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11687 Lebanon Road, Cincinnati OH 45241

October 10, 2016
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Ohio Valley Electric Corporation
3932 U.S. Route 23
P.O. Box 468
Piketon, Ohio 45661

**RE: Closure and Post-Closure Plans
Kyger Creek CCR Landfill
EPA Final Coal Combustion Residuals (CCR) Rule
Kyger Creek Station
Cheshire, Gallia County, Ohio**

1.0 PURPOSE

This letter documents Stantec's certification of the EPA Final CCR Rule closure and post-closure plan for the Kyger Creek Station's CCR Landfill.

2.0 CLOSURE AND POST-CLOSURE PLAN

The closure plan describes the steps necessary to close the CCR unit at any time during the life of the unit, and is subject to the requirements described in 40 CFR 257.102(b). The post-closure plan describes the monitoring and maintenance activities to be performed during the post-closure period of the unit, and is subject to the requirements of 40 CFR 257.104(d).

3.0 SUMMARY OF FINDINGS

The EPA Final CCR Rule closure and post-closure plan is conceptual and subject to the completion of all necessary environmental reviews. It is therefore subject to change at any time. The attached closure and post-closure plan demonstrates compliance with the requirements set forth in 40 CFR 257.102(b) and 257.104(d).

4.0 QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

I, Stan A. Harris, being a Professional Engineer in good standing in the State of Ohio, do hereby certify, to the best of my knowledge, information, and belief:

1. that the information contained in this certification is prepared in accordance with the accepted practice of engineering;
2. that the information contained herein is accurate as of the date of my signature below;



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Kyger Creek CCR Landfill
EPA Final Coal Combustion Residuals (CCR) Rule
Kyger Creek Station
Cheshire, Gallia County, Ohio**

3. that the closure plan for the Kyger Creek Station's CCR Landfill meets the requirements described in 40 CFR 257.102(b); and
4. that the post-closure plan for the Kyger Creek Station's CCR Landfill meets the requirements of 40 CFR 257.104(d).

SIGNATURE



DATE

10/10/16

ADDRESS:

Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, OH 45241

TELEPHONE:

(513) 842-8200

ATTACHMENT: Kyger Creek CCR Landfill Closure and Post-Closure Plans



Closure Plan

CFR 257.102(b)

CCR Landfill

Kyger Creek Station

Cheshire, Ohio

October 2016

Prepared by: Ohio Valley Electric Corporation

3932 U.S. Route 23

Piketon, OH 45661



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1.0 OBJECTIVE

This report has been prepared to fulfill the requirements of 40 CFR 257.102(b) of the Coal Combustion Residuals (CCR) Rule to develop a Closure Plan for the Kyger Creek CCR Landfill.

2.0 DESCRIPTION OF THE CCR UNIT

The Kyger Creek Station is located on the shore of the Ohio River near Cheshire, Ohio, and consists of five coal-fired electric generating units; each nominally rated at 217 megawatts, that began producing electricity in 1955 to support the Department of Energy's (DOE's) Portsmouth Gaseous Diffusion Plant located near Piketon, Ohio. The Kyger Creek CCR Landfill is located approximately two miles west of the Station, at 212 Shaver Road, Cheshire, Ohio. The landfill is owned and operated by the Ohio Valley Electric Corporation, and has been permitted by the Ohio Environmental Protection Agency (OEPA) as a Type III Residual Waste Landfill, Permit-To-Install (PTI) No. 06-08283, to accept CCR generated by the Kyger Creek Station. The landfill's leachate discharge is managed under the site's NPDES permit. The landfill facility is comprised of 98 acres of disposal area, with a capacity of 20.4 million cubic yards, and will be constructed in five phases.

3.0 DESCRIPTION OF CLOSURE PLAN 257.102(b)(1)(i)

[A narrative description of how the CCR unit will be closed in accordance with this section.]

The Kyger Creek Landfill will be closed in accordance with the closure plan that was developed and submitted as part of the permit application process with the OEPA, as well as in accordance with 257.102(d). Once final waste grades are achieved, the landfill surface will be covered with a minimum two-foot thick infiltration layer, with a permeability of no greater than 1×10^{-5} cm/sec, and soil layer that is two and a half feet thick to support native plant growth. A copy of the landfill's approved closure plan is included in Attachment A.

4.0 CLOSURE IN PLACE 257.102(b)(1)(iii)

[If closure of the CCR unit will be accomplished by leaving the CCR in place, a description of the final cover system, designed in accordance with paragraph (d) of this section, and the methods and procedures to be used to install the final cover.]

The final cover system will be designed and constructed in accordance with the requirements of 257.102(d), and consist of a minimum two-foot thick compacted soil layer with a permeability of no greater than 1×10^{-5} cm/sec, which will be placed directly over the graded CCR material. An additional soil layer that is two feet thick, capable of supporting native plant growth will be placed over the compacted soil system. The final cover will be graded to promote surface water runoff, and then seeded and mulched to promote growth of the vegetative cover. The final cover slope will be a minimum of 2% and will convey surface water to a NPDES-permitted outfall.

5.0 CLOSURE PERFORMANCE STANDARDS 257.102(d)(1)

5.1 SECTION 257.102(d)(1)(i)

[Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated.]

The final cover system will cover the CCR material and will have a permeability that is less than or equal to the permeability of the natural subsoils and is no greater than 1×10^{-5} cm/sec.

5.2 SECTION 257.102(d)(1)(ii)

[Preclude the probability of future impoundment of water, sediment, or slurry.]

The CCR landfill will be graded to a minimum slope of 2% to prevent the ponding of surface water. Surface water drainage features consisting of run-on and run-off controls and sedimentation ponds will be installed per the approved design and managed through the sites surface water management plan.

5.3 SECTION 257.102(d)(1)(iii)

[Include the measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period.]

The final cover system will be graded with a minimum slope of 2%. The final configuration of the landfill will meet the stability requirements necessary to prevent the sloughing or movement of the final cover system during the closure and post-closure care period.

5.4 SECTION 257.102(d)(1)(iv)

[Minimize the need for further maintenance of the CCR unit.]

The CCR landfill will be vegetated to prevent erosion. Maintenance of the final cover system will include mowing.

5.5 SECTION 257.102(d)(1)(v)

[Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.]

The landfill will be closed in a time frame consistent with recognized and generally accepted good engineering practices. There is currently no schedule for closure of this CCR unit.

6.0 DRAINING AND STABILIZING OF THE SURFACE IMPOUNDMENT 257.102(d)(2)

[The owner or operator of a CCR surface impoundment or any lateral expansion of a CCR surface impoundment must meet the requirements of paragraph (d)(2)(i) and (ii) of this section prior to installing the final cover system required under paragraph (d)(3) of this section.]

This section is not applicable to a CCR landfill.

7.0 FINAL COVER SYSTEM 257.102(d)(3)

[If a CCR unit is closed by leaving the CCR in place, the owner or operator must install a final cover system that is designed to minimize infiltration and erosion, and at a minimum, meets the requirements of paragraph (d)(3)(i) of this section, or the requirements of the alternative final cover system specified in paragraph (d)(3)(ii) of this section.

The final cover system must be designed and constructed to meet the criteria in paragraphs (d)(3)(i)(A) through (D) of this section. The design of the final cover system must be included in the written closure plan.]

The final cover system will consist of a minimum two and a half-foot thick compacted soil layer, with a permeability of no more than 1×10^{-5} cm/sec, which will be placed directly over the graded CCR material. An additional soil layer that is two feet thick, capable of supporting native plant growth will be placed over the compacted soil system. The final cover will be graded to promote surface water runoff, and then seeded and mulched to promote growth of the vegetative cover. The final cover slope will be a minimum of 2% and to accommodate settling and subsidence and will convey surface water to a NPDES-permitted outfall.

8.0 ESTIMATE OF MAXIMUM CCR VOLUME 257.102(b)(1)(iv)

[An estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit]

The estimated maximum amount of CCR to ever be on-site is approximately 20.4 million cubic yards.

9.0 ESTIMATE OF LARGEST AREA OF CCR REQUIRING COVER 257.102(b)(1)(v)

[An estimate of the largest area of CCR unit ever requiring a final cover]

The CCR landfill will be closed in phases as the landfill reaches final waste elevation grades. The largest area of the CCR unit that may require a final cover is approximately 98 acres.

10.0 CLOSURE SCHEDULE 257.102(b)(1)(vi)

[A schedule for collecting all activities necessary to satisfy the closure criteria in the section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the steps that will be taken to close the CCR unit, including identification of major milestones such as coordinating with and obtaining necessary approvals and permits from other agencies, the dewatering and stabilization of the CCR surface impoundment closure, or installation of the final cover system, and the estimated timeframes to complete each step or phase of the CCR unit closure.]

The landfill will be closed in phases as it reaches final waste placement elevations. The closure schedule will be based on disposal rates into the landfill. At this time, there are currently no projected time frames on when the closure phases will occur. Required notifications and schedules will be submitted to the Ohio EPA in manner in which satisfies this section.

Attachment A

FINAL CLOSURE/POST-CLOSURE PLAN

**FOR THE:
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
GALLIA COUNTY, CHESHIRE, OHIO**

**PREPARED FOR:
AMERICAN ELECTRIC POWER
1 RIVERSIDE PLAZA
COLUMBUS, OHIO 43215**

MARCH 2007 (REVISED MAY and NOVEMBER 2008)

Hull
& associates, inc.

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1.0 OAC 3745-30-09 FINAL CLOSURE ACTIVITIES

This Final Closure/Post-Closure Plan has been prepared in accordance with OAC 3475-30-09 and OAC 3745-30-10. All of the information required by OAC 3745-30-09 is contained in this Plan either directly or by reference to other sections of the Permit-to-Install (PTI) application. Final closure of the Kyger Creek Plant Landfill shall be conducted in accordance with OAC 3745-30-09.

(A) For all residual waste landfill facilities, a "final closure/post-closure plan" containing the following information shall be submitted to the director for approval as part of a permit to install application for a new residual waste landfill facility or the expansion of an existing residual waste landfill facility, or as part of a permit to install application submitted in response to division (A)(3) or (A)(4) of section 3734.05 of the Revised Code, and not later than one hundred eighty days prior to the anticipated date to cease accepting residual waste.

(1) The name and location of the facility.

The proposed Kyger Creek Plant Landfill is located on the west side of Shaver Road, approximately 1200 feet south of Little Kyger Road, in Addison Township, Gallia County, Ohio. The landfill is located approximately 3 miles southwest of downtown Cheshire, Ohio. The site location may be referenced on the United States Geologic Survey (USGS) quadrangle map provided in Figure 1.

(2) Any variances or exemptions from the requirements of this rule or rule 3745-30-10 of the Administrative Code, or any alternate cap material or thickness or cap slope, or any alternative schedule for completing final closure activities.

There are no variances or exceptions to OAC 3745-30-09 or OAC 3745-30-10 requested at this time.

(3) Name, address, and telephone number of the person or office to contact regarding the residual waste landfill facility during the final closure and post-closure care periods.

Name: Don Fulkerson, Ohio Valley Electric Corporation
Address: 3932 U.S. Route 23 Phone number: (740) 289-7200

4) The following information to be presented in the same manner as outlined in rule 3745-30-05 of the Administrative Code:

- (a) Plan drawings of the horizontal limits and top elevations of waste and the cap system; and surface water control structures including permanent ditches to control run-on and runoff; and sedimentation ponds including the inlet and outlet.**

The horizontal limits and top elevations of waste and the cap system, the surface water control structures, and the storm water sedimentation ponds including the inlet and outlet are located on Plan Drawings 4E, 4F, and 7J through 7M of the PTI Plan Set.

- (b) Establish a grid system with northings and eastings not more than five hundred feet apart.**

A grid system with northings and eastings not more than five hundred feet apart is located on the plan view drawings in the PTI Plan Set.

- (c) Detail drawings of the cap system including but not limited to the key trench, any penetrations, cap drainage structures, and surface water drainage structures**

Detail drawings of the cap system including penetrations, cap drainage structures, and surface water drainage structures are located on Plan Drawings 7C through 7O of the PTI Plan Set.

- (d) Detail drawings of sedimentation pond and discharge structures and surface water run-on and runoff control structures.**

Detail drawings of sedimentation ponds and discharge structures, and the surface water run-on and runoff control structures are located on Plan Drawings 7G through 7O of the PTI Plan Set.

- (e) Static and seismic stability analysis.**

Static and seismic stability analyses for Phase 1, 3, 4 and 5 are located in Appendix B of the PTI. An addendum to Appendix B for the static and seismic stability analyses for Phase 2 composite liner was completed by AEP and is submitted under a separate cover.

- (f) The ground water detection monitoring plan.**

The Groundwater Monitoring Program Plan is located in Appendix I of the PTI.

- (g) The financial assurance information in accordance with rules 3745-27-15 and 3745-27-16 of the Administrative Code, as applicable.**

The financial assurance information in accordance with rules 3745-27-15 and 3745-27-16 of the Administrative Code is located in Appendix A of this document.

(5) Description of on-site availability and suitability of cap material.

A soil volume analysis is included Appendix C-II of the PTI. Should additional suitable cap material be necessary to complete final-closure activities, it is available on other properties owned by OVEC within five mile of the Site.

