

**NOTIFICATION OF INTENT TO CLOSE A CCR UNIT  
MCELROY'S RUN IMPOUNDMENT**

**Prepared For:**



**ALLEGHENY ENERGY SUPPLY COMPANY, LLC  
WILLOW ISLAND, PLEASANTS COUNTY, WEST VIRGINIA**

**Prepared By:**

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.  
PITTSBURGH, PENNSYLVANIA**

**CEC Project 315-202**

**September 2024**



**Civil & Environmental Consultants, Inc.**

## TABLE OF CONTENTS

	<u>Page</u>
1.0 NOTIFICATION OF INTENT TO CLOSE A CCR UNIT.....	2
2.0 IMPOUNDMENT FINAL COVER DESIGN.....	2
3.0 ENGINEER’S CERTIFICATION.....	4

## **1.0 NOTIFICATION OF INTENT TO CLOSE A CCR UNIT**

Allegheny Energy Supply Company, LLC (AESC), a wholly owned company of FirstEnergy (FE), is submitting this Notification of Intent to Close a CCR Unit in accordance with USEPA CCR Regulation §257.102(g) for the closure of the McElroy's Run Coal Combustion Residuals (CCR) Disposal Impoundment (Impoundment) located in Pleasants County, West Virginia. The Impoundment and Landfill will be closed by leaving the CCR in place and installing a final cover system meeting the requirements of USEPA CCR Regulation §257.102(d)(3). In accordance with USEPA CCR Regulation §257.102(g), AESC is providing this notification of initiation of closure activities of the Impoundment.

## **2.0 IMPOUNDMENT FINAL COVER DESIGN**

In accordance with of §257.102(g), this document provides certification by a qualified professional engineer for the design of the final cover system as required by §257.102(d)(3)(iii).

USEPA CCR Regulation §257.102(d)(3)(i) requires a final cover system comprised of a soil infiltration layer a minimum 18-inches thick with permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than  $1 \times 10^{-5}$  cm/sec, whichever is less. A minimum 6-inch-thick erosion layer is required above the infiltration layer. USEPA CCR Regulation §257.102(d)(3)(ii) allows for an alternative final cover system that meets the requirements in the regulations. AESC is proposing an alternative final cover system for the Impoundment meeting the requirements of §257.102(d)(3)(ii), comprised of:

- 40-mil thick geomembrane
- Geotextile cushion/drainage layer
- 1-foot-thick soil cover

The alternative final cover 40-mil thick geomembrane provides an infiltration layer that achieves much less reduction in infiltration than 18 inches of soil with a permeability less than  $1 \times 10^{-5}$  cm/sec. The alternative final cover 1-foot-thick cover soil provides more protection from erosion than a 6-inch-thick layer.

Due to the shallow final cover slopes (generally less than 1 percent), a geotextile is suitable to replace a geocomposite drainage layer. The drainage layer will outlet into a drainage pipe that will run the length of the Impoundment to convey water collected in the drainage layer to the dam spillway.

AESC proposes to use a 12-inch-thick layer of final cover soil obtained from proposed on-site borrow areas as an alternative to the 24-inch-thick cover soil layer required by §257.102(d)(3)(i). The proposed alternative is based on the equivalency of the total plant available water storage (PAW) of the proposed 12-inch soil thickness compared to that of a 24-inch thickness of final cover soil.

It is the professional judgment and experience of CEC that USDA clay loam and silty clay textured soils containing less than 45 percent clay can serve as adequate growing media, as long as care is taken not to excessively compact them. Based on capping over 500 acres of an impoundment with similar grades with a 1-foot-thick cover soil layer, soils belonging to the USDA clay loam and clay textural classes containing up to 45 percent clay in the fine earth fraction have supported growth of robust perennial vegetation.

The borrow soil evaluation performed at McElroy's Run indicates that the on-site soils evaluated all contain less than 45 percent clay. Therefore, continued revegetation success can be expected using these soils. The laboratory data from borrow area investigations performed by CEC indicate that silty clay loam and clay loam are the predominant USDA soil textural classes of the proposed borrow areas.

The total PAW of the final cover soil is the most limiting factor affecting the growth and survival of plants through dry periods of the growing season. The borrow soils identified for use at the McElroy's Run Disposal Area generally have relatively high PAW, and the proposed 12-inch cover soil thickness will provide adequate PAW to sustain perennial vegetation. Also, because slopes are very flat (under 1 percent), soil erosion potential is negligible.

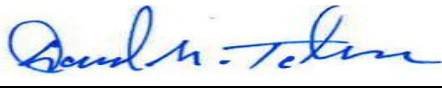
The final cover soil will be revegetated with seed, fertilizer, and mulch to provide a vegetative layer capable of sustaining native plant growth. Topsoil may be mixed with the final cover soil to provide additional organic matter.

Relevant final cover system design calculation are included in the McElroy's Run Impoundment Closure Plan.

### 3.0 ENGINEER'S CERTIFICATION

I, Daniel M. Tolmer, being a Registered Professional Engineer in the State of West Virginia do hereby certify that to the best of my knowledge, information, and belief that the McElroy's Run Impoundment Closure final cover system design meets the requirements of §257.102(d)(3)(ii).

Facility Name: McElroy's Run CCR Disposal Facility  
Location: Pleasants County

Engineer's Signature:  \_\_\_\_\_

WV License No. 23162

