (Nonwoven Geotextile)	0		\$7.00	\$0
	Downchute Structures (4'x4'x5')	0	-	\$3,000	\$0
				Subtotal	\$0

POST CLOSURE CARE COST ESTIMATE SUMMARY WORKSHEETS

I	Ground Water Monitoring	
	Item Description	Annual Cost
	Trace Metals (see site-specific alternate parameter list)	\$0
	Volatile and Semivolatile Organic Compounds	\$0
	General Ground Water Quality Parameters (see site-specific alternate parameter list)	\$0
	Alternate Parameter List; site-specific semi-annual parameter list (\$92 x 55 mon points x 2 x 1.2 (for blanks/dups))	\$12,100
	Alternate Parameter List; site-specific annual parameter list (\$171 x 55 mon points x 1 x 1.2 (for blanks/dups))	\$11,300
	Assessment Monitoring Parameters	\$0
	Background Sampling (For new wells only)	\$0
	Collection and Transportation of Samples ((\$70 x 55 samples x 2) + (\$70 x 55 samples x 1))	\$11,600
	Annual Subtotal	\$35,000
	Subtotal (15 years)	\$525,000

III	Leachate Monitoring	
	Item Description	Annual Cost
	Annual Grab Sample 3745-27-19(M)(5) (\$350 x 5)	\$1,800
	Collection and Transportation of Samples (\$70 x 5)	\$400
	Annual Subtotal	\$2,200
	Subtotal (15 years)	\$33,000

IV	Surface Water Monitoring	
	Item Description	Annual Cost
	Sampling per NPDES Permit, Closure Plan, or Other Authorizing Document (\$350 x 6)	\$1,800
	Collection and Transportation of Samples (\$70 x 6)	\$400
	Annual Subtotal	\$2,200
	Subtotal (15 years)	\$33,000

V	Operation and Maintenance of Leachate Collection and Treatment System			
	Item Description	Annual Quantity	Unit Cost	Annual Cost
	Inspection & Flushing of Collection and Conveyance Pipes (LS)	1	\$5,000	\$5,000
	Inspection & Cleaning of Sumps/Manholes (LS)	1	\$2,000	\$2,000
	Repair/Replacement of Sump Pumps, Piping & Instrumentation (LS)	1	\$3,000	\$3,000
	Annual Subtotal			\$10,000
	Subtotal (15 years)			\$150,000

IX	Utilities for Operation			
	Item Description and Supplier	Annual Quantity	Unit Cost	Annual Cost
	Electricity; supplier - AEP (kWh)	50000	\$0.13	\$6,500
	Annual Subtotal			\$6,500
	Subtotal (15 years)			\$97,500

POST CLOSURE CARE COST ESTIMATE SUMMARY WORKSHEETS

VI	Operation and Maintenance of Groundwater Monitoring Wells			
	Item Description	Quantity	Unit Cost	Annual Cost
	Routine Inspection and Maintenance (EVENT)	2	\$2,000	\$4,000
	Repair (LS – AVE/YR)	1	\$4,000	\$4,000
Annual Subtotal				\$8,000
Subtotal(15 years)				\$120,000
	Replacement (Installation, Development, Background Monitoring) (EA)	5	\$18,000	\$90,000
	Abandonment at end of post-closure care period (EA)	43	\$2,400	\$103,200
Subtotal				\$313,200

X	Maintenance of Cover System			
	Item Description	Quantity	Unit Cost	Annual Cost
	Mowing and removal of trees (AC)	831.6 (415.8 AC x 2/yr)	\$40	\$33,000
	Revegetation (fertilizing, mulching, and seeding) (AC)	8.32 (2% of 415.8 AC/yr)	\$3,000	\$25,000
	Cap Repair (leachate outbreak repair, erosion rill repair, differential settlement repair) (CY)	13,416 (1 ft over 2% of 415.8AC/yr)	\$12	\$161,000
Annual Subtotal				\$219,000
Subtotal(15 years)				\$3,285,000

XI	Operation and Maintenance of Surface Water Management System			
	Item Description	Quantity	Unit Cost	Annual Cost
	Inspection & Routine Maintenance (LS)	4	\$1,000	\$4,000
	Conveyance Ditch/Piping Cleaning & Repair (LF)	3000	\$0.25	\$1,000
	Sed. Pond Cleaning and Outlet Cleaning & Repair (LS)	6	\$1,500	\$9,000
Annual Subtotal				\$14,000
Subtotal (15 years)				\$210,000

XII	Operation and Maintenance of Access Control Structures			
	Item Description	Quantity	Unit Cost	Annual Cost
	Inspection & Routine Maintenance (LS)	4	\$1,000	\$4,000
	Fence, Gate and Sign Repair (LS)	1	\$6,000	\$6,000
	Maintenance of Roadways	1	\$5,000	\$5,000
Annual Subtotal				\$15,000
Subtotal (15 years)				\$225,000