(6) Quality assurance/quality control plan for cap system construction.

The Construction Quality Assurance/Quality Control Plan is located in Appendix J of the PTI.

(7) Explosive gas monitoring plan, for residual waste landfill facilities which are required to have an explosive gas monitoring system by paragraph (E) of rule 3745-30-06 of the Administrative Code.

An explosive gas monitoring plan is not required for the Kyger Creek Plant Landfill.

(8) Schedule of installation of any explosive gas control systems.

The Kyger Creek Plant Landfill is not required to have an explosive gas monitoring system.

(9) Description of anticipated measures to control erosion during closure.

Construction shall be performed in accordance with Best Management Practices and a Stormwater Pollution Prevention Plan. Erosion of the landfill cover system or stormwater control structures shall be corrected by placing additional soil and regrading the affected areas or installation of erosion-resistant materials if such problems are recurrent. Such erosion-resistant materials may include synthetic mulches, erosion control matting or rip-rap. Inspection of erosion prone areas shall be conducted on a weekly basis during active operational periods, and in accordance with the maintenance and inspection frequencies proposed for post-closure.

Areas subject to persistent erosion shall be inspected by the certifying engineer for appropriate remedial measures. Such measures may include the installation of permanent erosion control structures or the redirection of erosional forces. These measures shall provide for the long-term correction of the erosional problem and protection of the landfill cover systems.

Details for erosion control measures are located on Plan Drawings 7H and 7I of the PTI Plan.

(B) It is the responsibility of the owner or operator to complete final closure of the residual waste landfill facility in a manner that minimizes the need for further maintenance and minimizes post-closure formation and release of leachate and explosive gases to air, soil, ground water, or surface water to the extent necessary to protect human health and the environment.

Final closure of the Kyger Creek Plant Landfill shall be conducted in a manner that minimizes the need for further maintenance and minimizes post-closure formation and release of leachate to soil, ground water, or surface water to the extent necessary to protect human health and the environment.

(C) Mandatory closure. The owner or operator shall begin final closure activities in accordance with the final closure/post-closure plan and paragraph (F) of this rule no later than seven days after any of the occurrences specified in this paragraph. Approval of the final closure/post-closure plan does not affect the owner's or operator's obligations to begin and complete final closure activities in accordance with paragraph (F) of this rule. It is mandatory to begin closure activities for a residual solid waste landfill facility upon the occurrences of any of the following:

- (1) The owner or operator declares that no more residual waste will be accepted for disposal at the residual waste landfill facility.**
- (2) A solid waste license issued for the residual waste landfill facility has expired, and another license has not been applied for in the manner prescribed in Chapter 3745-37 of the Administrative Code.**
- (3) All approved limits of residual waste placement have been reached.**
- (4) A solid waste license issued for the residual waste landfill facility has expired, and another license has been applied for and denied as a final action.**
- (5) A solid waste license issued for the residual waste landfill facility has been revoked as a final action.**
- (6) A solid waste license issued for the residual waste landfill facility has been suspended as a final action.**

Final closure activities, if mandated, shall commence and be implemented in accordance with this final closure/post-closure plan and paragraph (F) of this rule no later than seven days after any of the occurrences specified in paragraph (C) above.

(D) Notification of anticipated date to cease acceptance of solid waste.

- (1) The owner or operator shall provide notice by certified mail or any other form of mail accompanied by a receipt of the anticipated date on which the residual waste landfill facility will cease to accept solid waste if final closure is to be triggered by an occurrence described in paragraph (C)(1), (C)(2), or (C)(3) of this rule. Such notice shall be provided not less than ninety days prior to the anticipated date on which solid waste will cease to be accepted.**
- (2) The owner or operator shall send a copy of the notice specified in paragraph (D)(1) of this rule to the following:**

- (a) **The board of health having jurisdiction.**
- (b) **The single county or joint county solid waste planning district in which the facility is located.**
- (c) **The director.**

Not less than 90 days prior to the anticipated date of final waste receipt, written notice of such action and the date shall be provided to the Director of the Ohio EPA and the Gallia County Health Department.

- (3) **Concurrently with the submission of the notice required by paragraph (D)(1) of this rule, the owner or operator shall commence publishing at three-week intervals, prominent notice of the anticipated date on which solid waste will cease to be accepted at the residual waste landfill facility. Such notice shall be published in the county in which the residual waste landfill facility is located and in any other county which has been a source of at least twenty-five per cent of the solid wastes deposited at the residual waste landfill facility over the previous twelve months of operation. Notice shall be provided to the director and the board of health having jurisdiction that affirms the notices have been published in accordance with this paragraph. The public notice requirement shall not apply to a residual waste landfill facility owned by a generator, exclusively disposing of solid wastes generated at the premises owned by the generator.**

This rule is not applicable since Kyger Creek Plant Landfill will be the generator exclusively disposing of waste at the facility.

- (4) **Not less than thirty days prior to the anticipated date on which the facility will cease to accept solid waste, notice shall be provided by certified mail or any other form of mail accompanied by a receipt to the director of any changes to the information that identifies the facility's final closure contact person.**

Not less than 30 days prior to the anticipated date of final waste receipt, written notice shall be provided by certified mail to the Director of any changes in the Facility's final closure contact person.

- (E) **The owner or operator shall send notification by certified mail or any other form of mail accompanied by a receipt to the director and to the board of health having jurisdiction, as to the actual date that the residual waste landfill facility ceased to accept residual waste. Notification shall be sent to the director and the board of health having jurisdiction not later than seven days after the date specified in the notification.**

Notification shall be sent to the Director of Ohio EPA and the Gallia County Health Department not later than seven days after the actual date that the Kyger Creek Plant Landfill ceased to accept residual waste.

(F) The owner or operator shall begin final closure activities not later than seven days after the residual waste landfill facility has ceased to accept residual waste. Final closure activities for all residual waste landfill facilities shall include, at a minimum the following:

(1) Blocking, by locked gates, fencing, or other sturdy obstacles, of all entrances and access roads to the residual waste landfill facility to prevent unauthorized access during the final closure and post-closure period.

All entrances and access roads to the Kyger Creek Plant Landfill shall be blocked, by locked gates, fencing, or other sturdy obstacles, to prevent unauthorized access during the final closure and post-closure period.

(2) Posting of signs, in such a manner as to be easily visible from all access roads leading onto the residual waste landfill facility, stating in letters not less than three inches high that the residual waste landfill facility no longer accepts residual waste. Signs shall be maintained in legible condition for not less than two years after final closure activities have been completed. This paragraph shall not apply to residual waste landfill facilities owned and operated by a generator of residual wastes if the residual waste landfill facility exclusively disposes of residual wastes generated at one or more premises owned by the generator.

This rule is not applicable since Kyger Creek Plant Landfill will be the generator exclusively disposing of waste at the facility.

(3) Construction of a cap system in all areas of residual waste placement, other than those which have been capped in accordance with paragraph (V)(3)(b) of rule 3745-30-14 of the Administrative Code, which shall minimize infiltration and shall, at a minimum, consist of the following:

(a) First, a recompacted soil barrier layer, a minimum of two feet thick, constructed in accordance with the specifications in rule 3745-30-07 of the Administrative Code and modeled by the construction of a test pad in accordance with rule 3745-30-07 of the Administrative Code.

The recompacted soil barrier layer in the cap system shall be a minimum of two feet thick and shall be constructed in accordance with the specifications in OAC 3745-30-07 and modeled by the construction of a test pad also in accordance with OAC 3745-30-07. The test pad construction work plan is located in Appendix N of the PTI.

- (b) **A vegetative layer, consisting of soil and vegetation, placed on top of the soil barrier layer. The soil shall be of sufficient thickness and fertility to support its vegetation and to protect the soil barrier layer from damage due to root penetration, and for facilities with disposed waste generally having a permeability greater than 1×10^{-5} cm/sec, the soil shall be of a thickness such that the top of the recompacted soil barrier layer lies below the local frost depth.**

Comparable materials and/or thicknesses for the soil barrier layer and soil vegetative layer may be used if approved by the director.

The cap system shall have a minimum slope of two per cent and a maximum slope of twenty-five per cent, or some alternate slope based on stability analyses. The cap system shall have a maximum projected erosion rate of five tons per acre per year.

Any penetrations into the cap system shall be sealed so that the integrity of the soil barrier layer is maintained.

The soil in the vegetative layer shall be 2.5 feet thick, shall be fertile to support its vegetation, and shall protect the soil barrier layer from damage due to root penetration. The cap system shall be graded to maintain stable slopes and facility surface water and erosion control.

- (4) **The owner or operator shall install the required surface water control structures including permanent ditches to control run-on and runoff and sedimentation pond(s), as shown in the final closure/post-closure plan, and as necessary, grade all land surfaces to prevent ponding of water where residual waste has been placed and institute measures to control erosion.**

[Comment: The minimum slope standard in rule 3745-30-07 of the Administrative Code is a design standard. For closure certification, it is not necessary to regrade the site if there is not a ponding problem, even if the slope no longer meets the design in the closure/post-closure plan.]

Surface water control structure including permanent ditches to control run-on and runoff, sedimentation ponds, and others as detailed in the PTI plans shall be installed. A surface water management plan containing analysis and design of components of the surface water control structures is included in Appendix G of the PTI.

- (5) **Design, installation, and maintenance of a ground-water monitoring system in accordance with rule 3745-30-08 of the Administrative Code, if not in place.**

The design, installation, and maintenance of the groundwater monitoring system will be in accordance with OAC 3745-30-08. The Groundwater Monitoring Program Plan is located in Appendix I of the PTI.

- (6) The owner or operator shall record on the plat and deed to the residual waste landfill facility property, or on some other instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property, a notation describing the impacted acreage, exact location, depth, volume, and nature of the residual waste deposited in the residual waste landfill facility.**

Upon ceasing waste acceptance, the county recorder will be contacted to add a notation to the property deed and plat that describes the acreage, exact location, depth, volume, and nature of waste in the Facility.

- (7) Continue to comply with rule 3745-30-14 of the Administrative Code and all monitoring and reporting activities required during the operating life of the residual solid waste landfill facility until the closure certification is submitted and the post-closure care period begins.**

The Kyger Creek Plant Landfill shall continue the monitoring and reporting activities required in OAC 3745-30-14 until the closure certification is submitted and the post-closure care period begins.

- (G) Final closure activities shall be completed not later than one year after final receipt of residual waste in the residual waste landfill facility unless an alternate schedule has been approved by the director.**

Closure activities shall be completed at the Kyger Creek Plant Landfill within one year after final waste receipt unless an alternate schedule is approved by the Director.

- (H) Final closure certification. Not later than ninety days after the completion of final closure activities, the owner or operator shall submit to the director, and to the board of health having jurisdiction, a written certification report. The final closure certification shall include verification that the residual waste landfill facility has been closed in accordance with this rule and the "final closure/post-closure plan". The final closure certification shall at a minimum include the following:**

- (1) A list of the construction certification reports for construction of the cap system with the date of submittal and a topographic map of the entire residual waste landfill facility showing the areas certified by each report. The map shall also show the horizontal limits of waste placement and the surface water control structures including permanent ditches to control run-on and runoff, and the following if present: the sedimentation pond(s) including the inlet and outlet, the outlet of any permanent ground water control structures, and the explosive gas control system.**
- (2) A demonstration that the ground water monitoring system meets the requirements of rule 3745-30-08 of the Administrative Code.**

- (3) A copy of the plat and deed or other instrument which is normally examined during a title search, showing the notation required by paragraph (F)(6) of this rule and bearing the mark of recordation of the office of the county recorder for the county in which the property is located.**
- (4) A demonstration that all entrances and access roads have been blocked as required by paragraph (F)(1) of this rule, and the sign required by paragraph (F)(2) has been posted.**

A final-closure certification report shall be prepared upon completion of closure activities by a registered professional engineer. The report shall contain all the requirements of OAC 3745-30-09(H), including a record drawing of the entire Facility at the required scale. The certification report will be submitted to the Ohio EPA and the Gallia County Health Department within 90 days of the completion of closure activities.

- (I) The health commissioner and the director, or their authorized representatives, upon proper identification, may enter any residual waste landfill facility at any time during the final closure period for the purpose of determining compliance with this rule.**

Upon proper identification, the Gallia County Health Department and the Ohio EPA, or their authorized representatives, may enter the Kyger Creek Plant Landfill at any time during the final closure period for the purpose of determining compliance with OAC 3745-30-09.

2.0 OAC 3745-30-10 POST-CLOSURE ACTIVITIES

The post-closure care shall commence upon approval of final closure certification by Ohio EPA. The post-closure care shall be conducted in accordance with OAC 3745-30-10.

(A) Following completion of final closure activities in accordance with rule 3745-30-09 of the Administrative Code the owner, operator, or permittee shall conduct post-closure care activities at the residual waste landfill facility for the following applicable time period:

- (1) Thirty years if the facility is a class I residual waste landfill.**
- (2) Twenty years if the facility is a class II residual waste landfill.**
- (3) Fifteen years if the facility is a class III residual waste landfill.**

The post-closure care period begins when the certification required by paragraph (H) of rule 3745-30-09 of the Administrative Code has been submitted for the residual waste landfill facility.

