

CLOSURE PLAN

CCR 257.102(b)

Little Broad Run Landfill

Mountaineer Plant
New Haven, West Virginia

October, 2016

Prepared for : Appalachian Power Company - Mountaineer Plant

New Haven, West Virginia

Prepared by: American Electric Power Service Corporation

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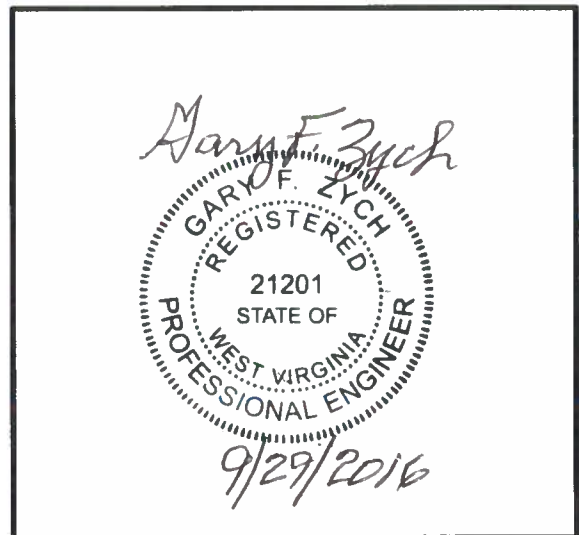
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CCR 257.102(b)
MOUNTAINEER PLANT
LITTLE BROAD RUN LANDFILL

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I certify to the best of my knowledge, information, and belief that the information contained in this closure plan meets the requirements of 40 CFR § 257.102

I certify to the best of my knowledge, information and belief that design of the final cover system as described in this closure plan meets the requirements of 40 CFR § 257.102.

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1.0 OBJECTIVE

This report was prepared by AEP- Geotechnical Engineering Services (GES) section to fulfill requirements of CCR 257.102(b) for Closure Plans of Existing CCR Units.

2.0 DESCRIPTION OF THE CCR UNIT

The Mountaineer Power Plant is located near the City of New Haven, Mason County, West Virginia. It is owned and operated by Appalachian Power Company (APCO). The facility operates a landfill for the disposal of CCR materials.

The Little Broad Run Landfill (Landfill) is a Class F Solid Waste Facility per the West Virginia Department of Environmental Protection (WVDEP), Title 33, Series 1, Solid Waste Management Rule and the Class F Industrial Landfill Application requirements.

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 Mountaineer Landfill will be closed by closure in place. The final cover system per the current approved permit and closure plan calls for the final cover system to consist of a re-compacted soil barrier layer and protective soil cover. AEP will be submitting an alternation to WV DEP to incorporate a flexible geomembrane liner into the final cover system in compliance with the CFR 257.102(d)(3). The closure will consist of grading the existing onsite materials to the desired permit grades and the installation of an impermeable cap with vegetative cover. The existing surface will be graded to achieve at minimum a gently sloping surface to promote surface water runoff. The graded surface will be covered with a flexible geomembrane system and 2-feet of soil fill consisting of an 18" soil infiltration layer and 6" of earthen material that is capable of sustaining native plant growth. The surface soil will be seeded and mulched to promote the growth of a vegetative cover.

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 closure plan must also discuss how the final cover system will achieve the performance standards specified in paragraph (d) of this section.]

The final cover system per the current approved permit and closure plan calls for the final cover system to consist of a re-compacted soil barrier layer and protective soil cover. AEP will be submitting an alternation to WV DEP to incorporate a flexible geomembrane liner into the final cover system in compliance with the CFR 257.102(d)(3). The final cover system will consist of a flexible geomembrane that 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. The geomembrane will be installed directly over the graded CCR materials. Over the geomembrane will be installed an infiltration layer consisting of 18" of earthen material and an erosion layer consisting of 6" of earthen material that is capable of sustaining native

plant growth. The final cover will be seeded and mulched to promote growth of a vegetative cover. The final cover slope will be a minimum of 2% and will convey water to a NPDES permitted outfall.

4.1 CLOSURE PERFORMANCE STANDARDS 257.102 (d)(1)

4.1.1 SECTION 257.102(d)(1)(i)

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

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.

4.1.2 SECTION 257.102(d)(1)(ii)

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

The final surface areas will be graded to a minimum slope 2% to prevent the ponding of surface runoff. Drainage features will be designed to have positive drainage.

4.1.3 SECTION 257.102(d)(1)(iii)

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

4.1.4 SECTION 257.102(d)(1)(iv)

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

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

4.1.5 SECTION 257.102(d)(1)(v)

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

The CCR unit will be closed in a timeframe consistent with recognized and generally accepted good engineering practices. As the fill reaches the approved final grades, periodic closure activities may occur.

4.2 DRAINING AND STABILIZING OF THE SURFACE IMPOUNDMENT

257.102(d)(2)

This section is not applicable to a landfill.

4.3 FINAL COVER SYSTEM 257.102 (d)(3)

[If a CCR unit is closed by leaving 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 per the current approved permit and closure plan calls for the final cover system to consist of a re-compacted soil barrier layer and protective soil cover. AEP will be submitting an alternation to WV DEP to incorporate a flexible geomembrane liner into the final cover system in compliance with the CFR 257.102(d)(3). The final cover system will consist of a flexible geomembrane that 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. The geomembrane will be installed directly over the graded CCR material. Over the geomembrane will be installed an infiltration layer consisting of 18" of earthen material and an erosion layer consisting of 6" of earthen material that is capable of sustaining native plant growth. The final cover will be seeded and mulched to promote growth of a vegetative cover. The final cover slope will be a minimum of 2% and will convey water to a NPDES permitted outfall. The final cover slope will be a minimum of 2% to accommodate settling and subsidence.

5.0 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 CCR volume ever on-site is 56,500,000 Cubic Yards.

6.0 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 largest area of the CCR unit ever requiring a final cover is 144 acres.

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

[A schedule for completing 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 sequential 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 phases 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.

At this time there are currently no plans to close this CCR unit. Once the CCR unit requires closure a schedule to satisfy this section will be prepared.