The post-closure care period for the Kyger Creek Plant Landfill shall be 15 years.

(B) Any time during the post-closure period, based on such factors as the inspection or monitoring results required by paragraphs (C)(4) and (C)(5) of this rule and whether human health or safety or the environment is or will be protected, or whether a nuisance is or will be created, the director may do either of the following:

- (1) Shorten the post-closure care period required by paragraph (A) of this rule, if a variance has been requested pursuant to rule 3745-30-15 of the Administrative Code and the director finds that the reduced period is sufficient to protect human health and the environment, based on such factors as the inspection and monitoring results required by paragraphs (C)(4) and (C)(5) of this rule.**
- (2) Extend the post-closure care period required by paragraph (A) of this rule, if the director finds that the extended period is necessary to protect human health and the environment, based on such factors as the inspection and monitoring results required by paragraphs (C)(4) and (C)(5) of this rule.**

[Comment: If the landfill shows an improvement to leachate quality, the quantity of leachate generated will not cause an outbreak or slope failure, that ground water monitoring is no longer needed, that it is not generating explosive gas which has the potential to migrate underground, and that the cap system will maintain its integrity and stability if post-closure care activities cease, the director may release the owner, operator, or permittee from continuing post-closure care activities.]

The post-closure care period shall be 15 years unless it is shortened or lengthened per OAC 3745-30-10(B).

(C) Post-closure care activities for all residual waste landfill facilities shall include, but are not limited to the following:

- (1) Continuing operation and maintenance of the leachate management system, the surface water management system, any explosive gas extraction and/or control system, any explosive gas monitoring system, and the ground water monitoring system.**

The leachate management system, groundwater monitoring system and surface water monitoring system shall be operated and maintained during the post-closure care period.

- (2) Maintaining the integrity and effectiveness of the cap system, including making repairs to the cap system as necessary to correct the effects of settling, dead vegetation, subsidence, ponding, erosion, or other events, and preventing run-on and runoff from eroding or otherwise damaging the cap system.**

The integrity and effectiveness of the cap system shall be maintained during the post-closure period. Repairs needed to correct settling, dead vegetation, subsidence, ponding, and erosion shall be made accordingly. If suitable soils to repair the cap system are not available on-site, additional suitable cap material is available on other properties owned by OVEC within five mile of the Site.

(3) Repairing any leachate outbreaks detected at the residual waste landfill facility by doing the following:

- (a) Contain and properly manage the leachate at the residual waste landfill facility.**
- (b) If necessary, collect, treat, and dispose of the leachate, including, if necessary, following the contingency plan for leachate storage and disposal prepared pursuant to rule 3745-30-14 of the Administrative Code.**
- (c) Take action to minimize, control, or eliminate the conditions which contribute to the production of leachate.**

Leachate outbreaks detected during the post-closure period will be managed and collected per OAC 3745-30-10(C)(3).

- (4) Quarterly inspection of the residual waste landfill facility during each year of the post-closure care period and submittal of a written summary to the**

appropriate Ohio EPA district office not later than fifteen days after the inspection date detailing the results of the inspection and a schedule of any actions to be taken to maintain compliance with paragraphs (C)(1), (C)(2), and (C)(3) of this rule. The director may either increase the frequency of inspections, or, upon the request of the permittee, decrease the frequency of inspections if the results of past inspections justify either action.

Written summary of quarterly inspection of the facility shall be submitted to the Ohio EPA not later than 15 days after the inspection. A typical Post-Closure Inspection Form is included in Appendix B of this document. This inspection form can be modified by Kyger Creek Plant Landfill, as needed, to address the needs of the Landfill.

- (5) Fulfilling all monitoring and reporting requirements in accordance with rule 3745-30-08 of the Administrative Code for ground water, and, if necessary, with rule 3745-27-12 of the Administrative Code for explosive gas, and with any monitoring required by any orders or authorizing documents. The post-closure care period may be shortened for explosive gas monitoring, as outlined in paragraph (L) of rule 3745-27-12 of the Administrative Code.**

The Kyger Creek Plant Landfill shall perform groundwater monitoring and reporting during the post-closure period per OAC 3745-30-08. The post-closure period may be shortened, if possible, per OAC 3745-27-12.

- (6) Submitting a report to the appropriate Ohio EPA district office and approved health department not later than the first day of April of each year, which contains the following:**
 - (a) A summary of the quantity of leachate collected for treatment and disposal on a monthly basis during the year, and the location of leachate treatment and/or disposal.**
 - (b) Results of analytical testing of an annual grab sample of leachate for the parameters specified in paragraph (A) of rule 3745-30-03 of the Administrative Code. The grab sample shall be obtained from the leachate management system.**
 - (c) The most recent updated post-closure cost estimate adjusted for inflation and for any change in the post-closure cost estimate required by rule 3745-27-16 of the Administrative Code.**

A report on leachate monitoring and updated post-closure care cost shall be submitted to Ohio EPA and the Gallia County Health Department not later than the first day of April of each year.

- (7) Records and reports generated by paragraphs (C)(4) to (C)(6) of this rule are to be kept for the duration of the post-closure care period at a location**

where the records and reports are available for inspection by Ohio EPA or the approved health department during normal working hours.

Records and reports prepared in accordance with OAC 3745-30-10(C)(4) to (C)(6) shall be kept at the Kyger Creek Plant Landfill for the duration of the post-closure period and shall be available for inspection by the Ohio EPA and Gallia County Health Department during normal working hours.

- (D) Upon completion of the post-closure care period, the owner, operator, or permittee shall submit to the director written certification that the residual waste landfill facility has completed post-closure activities in accordance with this rule and the "final closure/post-closure plan." This certification shall be accompanied by documentation which demonstrates that all post-closure care activities have been completed. The certification shall be signed and sealed by a professional engineer registered in Ohio.**

Following completion of the post-closure care period, Kyger Creek Plant Landfill shall submit certification that the post-closure activities have been completed. The certification shall be signed and sealed by a professional engineer registered in the State of Ohio.

- (E) The health commissioner and the director, or their authorized representatives, upon proper identification, may enter any closed residual waste landfill facility at any time during the post-closure care period for the purpose of determining compliance with this rule.**

Upon proper identification, the Gallia County Health Department and the Ohio EPA, or their authorized representatives, may enter the Kyger Creek Plant Landfill at any time during the post-closure care period for the purpose of determining compliance with this rule.

APPENDIX A

Financial Assurance Information

(To be provided once permit is obtained)

APPENDIX B

Post-Closure Inspection Form

**OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
POST-CLOSURE INSPECTION FORM**

Facility: KYGER CREEK PLANT LANDFILL, GALLIA COUNTY, OHIO

Weather Conditions: Rain Snow Clear Wind _____ Temperature _____

Inspection Date: _____ Arrival Time: _____ Departure Time: _____

Type of Inspection: _____

Inspector(s) Affiliation: _____

INSPECTION ITEMS	ACTION REQ'D	NO ACTION REQ'D	LOCATION AND COMMENTS
A. SITE ACCESS			
- Gate			
- Signs			
B. SITE SECURITY			
C. VEGETATIVE COVER			
- Bare Spots			
- Cracks			
- Erosion			
- Settlement			
- Water Ponding			
- Protruding Objects			
D. LEACHATE SEEPS			
- Area Locations			
- Entering Surface Water			
E. LEACHATE COLLECTION SYSTEM			
- Piping(evidence of leakage)			
- Leachate collection pond(s)			

**OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
POST-CLOSURE INSPECTION FORM**

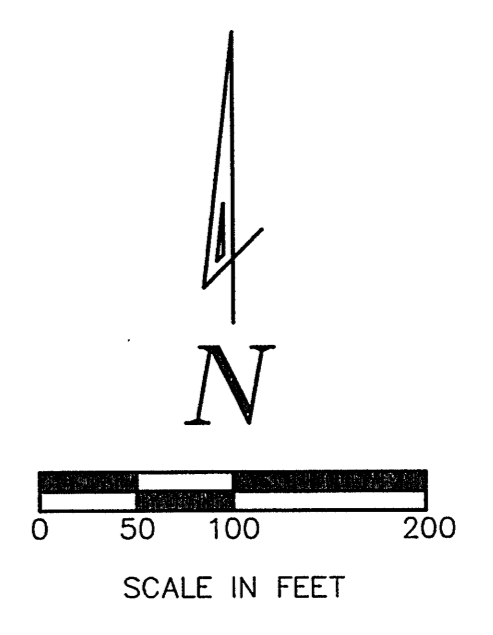
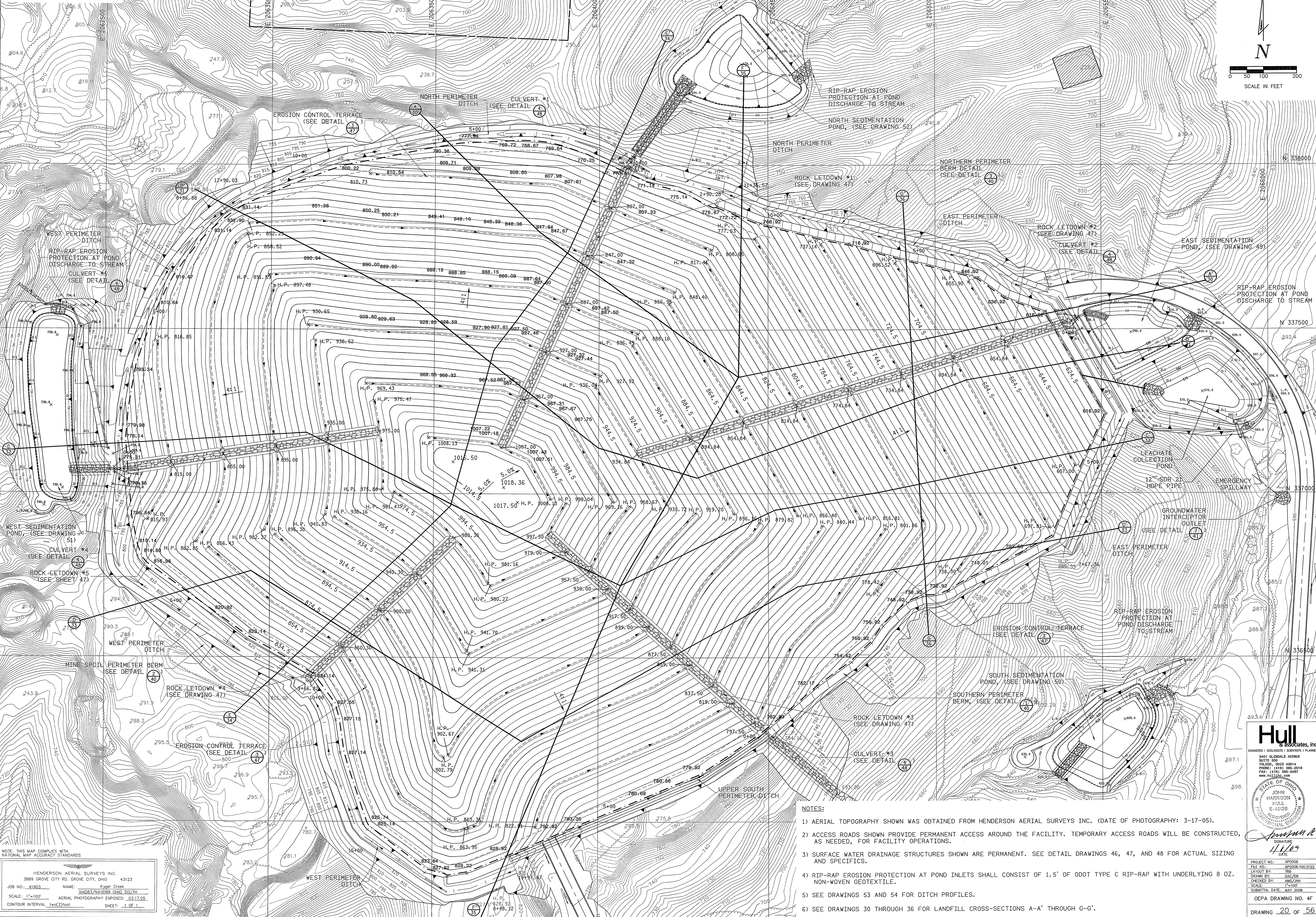
INSPECTION ITEMS	ACTION REQ'D	NO ACTION REQ'D	LOCATION AND COMMENTS
F. SURFACE WATER			
- Sedimentation Ponds:			
- Outlet Clear/Functional			
- Erosion at Outlet			
- Erosion at Inlet			
- Inlet Unobstructed			
- Erosion at Berms/Banks			
- Sediment Level			
- Ditches			
- Vegetative Cover			
- Erosion Control Terraces			
- Silt Accumulation			
- Erosion or Scour			
- Channel Lining Intact			
- Differential Settlement –Slopes Affected			
- Culverts Intact			
- Erosion/Scour at Inlet/Outlet			
- Traffic Damage			
- Cover Height Adequate			
- Silt Accumulation			
- Obstructions			
G. GROUND-WATER MONITORING			
- Groundwater Wells *			
- Groundwater Wells *			
- Groundwater Wells *			
- Wells Locked			

**OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
POST-CLOSURE INSPECTION FORM**

INSPECTION ITEMS	ACTION REQ'D	NO ACTION REQ'D	LOCATION AND COMMENTS
H. OTHER			
- Access Road Condition			
- Vegetative Stress			
- Screening/Aesthetics Conditions			
- Groundwater Interceptor System			

*Note: Overall site inspections should include an inspection of the physical components of the wells visible from the surface. Additional components of the wells will be inspected during the groundwater monitoring inspections, which are outlined in the Groundwater Monitoring Plan.

Attachment B



LEGEND - EXISTING

- PROPERTY LINE
- ▨ APPROXIMATE LOCATION OF CEMETERY
- 730 --- 10-FOOT CONTOUR INTERVAL
- 2-FOOT CONTOUR INTERVAL
- 745.6 --- SPOT ELEVATION
- TREE LINE
- BUILDING

LEGEND - PROPOSED

- WASTE LIMIT
- 794.5 --- FINAL COVER GRADES
- GROUNDWATER INTERCEPTOR DRAIN PIPE
- LEACHATE COLLECTION TRUNK OUTLET
- DRAINAGE DITCH/SWALE
- DITCH/ROAD STATION (SEE DETAIL - DRAWING 7, SEE PROFILE DRAWINGS 48 AND 49)
- EROSION CONTROL TERRACE
- 1097.10 --- SPOT ELEVATION
- RIP-RAP EROSION PROTECTION
- CULVERT
- LANDFILL CROSS-SECTION LOCATION (SEE DRAWINGS 30 THROUGH 36)
- MAXIMUM WATER DESIGN ELEVATION

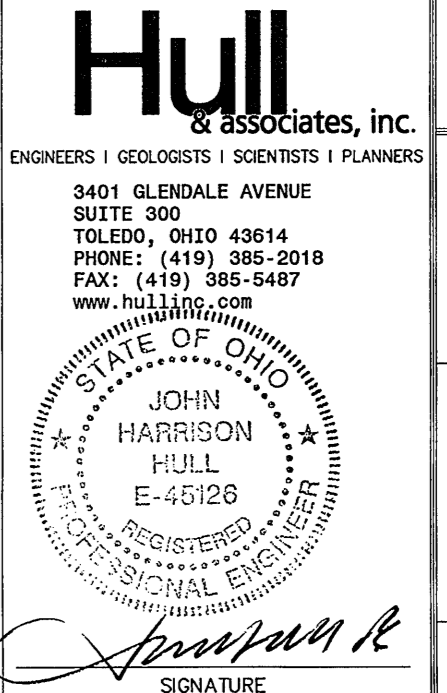
REFERENCE DRAWINGS

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5/28/06	C	NOD 2 RESPONSE	JHH
1/24/07	B	NOD 1 RESPONSE	JHH
2/28/07	A	ISSUED FOR PERMIT	JHH

REVISIONS

NO.	DESCRIPTION
1	REVISED PER PERMIT

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441205
SIGNATURE

PROJECT NO.: AP0006
FILE NO.: AP0006.100.0122
LAYOUT BY: TBE
DRAWN BY: GAC/JOB
CHECKED BY: JMS/JHH
SCALE: 1"=100'
SUBMITTAL DATE: MAY 2008
DATE: 11/7/08

CEPA DRAWING NO. 4F
DRAWING 20 OF 56

OHIO VALLEY ELECTRIC CORP.
KYGER CREEK PLANT
CHESHIRE OHIO
KYGER CREEK PLANT LANDFILL
TOP OF FINAL COVER PLAN

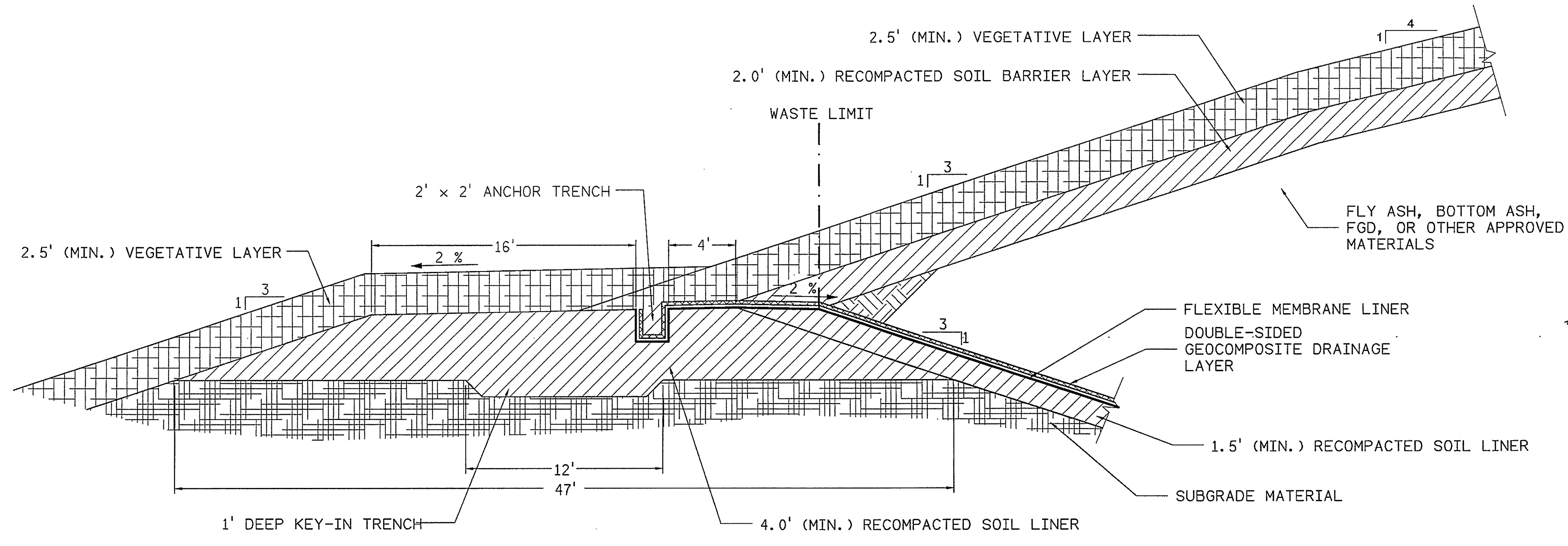
DWG. NO. 15-30501-20-D
SCALE: 1"=100'
CIVIL ENGINEERING DIVISION

1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

NOTE: THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

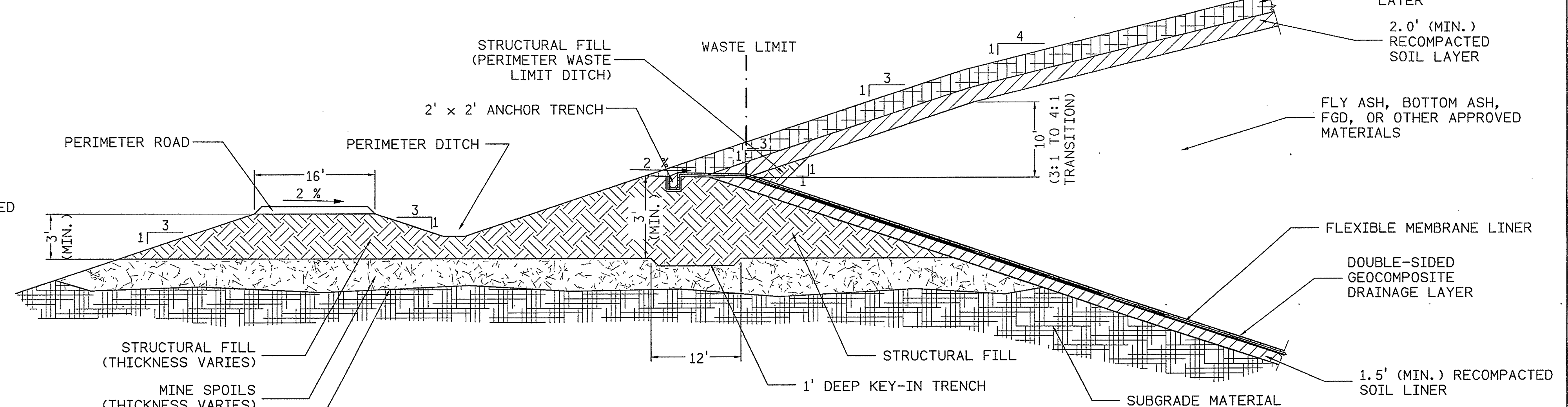
HENDERSON AERIAL SURVEYS INC.
3889 GROVE CITY RD. GROVE CITY, OHIO 43123
JOB NO.: 41903 NAME: Kyger Creek
NAD83/NAV88 OHIO SOUTH
SCALE: 1"=100' AERIAL PHOTOGRAPHY EXPOSED: 03.17.05
CONTOUR INTERVAL: two(2)foot SHEET: 1 OF 1

- NOTES:
- 1) AERIAL TOPOGRAPHY SHOWN WAS OBTAINED FROM HENDERSON AERIAL SURVEYS INC. (DATE OF PHOTOGRAPHY: 3-17-05).
 - 2) ACCESS ROADS SHOWN PROVIDE PERMANENT ACCESS AROUND THE FACILITY. TEMPORARY ACCESS ROADS WILL BE CONSTRUCTED, AS NEEDED, FOR FACILITY OPERATIONS.
 - 3) SURFACE WATER DRAINAGE STRUCTURES SHOWN ARE PERMANENT. SEE DETAIL DRAWINGS 46, 47, AND 48 FOR ACTUAL SIZING AND SPECIFICS.
 - 4) RIP-RAP EROSION PROTECTION AT POND INLETS SHALL CONSIST OF 1.5' OF ODOT TYPE C RIP-RAP WITH UNDERLYING 8 OZ. NON-WOVEN GEOTEXTILE.
 - 5) SEE DRAWINGS 53 AND 54 FOR DITCH PROFILES.
 - 6) SEE DRAWINGS 30 THROUGH 36 FOR LANDFILL CROSS-SECTIONS A-A' THROUGH G-G'.



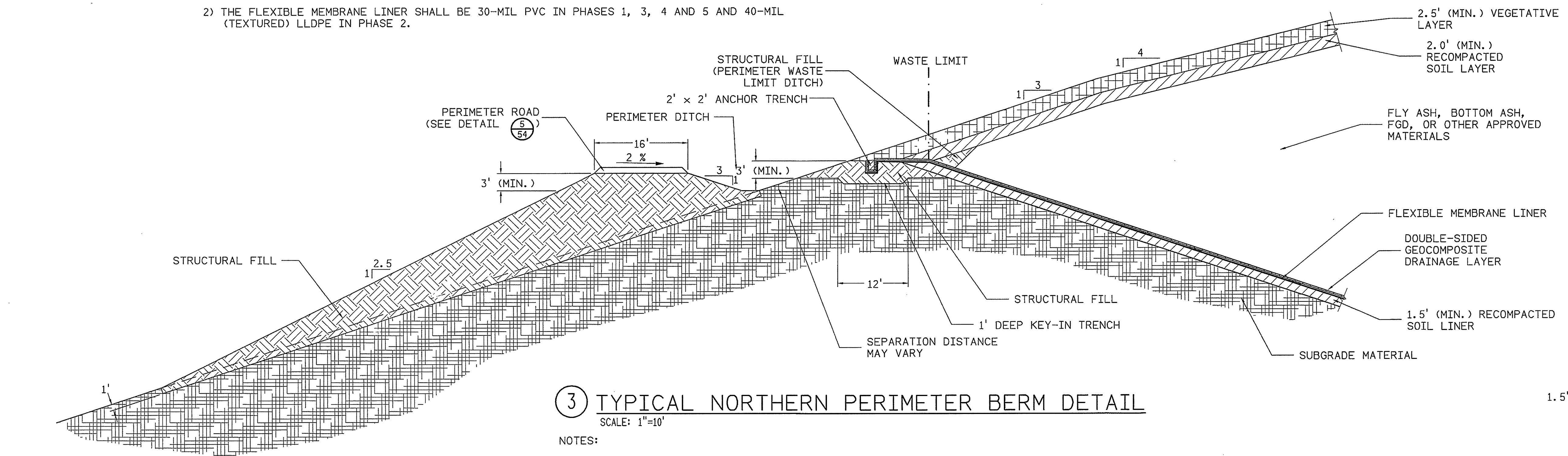
① TYPICAL SOUTHERN FUTURE TIE-IN BERM DETAIL
SCALE: 1"=5'

- NOTES:
- 1) THE ANCHOR TRENCH MAY BE A SIMILAR CONFIGURATION APPROVED BY THE CERTIFYING ENGINEER. THE TRENCH GEOMETRY MAY CHANGE DEPENDING ON CONSTRUCTION TECHNIQUES USED.
 - 2) THE FLEXIBLE MEMBRANE LINER SHALL BE 30-MIL PVC IN PHASES 1, 3, 4 AND 5 AND 40-MIL (TEXTURED) LLDPE IN PHASE 2.



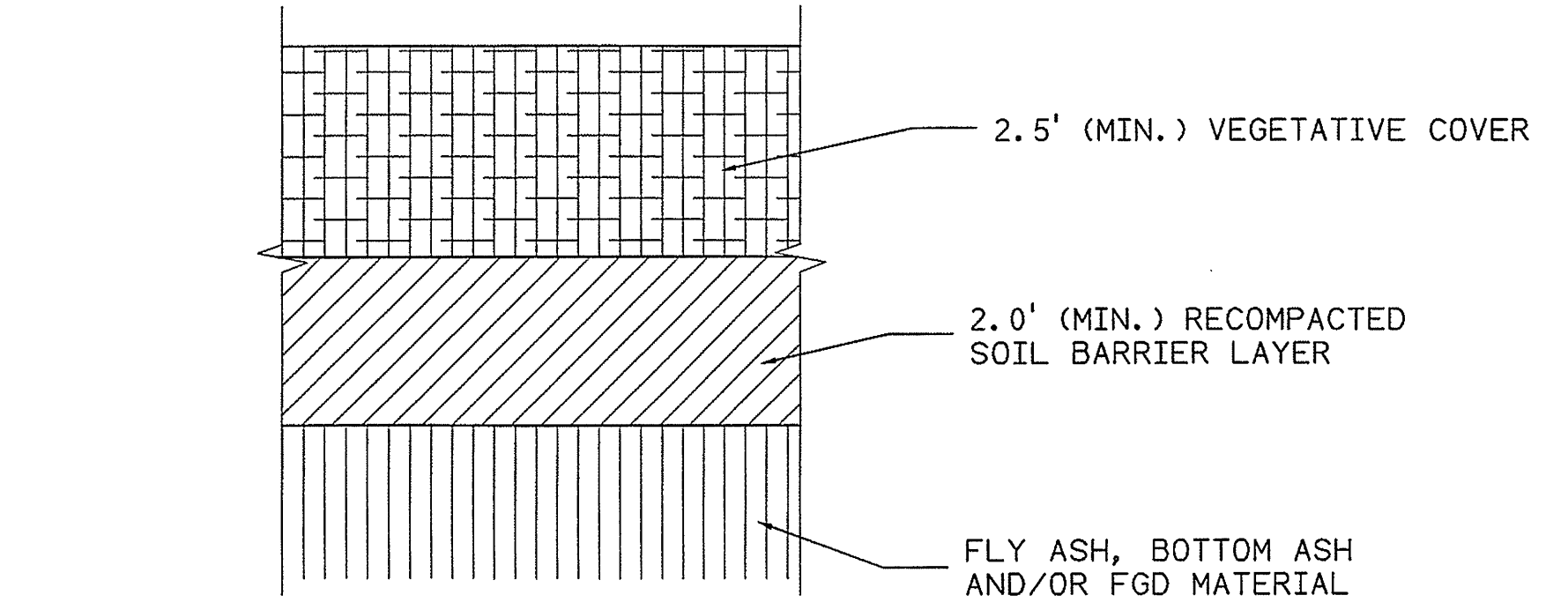
② MINE SPOIL PERIMETER BERM DETAIL
SCALE: 1"=10'

- NOTES:
- 1) THE PERIMETER ROAD WIDTH SHALL BE 20 FEET WHEN THE PERIMETER ROAD IS CONSTRUCTED ON PERIMETER BERMS EXCEEDING 10 FEET IN HEIGHT.
 - 2) THE FLEXIBLE MEMBRANE LINER SHALL BE 30-MIL PVC IN PHASES 1, 3, 4 AND 5 AND 40-MIL (TEXTURED) LLDPE IN PHASE 2.

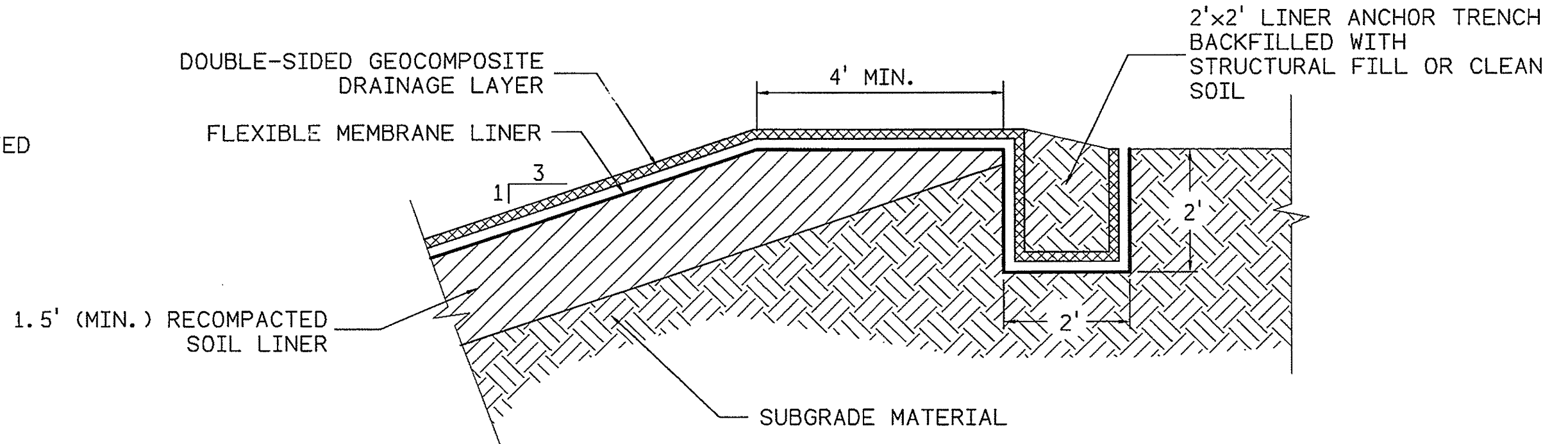


③ TYPICAL NORTHERN PERIMETER BERM DETAIL
SCALE: 1"=10'

- NOTES:
- 1) THE ANCHOR TRENCH MAY BE A SIMILAR CONFIGURATION APPROVED BY THE CERTIFYING ENGINEER. THE TRENCH GEOMETRY MAY CHANGE DEPENDING ON CONSTRUCTION TECHNIQUES USED.
 - 2) THE FLEXIBLE MEMBRANE LINER SHALL BE 30-MIL PVC IN PHASES 1, 3, 4 AND 5 AND 40-MIL (TEXTURED) LLDPE IN PHASE 2.
 - 3) THE PERIMETER ROAD WIDTH SHALL BE 20 FEET WHEN THE PERIMETER ROAD IS CONSTRUCTED ON PERIMETER BERMS EXCEEDING 10 FEET IN HEIGHT.

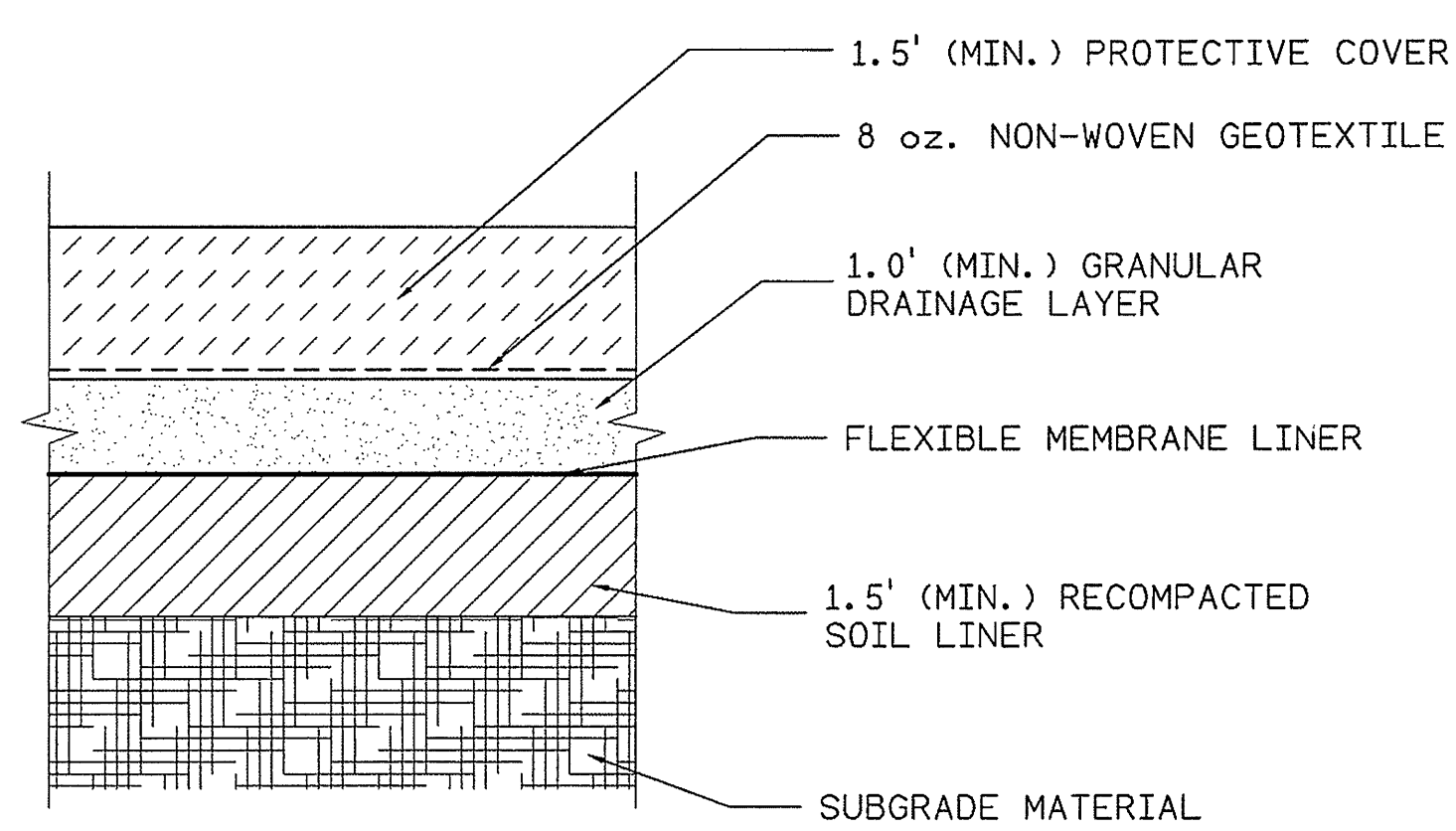


④ FINAL COVER SYSTEM DETAIL
SCALE: 1"=2'



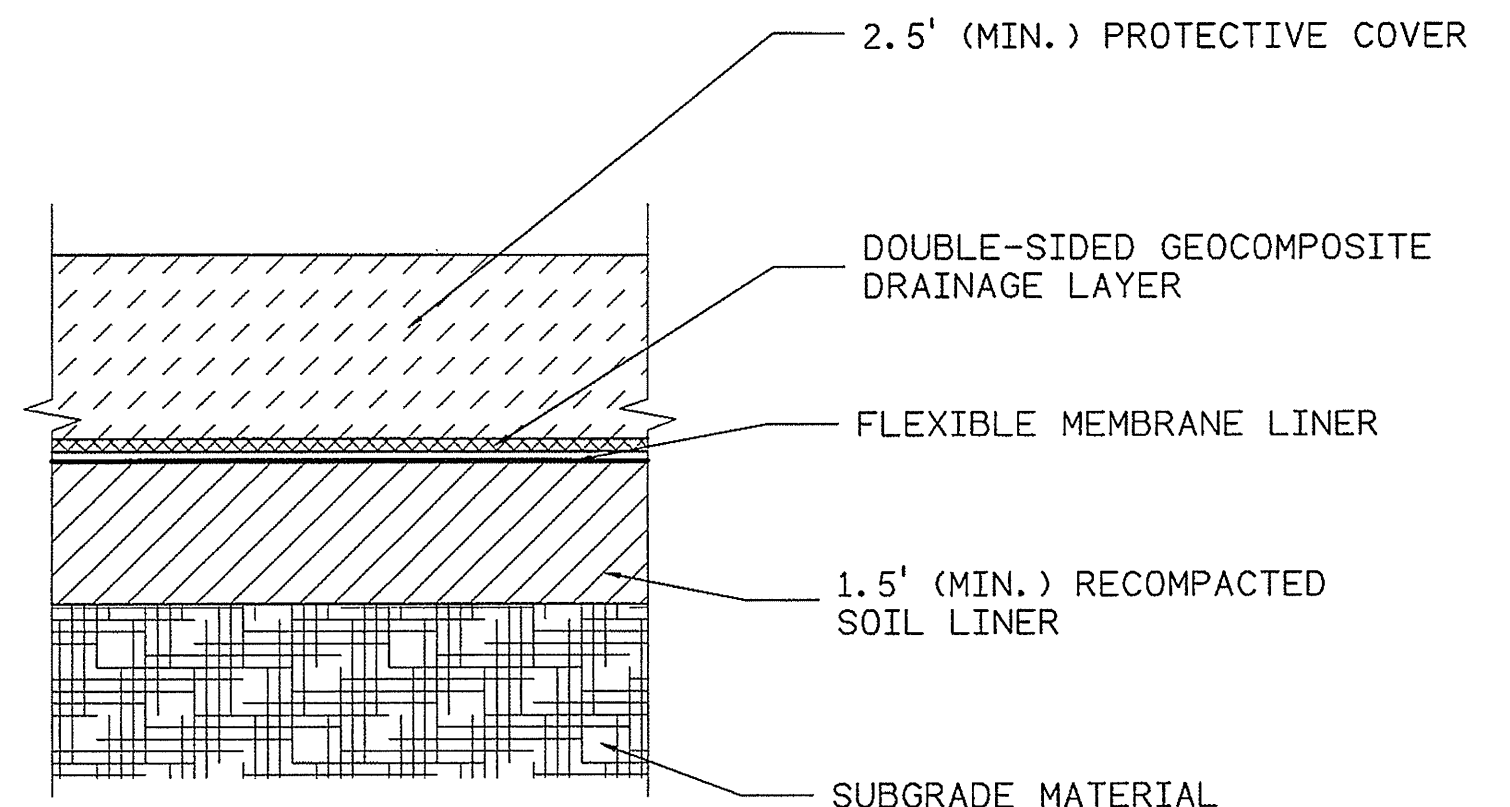
⑦ LINER ANCHOR TRENCH DETAIL
SCALE: 1"=2'

- NOTES:
- 1) THE ANCHOR TRENCH MAY BE A SIMILAR CONFIGURATION APPROVED BY THE CERTIFYING ENGINEER. THE TRENCH GEOMETRY MAY CHANGE DEPENDING ON CONSTRUCTION TECHNIQUES USED.
 - 2) THE FLEXIBLE MEMBRANE LINER SHALL BE 30-MIL PVC IN PHASES 1, 3, 4 AND 5 AND 40-MIL (TEXTURED) LLDPE IN PHASE 2.



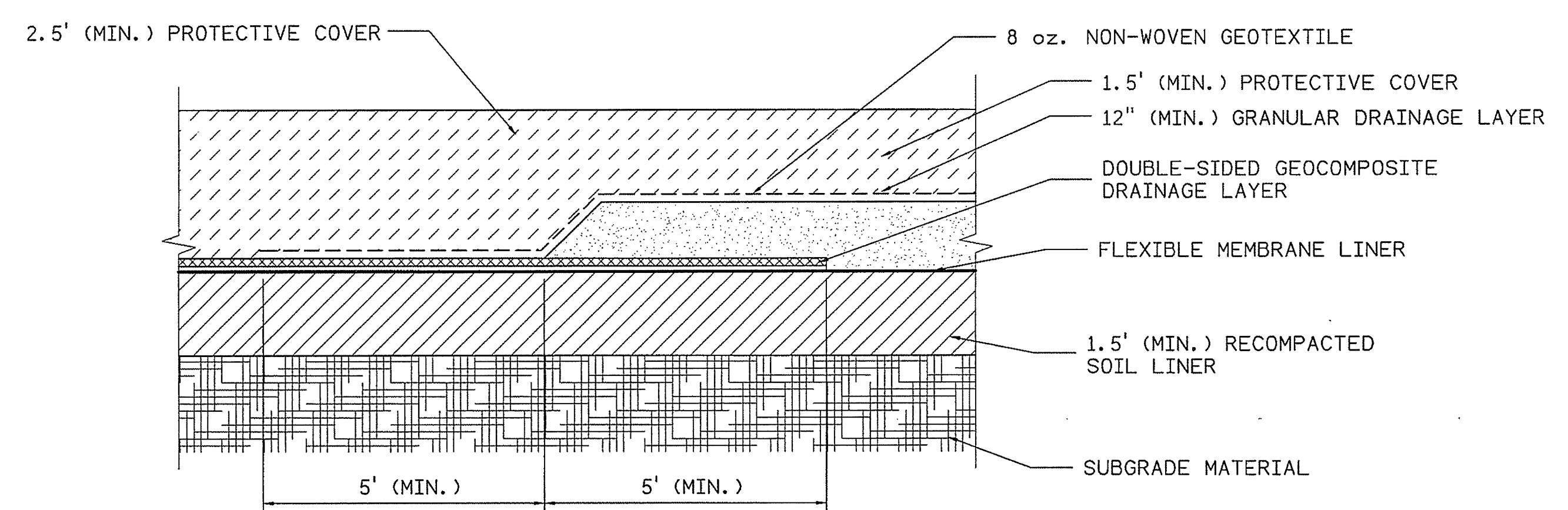
⑤ TYPICAL BOTTOM LINER SYSTEM DETAIL
SCALE: 1"=2'

- NOTES:
- 1) THE GROUNDWATER INTERCEPTOR DRAIN COMPONENTS ARE NOT SHOWN IN THIS DETAIL.
 - 2) IF GEOCOMPOSITE IS USED FOR THE DRAINAGE LAYER, THEN THERE WILL NOT BE AN OVERLYING GEOTEXTILE.
 - 3) A CUSHION LAYER SHALL BE ADDED ABOVE THE COMPOSITE LINER SYSTEM IF THE DRAINAGE MATERIAL IS COMPRISED OF PARTICLES LARGER THAN THE #8 SIEVE AND PARTICLES ARE MORE ANGULAR THAN SUB-ROUNDED.
 - 4) THE FLEXIBLE MEMBRANE LINER SHALL BE 30-MIL PVC IN PHASES 1, 3, 4 AND 5 AND 40-MIL (TEXTURED) LLDPE IN PHASE 2.
 - 5) PROTECTIVE COVER AND GRANULAR DRAINAGE MATERIALS SHALL BE PLACED FROM THE BOTTOM OF THE SLOPE TO THE TOP ON SLOPES THAT EXCEED 15%.



⑥ TYPICAL SIDESLOPE LINER SYSTEM DETAIL
SCALE: 1"=2'

- NOTES:
- 1) THE GROUNDWATER INTERCEPTOR DRAIN COMPONENTS ARE NOT SHOWN IN THIS DETAIL.
 - 2) IF GEOCOMPOSITE IS USED FOR THE DRAINAGE LAYER, THEN THERE WILL NOT BE AN OVERLYING GEOTEXTILE.
 - 3) THE FLEXIBLE MEMBRANE LINER SHALL BE 30-MIL PVC IN PHASES 1, 3, 4 AND 5 AND 40-MIL (TEXTURED) LLDPE IN PHASE 2.
 - 4) PROTECTIVE COVER AND GRANULAR DRAINAGE MATERIALS SHALL BE PLACED FROM THE BOTTOM OF THE SLOPE TO THE TOP ON SLOPES THAT EXCEED 15%.



⑧ TYPICAL DOUBLE-SIDED GEOCOMPOSITE DRAINAGE LAYER TO GRANULAR DRAINAGE MATERIAL
SCALE: 1"=2'

- NOTES:
- 1) THE FLEXIBLE MEMBRANE LINER SHALL BE 30-MIL PVC IN PHASES 1, 3, 4 AND 5 AND 40-MIL (TEXTURED) LLDPE IN PHASE 2.
 - 2) PROTECTIVE COVER AND GRANULAR DRAINAGE MATERIALS SHALL BE PLACED FROM THE BOTTOM OF THE SLOPE TO THE TOP ON SLOPES THAT EXCEED 15%.
 - 3) A CUSHION LAYER SHALL BE ADDED ABOVE THE COMPOSITE LINER SYSTEM IF THE DRAINAGE MATERIAL IS COMPRISED OF PARTICLES LARGER THAN THE #8 SIEVE AND PARTICLES ARE MORE ANGULAR THAN SUB-ROUNDED.

LEGEND - EXISTING

LEGEND - PROPOSED

REFERENCE DRAWINGS

DATE	NO.	DESCRIPTION	APPD.
11/29/06	D	NOD 3 RESPONSE	JHH
9/29/06	C	NOD 2 RESPONSE	JHH
9/29/07	B	NOD 1 RESPONSE	JHH
2/29/07	A	ISSUED FOR PERMIT	JHH

REVISIONS

s:/mt/15/geo_hydro_site/vendor/hull/15-30501-34

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www.hullinc.com

STATE OF OHIO
JOHN HARRISON
HULL
E-45128
REGISTERED PROFESSIONAL ENGINEER

DATE: 11/3/08
PROJECT NO.: APO006
FILE NO.: APO006.100.0035
LAYOUT BY: TBE
DRAWN BY: SAC/GB
CHECKED BY: AMG/LAS
SCALE: AS NOTED
SUBMITTAL DATE: MAY 2008
DEPA DRAWING NO. 7A

DWG. NO. 15-30501-40-D
SCALE: AS NOTED
CIVIL ENGINEERING DIVISION
DRAWING 40 OF 56

OHIO VALLEY ELECTRIC CORP.
KYGER CREEK PLANT
CHESHIRE OHIO
KYGER CREEK PLANT LANDFILL

TYPICAL CONSTRUCTION DETAILS

DWG. NO. 15-30501-40-D
SCALE: AS NOTED
CIVIL ENGINEERING DIVISION

1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

Post-closure Plan

CFR 257.104(d)

CCR Landfill

Kyger Creek Station

Cheshire, Ohio

October 2016

Prepared by: Ohio Valley Electric Corporation

3932 U.S. Route 23

Piketon, OH 45661



Table of Contents

1.0	OBJECTIVE	1
2.0	DESCRIPTION OF THE CCR UNIT	1
3.0	DESCRIPTION OF THE POST-CLOSURE PLAN - 257.104(d)(1)(i)	1
4.0	POST-CLOSURE CONTACT - 257.104(d)(1)(ii)	4
5.0	POST-CLOSURE PLANNED USE - 257.104(d)(1)(iii)	4

Attachments

Attachment A – Closure/Post-closure Plan submitted to OEPA

1.0 OBJECTIVE

This report has been prepared to fulfill the requirements of 40 CFR 257.102(b) of the Coal Combustion Residuals (CCR) Rule to develop a Closure Plan for the Kyger Creek CCR Landfill.

2.0 DESCRIPTION OF THE CCR UNIT

The Kyger Creek Station is located on the shore of the Ohio River near Cheshire, Ohio, and consists of five coal-fired electric generating units; each nominally rated at 217 megawatts, that began producing electricity in 1955 to support the Department of Energy's (DOE's) Portsmouth Gaseous Diffusion Plant located near Piketon, Ohio. The Kyger Creek CCR Landfill is located approximately two miles west of the Station, at 212 Shaver Road, Cheshire, Ohio. The landfill is owned and operated by the Ohio Valley Electric Corporation, and has been permitted by the Ohio Environmental Protection Agency as a Type III Residual Waste Landfill, Permit-To-Install (PTI) No. 06-08283, to accept CCR generated by the Kyger Creek Station. The landfill's leachate discharge is managed under the site's NPDES permit. The landfill facility is comprised of 98 acres of disposal area, with a capacity of 20.4 million cubic yards, and will be constructed in five phases.

3.0 DESCRIPTION OF THE POST-CLOSURE PLAN 257.102(b)(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]

3.1 Section 257.104(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 the 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 damage or degradation of the final cover system occurs.

- **Embankment**: The entire embankment, including top surface and side-slopes, will be inspected for slides, settlement, subsidence, displacement, and cover condition.
- **Soil Dike**: The soil dike will be inspected for slides, displacement, seepage, 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. Due to the design contours required to achieve the final cap grade, special attention will be focused to ensure that no settlement, subsidence, erosion, depressions or flat areas exist and that no water is allowed to pond above the cap system.
- 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 pond will be inspected for clogging or damage routinely. Other exposed portions of the Leachate Collection System, including cleanouts, will be inspected for damage and repaired as necessary. Additionally, the Leachate Collection Pond will be inspected for general damage to the pond and perimeter berms, with repairs made as necessary. The Leachate Collection pond will also be inspected for the accumulation of sediment and managed as necessary.

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

- 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. The selection of fertilizers and herbicides will be made in manner to 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.
- Security Control devices: Any portions of the security control devices installed (i.e., fencing, roadway barricades, etc...) will be inspected and repaired as necessary.
- 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 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 will be examined and rectified. Due to the design contours required to achieve the final cap grade, special attention will be focused on the cap surface to ensure that any areas that hold water are re-graded to promote drainage, re-seeded to promote vegetative growth, and maintained to ensure that the ponding of water does not persist.
- Surface Water Drainage System: The channel linings are designed and will be constructed 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 reseeded according to the specifications. Damage to culverts will be repaired; structure replacement will be performed if needed. The Kyger Creek Landfill will be closed periodically throughout the life of the landfill as sub phases and phases reach the final waste placement elevations. Once final waste grades are achieved, the landfill surface will be covered with a minimum two and a half-foot thick compacted soil layer with a permeability of no more than 1×10^{-5} cm/sec, and soil layer that is two feet thick to support native plant growth.
- Leachate Collection System: Maintenance of the leachate collection System will consist of repairing and/or replacing any damaged or eroded portions of the system and pond, cleaning of the piping, and removing leachate and sediment from the collection pond as needed.

3.2 SECTION 257.104(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 or repaired.

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 257.104 (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, telephone number, and email address of the person to contact about the facility during the post-closure period shall be provided upon notification of closure.

5.0 POST-CLOSURE PLANNED USE 257.104 (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 containment 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. All other activities will be prohibited.

Attachment A

FINAL CLOSURE/POST-CLOSURE PLAN

**FOR THE:
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
GALLIA COUNTY, CHESHIRE, OHIO**

**PREPARED FOR:
AMERICAN ELECTRIC POWER
1 RIVERSIDE PLAZA
COLUMBUS, OHIO 43215**

MARCH 2007 (REVISED MAY and NOVEMBER 2008)

Hull
& associates, inc.

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1.0 OAC 3745-30-09 FINAL CLOSURE ACTIVITIES

This Final Closure/Post-Closure Plan has been prepared in accordance with OAC 3475-30-09 and OAC 3745-30-10. All of the information required by OAC 3745-30-09 is contained in this Plan either directly or by reference to other sections of the Permit-to-Install (PTI) application. Final closure of the Kyger Creek Plant Landfill shall be conducted in accordance with OAC 3745-30-09.

(A) For all residual waste landfill facilities, a "final closure/post-closure plan" containing the following information shall be submitted to the director for approval as part of a permit to install application for a new residual waste landfill facility or the expansion of an existing residual waste landfill facility, or as part of a permit to install application submitted in response to division (A)(3) or (A)(4) of section 3734.05 of the Revised Code, and not later than one hundred eighty days prior to the anticipated date to cease accepting residual waste.

(1) The name and location of the facility.

The proposed Kyger Creek Plant Landfill is located on the west side of Shaver Road, approximately 1200 feet south of Little Kyger Road, in Addison Township, Gallia County, Ohio. The landfill is located approximately 3 miles southwest of downtown Cheshire, Ohio. The site location may be referenced on the United States Geologic Survey (USGS) quadrangle map provided in Figure 1.

(2) Any variances or exemptions from the requirements of this rule or rule 3745-30-10 of the Administrative Code, or any alternate cap material or thickness or cap slope, or any alternative schedule for completing final closure activities.

There are no variances or exceptions to OAC 3745-30-09 or OAC 3745-30-10 requested at this time.

(3) Name, address, and telephone number of the person or office to contact regarding the residual waste landfill facility during the final closure and post-closure care periods.

Name: Don Fulkerson, Ohio Valley Electric Corporation
Address: 3932 U.S. Route 23 Phone number: (740) 289-7200

4) The following information to be presented in the same manner as outlined in rule 3745-30-05 of the Administrative Code:

- (a) Plan drawings of the horizontal limits and top elevations of waste and the cap system; and surface water control structures including permanent ditches to control run-on and runoff; and sedimentation ponds including the inlet and outlet.**

The horizontal limits and top elevations of waste and the cap system, the surface water control structures, and the storm water sedimentation ponds including the inlet and outlet are located on Plan Drawings 4E, 4F, and 7J through 7M of the PTI Plan Set.

- (b) Establish a grid system with northings and eastings not more than five hundred feet apart.**

A grid system with northings and eastings not more than five hundred feet apart is located on the plan view drawings in the PTI Plan Set.

- (c) Detail drawings of the cap system including but not limited to the key trench, any penetrations, cap drainage structures, and surface water drainage structures**

Detail drawings of the cap system including penetrations, cap drainage structures, and surface water drainage structures are located on Plan Drawings 7C through 7O of the PTI Plan Set.

- (d) Detail drawings of sedimentation pond and discharge structures and surface water run-on and runoff control structures.**

Detail drawings of sedimentation ponds and discharge structures, and the surface water run-on and runoff control structures are located on Plan Drawings 7G through 7O of the PTI Plan Set.

- (e) Static and seismic stability analysis.**

Static and seismic stability analyses for Phase 1, 3, 4 and 5 are located in Appendix B of the PTI. An addendum to Appendix B for the static and seismic stability analyses for Phase 2 composite liner was completed by AEP and is submitted under a separate cover.

- (f) The ground water detection monitoring plan.**

The Groundwater Monitoring Program Plan is located in Appendix I of the PTI.

- (g) The financial assurance information in accordance with rules 3745-27-15 and 3745-27-16 of the Administrative Code, as applicable.**

The financial assurance information in accordance with rules 3745-27-15 and 3745-27-16 of the Administrative Code is located in Appendix A of this document.

(5) Description of on-site availability and suitability of cap material.

A soil volume analysis is included Appendix C-II of the PTI. Should additional suitable cap material be necessary to complete final-closure activities, it is available on other properties owned by OVEC within five mile of the Site.

(6) Quality assurance/quality control plan for cap system construction.

The Construction Quality Assurance/Quality Control Plan is located in Appendix J of the PTI.

(7) Explosive gas monitoring plan, for residual waste landfill facilities which are required to have an explosive gas monitoring system by paragraph (E) of rule 3745-30-06 of the Administrative Code.

An explosive gas monitoring plan is not required for the Kyger Creek Plant Landfill.

(8) Schedule of installation of any explosive gas control systems.

The Kyger Creek Plant Landfill is not required to have an explosive gas monitoring system.

(9) Description of anticipated measures to control erosion during closure.

Construction shall be performed in accordance with Best Management Practices and a Stormwater Pollution Prevention Plan. Erosion of the landfill cover system or stormwater control structures shall be corrected by placing additional soil and regrading the affected areas or installation of erosion-resistant materials if such problems are recurrent. Such erosion-resistant materials may include synthetic mulches, erosion control matting or rip-rap. Inspection of erosion prone areas shall be conducted on a weekly basis during active operational periods, and in accordance with the maintenance and inspection frequencies proposed for post-closure.

Areas subject to persistent erosion shall be inspected by the certifying engineer for appropriate remedial measures. Such measures may include the installation of permanent erosion control structures or the redirection of erosional forces. These measures shall provide for the long-term correction of the erosional problem and protection of the landfill cover systems.

Details for erosion control measures are located on Plan Drawings 7H and 7I of the PTI Plan.

(B) It is the responsibility of the owner or operator to complete final closure of the residual waste landfill facility in a manner that minimizes the need for further maintenance and minimizes post-closure formation and release of leachate and explosive gases to air, soil, ground water, or surface water to the extent necessary to protect human health and the environment.

Final closure of the Kyger Creek Plant Landfill shall be conducted in a manner that minimizes the need for further maintenance and minimizes post-closure formation and release of leachate to soil, ground water, or surface water to the extent necessary to protect human health and the environment.

(C) Mandatory closure. The owner or operator shall begin final closure activities in accordance with the final closure/post-closure plan and paragraph (F) of this rule no later than seven days after any of the occurrences specified in this paragraph. Approval of the final closure/post-closure plan does not affect the owner's or operator's obligations to begin and complete final closure activities in accordance with paragraph (F) of this rule. It is mandatory to begin closure activities for a residual solid waste landfill facility upon the occurrences of any of the following:

- (1) The owner or operator declares that no more residual waste will be accepted for disposal at the residual waste landfill facility.**
- (2) A solid waste license issued for the residual waste landfill facility has expired, and another license has not been applied for in the manner prescribed in Chapter 3745-37 of the Administrative Code.**
- (3) All approved limits of residual waste placement have been reached.**
- (4) A solid waste license issued for the residual waste landfill facility has expired, and another license has been applied for and denied as a final action.**
- (5) A solid waste license issued for the residual waste landfill facility has been revoked as a final action.**
- (6) A solid waste license issued for the residual waste landfill facility has been suspended as a final action.**

Final closure activities, if mandated, shall commence and be implemented in accordance with this final closure/post-closure plan and paragraph (F) of this rule no later than seven days after any of the occurrences specified in paragraph (C) above.

(D) Notification of anticipated date to cease acceptance of solid waste.

- (1) The owner or operator shall provide notice by certified mail or any other form of mail accompanied by a receipt of the anticipated date on which the residual waste landfill facility will cease to accept solid waste if final closure is to be triggered by an occurrence described in paragraph (C)(1), (C)(2), or (C)(3) of this rule. Such notice shall be provided not less than ninety days prior to the anticipated date on which solid waste will cease to be accepted.**
- (2) The owner or operator shall send a copy of the notice specified in paragraph (D)(1) of this rule to the following:**

- (a) **The board of health having jurisdiction.**
- (b) **The single county or joint county solid waste planning district in which the facility is located.**
- (c) **The director.**

Not less than 90 days prior to the anticipated date of final waste receipt, written notice of such action and the date shall be provided to the Director of the Ohio EPA and the Gallia County Health Department.

- (3) **Concurrently with the submission of the notice required by paragraph (D)(1) of this rule, the owner or operator shall commence publishing at three-week intervals, prominent notice of the anticipated date on which solid waste will cease to be accepted at the residual waste landfill facility. Such notice shall be published in the county in which the residual waste landfill facility is located and in any other county which has been a source of at least twenty-five per cent of the solid wastes deposited at the residual waste landfill facility over the previous twelve months of operation. Notice shall be provided to the director and the board of health having jurisdiction that affirms the notices have been published in accordance with this paragraph. The public notice requirement shall not apply to a residual waste landfill facility owned by a generator, exclusively disposing of solid wastes generated at the premises owned by the generator.**

This rule is not applicable since Kyger Creek Plant Landfill will be the generator exclusively disposing of waste at the facility.

- (4) **Not less than thirty days prior to the anticipated date on which the facility will cease to accept solid waste, notice shall be provided by certified mail or any other form of mail accompanied by a receipt to the director of any changes to the information that identifies the facility's final closure contact person.**

Not less than 30 days prior to the anticipated date of final waste receipt, written notice shall be provided by certified mail to the Director of any changes in the Facility's final closure contact person.

- (E) **The owner or operator shall send notification by certified mail or any other form of mail accompanied by a receipt to the director and to the board of health having jurisdiction, as to the actual date that the residual waste landfill facility ceased to accept residual waste. Notification shall be sent to the director and the board of health having jurisdiction not later than seven days after the date specified in the notification.**

Notification shall be sent to the Director of Ohio EPA and the Gallia County Health Department not later than seven days after the actual date that the Kyger Creek Plant Landfill ceased to accept residual waste.

(F) The owner or operator shall begin final closure activities not later than seven days after the residual waste landfill facility has ceased to accept residual waste. Final closure activities for all residual waste landfill facilities shall include, at a minimum the following:

(1) Blocking, by locked gates, fencing, or other sturdy obstacles, of all entrances and access roads to the residual waste landfill facility to prevent unauthorized access during the final closure and post-closure period.

All entrances and access roads to the Kyger Creek Plant Landfill shall be blocked, by locked gates, fencing, or other sturdy obstacles, to prevent unauthorized access during the final closure and post-closure period.

(2) Posting of signs, in such a manner as to be easily visible from all access roads leading onto the residual waste landfill facility, stating in letters not less than three inches high that the residual waste landfill facility no longer accepts residual waste. Signs shall be maintained in legible condition for not less than two years after final closure activities have been completed. This paragraph shall not apply to residual waste landfill facilities owned and operated by a generator of residual wastes if the residual waste landfill facility exclusively disposes of residual wastes generated at one or more premises owned by the generator.

This rule is not applicable since Kyger Creek Plant Landfill will be the generator exclusively disposing of waste at the facility.

(3) Construction of a cap system in all areas of residual waste placement, other than those which have been capped in accordance with paragraph (V)(3)(b) of rule 3745-30-14 of the Administrative Code, which shall minimize infiltration and shall, at a minimum, consist of the following:

(a) First, a recompacted soil barrier layer, a minimum of two feet thick, constructed in accordance with the specifications in rule 3745-30-07 of the Administrative Code and modeled by the construction of a test pad in accordance with rule 3745-30-07 of the Administrative Code.

The recompacted soil barrier layer in the cap system shall be a minimum of two feet thick and shall be constructed in accordance with the specifications in OAC 3745-30-07 and modeled by the construction of a test pad also in accordance with OAC 3745-30-07. The test pad construction work plan is located in Appendix N of the PTI.

- (b) **A vegetative layer, consisting of soil and vegetation, placed on top of the soil barrier layer. The soil shall be of sufficient thickness and fertility to support its vegetation and to protect the soil barrier layer from damage due to root penetration, and for facilities with disposed waste generally having a permeability greater than 1×10^{-5} cm/sec, the soil shall be of a thickness such that the top of the recompacted soil barrier layer lies below the local frost depth.**

Comparable materials and/or thicknesses for the soil barrier layer and soil vegetative layer may be used if approved by the director.

The cap system shall have a minimum slope of two per cent and a maximum slope of twenty-five per cent, or some alternate slope based on stability analyses. The cap system shall have a maximum projected erosion rate of five tons per acre per year.

Any penetrations into the cap system shall be sealed so that the integrity of the soil barrier layer is maintained.

The soil in the vegetative layer shall be 2.5 feet thick, shall be fertile to support its vegetation, and shall protect the soil barrier layer from damage due to root penetration. The cap system shall be graded to maintain stable slopes and facility surface water and erosion control.

- (4) **The owner or operator shall install the required surface water control structures including permanent ditches to control run-on and runoff and sedimentation pond(s), as shown in the final closure/post-closure plan, and as necessary, grade all land surfaces to prevent ponding of water where residual waste has been placed and institute measures to control erosion.**

[Comment: The minimum slope standard in rule 3745-30-07 of the Administrative Code is a design standard. For closure certification, it is not necessary to regrade the site if there is not a ponding problem, even if the slope no longer meets the design in the closure/post-closure plan.]

Surface water control structure including permanent ditches to control run-on and runoff, sedimentation ponds, and others as detailed in the PTI plans shall be installed. A surface water management plan containing analysis and design of components of the surface water control structures is included in Appendix G of the PTI.

- (5) **Design, installation, and maintenance of a ground-water monitoring system in accordance with rule 3745-30-08 of the Administrative Code, if not in place.**

The design, installation, and maintenance of the groundwater monitoring system will be in accordance with OAC 3745-30-08. The Groundwater Monitoring Program Plan is located in Appendix I of the PTI.

- (6) The owner or operator shall record on the plat and deed to the residual waste landfill facility property, or on some other instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property, a notation describing the impacted acreage, exact location, depth, volume, and nature of the residual waste deposited in the residual waste landfill facility.**

Upon ceasing waste acceptance, the county recorder will be contacted to add a notation to the property deed and plat that describes the acreage, exact location, depth, volume, and nature of waste in the Facility.

- (7) Continue to comply with rule 3745-30-14 of the Administrative Code and all monitoring and reporting activities required during the operating life of the residual solid waste landfill facility until the closure certification is submitted and the post-closure care period begins.**

The Kyger Creek Plant Landfill shall continue the monitoring and reporting activities required in OAC 3745-30-14 until the closure certification is submitted and the post-closure care period begins.

- (G) Final closure activities shall be completed not later than one year after final receipt of residual waste in the residual waste landfill facility unless an alternate schedule has been approved by the director.**

Closure activities shall be completed at the Kyger Creek Plant Landfill within one year after final waste receipt unless an alternate schedule is approved by the Director.

- (H) Final closure certification. Not later than ninety days after the completion of final closure activities, the owner or operator shall submit to the director, and to the board of health having jurisdiction, a written certification report. The final closure certification shall include verification that the residual waste landfill facility has been closed in accordance with this rule and the "final closure/post-closure plan". The final closure certification shall at a minimum include the following:**

- (1) A list of the construction certification reports for construction of the cap system with the date of submittal and a topographic map of the entire residual waste landfill facility showing the areas certified by each report. The map shall also show the horizontal limits of waste placement and the surface water control structures including permanent ditches to control run-on and runoff, and the following if present: the sedimentation pond(s) including the inlet and outlet, the outlet of any permanent ground water control structures, and the explosive gas control system.**
- (2) A demonstration that the ground water monitoring system meets the requirements of rule 3745-30-08 of the Administrative Code.**

- (3) A copy of the plat and deed or other instrument which is normally examined during a title search, showing the notation required by paragraph (F)(6) of this rule and bearing the mark of recordation of the office of the county recorder for the county in which the property is located.**
- (4) A demonstration that all entrances and access roads have been blocked as required by paragraph (F)(1) of this rule, and the sign required by paragraph (F)(2) has been posted.**

A final-closure certification report shall be prepared upon completion of closure activities by a registered professional engineer. The report shall contain all the requirements of OAC 3745-30-09(H), including a record drawing of the entire Facility at the required scale. The certification report will be submitted to the Ohio EPA and the Gallia County Health Department within 90 days of the completion of closure activities.

- (I) The health commissioner and the director, or their authorized representatives, upon proper identification, may enter any residual waste landfill facility at any time during the final closure period for the purpose of determining compliance with this rule.**

Upon proper identification, the Gallia County Health Department and the Ohio EPA, or their authorized representatives, may enter the Kyger Creek Plant Landfill at any time during the final closure period for the purpose of determining compliance with OAC 3745-30-09.

2.0 OAC 3745-30-10 POST-CLOSURE ACTIVITIES

The post-closure care shall commence upon approval of final closure certification by Ohio EPA. The post-closure care shall be conducted in accordance with OAC 3745-30-10.

(A) Following completion of final closure activities in accordance with rule 3745-30-09 of the Administrative Code the owner, operator, or permittee shall conduct post-closure care activities at the residual waste landfill facility for the following applicable time period:

- (1) Thirty years if the facility is a class I residual waste landfill.**
- (2) Twenty years if the facility is a class II residual waste landfill.**
- (3) Fifteen years if the facility is a class III residual waste landfill.**

The post-closure care period begins when the certification required by paragraph (H) of rule 3745-30-09 of the Administrative Code has been submitted for the residual waste landfill facility.

The post-closure care period for the Kyger Creek Plant Landfill shall be 15 years.

(B) Any time during the post-closure period, based on such factors as the inspection or monitoring results required by paragraphs (C)(4) and (C)(5) of this rule and whether human health or safety or the environment is or will be protected, or whether a nuisance is or will be created, the director may do either of the following:

- (1) Shorten the post-closure care period required by paragraph (A) of this rule, if a variance has been requested pursuant to rule 3745-30-15 of the Administrative Code and the director finds that the reduced period is sufficient to protect human health and the environment, based on such factors as the inspection and monitoring results required by paragraphs (C)(4) and (C)(5) of this rule.**
- (2) Extend the post-closure care period required by paragraph (A) of this rule, if the director finds that the extended period is necessary to protect human health and the environment, based on such factors as the inspection and monitoring results required by paragraphs (C)(4) and (C)(5) of this rule.**

[Comment: If the landfill shows an improvement to leachate quality, the quantity of leachate generated will not cause an outbreak or slope failure, that ground water monitoring is no longer needed, that it is not generating explosive gas which has the potential to migrate underground, and that the cap system will maintain its integrity and stability if post-closure care activities cease, the director may release the owner, operator, or permittee from continuing post-closure care activities.]

The post-closure care period shall be 15 years unless it is shortened or lengthened per OAC 3745-30-10(B).

(C) Post-closure care activities for all residual waste landfill facilities shall include, but are not limited to the following:

(1) Continuing operation and maintenance of the leachate management system, the surface water management system, any explosive gas extraction and/or control system, any explosive gas monitoring system, and the ground water monitoring system.

The leachate management system, groundwater monitoring system and surface water monitoring system shall be operated and maintained during the post-closure care period.

(2) Maintaining the integrity and effectiveness of the cap system, including making repairs to the cap system as necessary to correct the effects of settling, dead vegetation, subsidence, ponding, erosion, or other events, and preventing run-on and runoff from eroding or otherwise damaging the cap system.

The integrity and effectiveness of the cap system shall be maintained during the post-closure period. Repairs needed to correct settling, dead vegetation, subsidence, ponding, and erosion shall be made accordingly. If suitable soils to repair the cap system are not available on-site, additional suitable cap material is available on other properties owned by OVEC within five mile of the Site.

(3) Repairing any leachate outbreaks detected at the residual waste landfill facility by doing the following:

(a) Contain and properly manage the leachate at the residual waste landfill facility.

(b) If necessary, collect, treat, and dispose of the leachate, including, if necessary, following the contingency plan for leachate storage and disposal prepared pursuant to rule 3745-30-14 of the Administrative Code.

(c) Take action to minimize, control, or eliminate the conditions which contribute to the production of leachate.

Leachate outbreaks detected during the post-closure period will be managed and collected per OAC 3745-30-10(C)(3).

(4) Quarterly inspection of the residual waste landfill facility during each year of the post-closure care period and submittal of a written summary to the

appropriate Ohio EPA district office not later than fifteen days after the inspection date detailing the results of the inspection and a schedule of any actions to be taken to maintain compliance with paragraphs (C)(1), (C)(2), and (C)(3) of this rule. The director may either increase the frequency of inspections, or, upon the request of the permittee, decrease the frequency of inspections if the results of past inspections justify either action.

Written summary of quarterly inspection of the facility shall be submitted to the Ohio EPA not later than 15 days after the inspection. A typical Post-Closure Inspection Form is included in Appendix B of this document. This inspection form can be modified by Kyger Creek Plant Landfill, as needed, to address the needs of the Landfill.

- (5) **Fulfilling all monitoring and reporting requirements in accordance with rule 3745-30-08 of the Administrative Code for ground water, and, if necessary, with rule 3745-27-12 of the Administrative Code for explosive gas, and with any monitoring required by any orders or authorizing documents. The post-closure care period may be shortened for explosive gas monitoring, as outlined in paragraph (L) of rule 3745-27-12 of the Administrative Code.**

The Kyger Creek Plant Landfill shall perform groundwater monitoring and reporting during the post-closure period per OAC 3745-30-08. The post-closure period may be shortened, if possible, per OAC 3745-27-12.

- (6) **Submitting a report to the appropriate Ohio EPA district office and approved health department not later than the first day of April of each year, which contains the following:**
 - (a) **A summary of the quantity of leachate collected for treatment and disposal on a monthly basis during the year, and the location of leachate treatment and/or disposal.**
 - (b) **Results of analytical testing of an annual grab sample of leachate for the parameters specified in paragraph (A) of rule 3745-30-03 of the Administrative Code. The grab sample shall be obtained from the leachate management system.**
 - (c) **The most recent updated post-closure cost estimate adjusted for inflation and for any change in the post-closure cost estimate required by rule 3745-27-16 of the Administrative Code.**

A report on leachate monitoring and updated post-closure care cost shall be submitted to Ohio EPA and the Gallia County Health Department not later than the first day of April of each year.

- (7) **Records and reports generated by paragraphs (C)(4) to (C)(6) of this rule are to be kept for the duration of the post-closure care period at a location**

where the records and reports are available for inspection by Ohio EPA or the approved health department during normal working hours.

Records and reports prepared in accordance with OAC 3745-30-10(C)(4) to (C)(6) shall be kept at the Kyger Creek Plant Landfill for the duration of the post-closure period and shall be available for inspection by the Ohio EPA and Gallia County Health Department during normal working hours.

- (D) Upon completion of the post-closure care period, the owner, operator, or permittee shall submit to the director written certification that the residual waste landfill facility has completed post-closure activities in accordance with this rule and the "final closure/post-closure plan." This certification shall be accompanied by documentation which demonstrates that all post-closure care activities have been completed. The certification shall be signed and sealed by a professional engineer registered in Ohio.**

Following completion of the post-closure care period, Kyger Creek Plant Landfill shall submit certification that the post-closure activities have been completed. The certification shall be signed and sealed by a professional engineer registered in the State of Ohio.

- (E) The health commissioner and the director, or their authorized representatives, upon proper identification, may enter any closed residual waste landfill facility at any time during the post-closure care period for the purpose of determining compliance with this rule.**

Upon proper identification, the Gallia County Health Department and the Ohio EPA, or their authorized representatives, may enter the Kyger Creek Plant Landfill at any time during the post-closure care period for the purpose of determining compliance with this rule.

APPENDIX A

Financial Assurance Information

(To be provided once permit is obtained)

APPENDIX B

Post-Closure Inspection Form

**OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
POST-CLOSURE INSPECTION FORM**

Facility: KYGER CREEK PLANT LANDFILL, GALLIA COUNTY, OHIO

Weather Conditions: Rain Snow Clear Wind _____ Temperature _____

Inspection Date: _____ Arrival Time: _____ Departure Time: _____

Type of Inspection: _____

Inspector(s) Affiliation: _____

INSPECTION ITEMS	ACTION REQ'D	NO ACTION REQ'D	LOCATION AND COMMENTS
A. SITE ACCESS			
- Gate			
- Signs			
B. SITE SECURITY			
C. VEGETATIVE COVER			
- Bare Spots			
- Cracks			
- Erosion			
- Settlement			
- Water Ponding			
- Protruding Objects			
D. LEACHATE SEEPS			
- Area Locations			
- Entering Surface Water			
E. LEACHATE COLLECTION SYSTEM			
- Piping(evidence of leakage)			
- Leachate collection pond(s)			

**OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
POST-CLOSURE INSPECTION FORM**

INSPECTION ITEMS	ACTION REQ'D	NO ACTION REQ'D	LOCATION AND COMMENTS
F. SURFACE WATER			
- Sedimentation Ponds:			
- Outlet Clear/Functional			
- Erosion at Outlet			
- Erosion at Inlet			
- Inlet Unobstructed			
- Erosion at Berms/Banks			
- Sediment Level			
- Ditches			
- Vegetative Cover			
- Erosion Control Terraces			
- Silt Accumulation			
- Erosion or Scour			
- Channel Lining Intact			
- Differential Settlement –Slopes Affected			
- Culverts Intact			
- Erosion/Scour at Inlet/Outlet			
- Traffic Damage			
- Cover Height Adequate			
- Silt Accumulation			
- Obstructions			
G. GROUND-WATER MONITORING			
- Groundwater Wells *			
- Groundwater Wells *			
- Groundwater Wells *			
- Wells Locked			

**OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK PLANT LANDFILL
POST-CLOSURE INSPECTION FORM**

INSPECTION ITEMS	ACTION REQ'D	NO ACTION REQ'D	LOCATION AND COMMENTS
H. OTHER			
- Access Road Condition			
- Vegetative Stress			
- Screening/Aesthetics Conditions			
- Groundwater Interceptor System			

*Note: Overall site inspections should include an inspection of the physical components of the wells visible from the surface. Additional components of the wells will be inspected during the groundwater monitoring inspections, which are outlined in the Groundwater Monitoring Plan.