2023 ANNUAL PROGRESS REPORT FOR SITE-SPECIFIC ALTERNATE TO INITIATION OF CLOSURE DUE TO PERMANENT CESSATION OF COAL-FIRED BOILERS BY DATE CERTAIN 40 CFR 257.103(f)(2)

McELROY'S RUN COAL COMBUSTION RESIDUAL DISPOSAL IMPOUNDMENT

Pleasants Power Station
Pleasants County, West Virginia

Prepared by:

800 Cabin Hill Drive
Greensburg, PA 15601

November 2023

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PLEASANTS POWER STATION

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1.0 INTRODUCTION

In accordance with 40 CFR 257.103(f)(2), Allegheny Energy Supply Company, LLC, a FirstEnergy Company ("AESC"), submitted a demonstration to the United States Environmental Protection Agency (USEPA) in November 2020 for approval to extend the closure deadlines for the McElroy's Run Disposal Impoundment (the "Impoundment") based on permanent cessation of the coal-fired boilers at the Pleasants Power Station (the "Station") by no later than October 17, 2028 and cessation of the acceptance of waste from the Station at the Impoundment by October 17, 2024 to achieve closure of the Impoundment by October 17, 2028. Although this demonstration submittal remains under agency review, on October 22, 2021, USEPA provided notification that the annual progress report stipulated under 40 CFR 257.103(f)(2)(x) was required to be completed no later than November 30th of each year until closure of the Impoundment was completed. Accordingly, annual progress reports were completed by November 30th of 2021 and 2022. This document has been prepared to fulfill the annual progress reporting requirement for 2023 and provides a summary of the following relative to the reporting period between December 2022 and November 2023:

- Documentation of the continued lack of alternative capacity
- Progress made towards closure of the Impoundment and any delays to the anticipated cease receipt of waste date; and
- Continued CCR Rule compliance activities.

As per 40 CFR 257.105(i)(20) this annual progress report will be placed in the Impoundment's operating record.

2.0 CONTINUED LACK OF ALTERNATIVE DISPOSAL CAPACITY

In accordance with 40 CFR 257.103(f)(2)(i) and 103(f)(2)(v)(A), the November 2020 demonstration submitted under the alternative closure standard in Section 103(f)(2) showed that alternative on or off-site disposal capacity was not available. Five different on-site capacity options were originally assessed (refer to Section 2.1 of the November 2020 demonstration for details) and then reassessed in the 2021 and 2022 Annual Progress Reports (refer to Section 2.0 of those reports for details). Status updates for these five options during the current reporting period are summarized below:

A. Clean Close Impoundment and Retrofit with Liner: This option had several fatal flaws that made it implausible, which included insufficient and/or limited acreage at the site and the Station to construct temporary water and solids management systems; insufficient existing and potential disposal volume at the landfill to support both clean closure and continued Station operations during retrofitting; and the time required and logistics associated with managing the Station's CCRs in order to complete clean closure within a 15 year timeframe. During the current reporting period there have been no changes to any of these factors.

B. Drain Existing Impoundment and Install Liner: This option was not viable due to a combination of technical limitations and time constraints related primarily to the Impoundment's operational configuration not allowing for filling in one area while constructing a liner over another area, along with the Impoundment's remaining disposal volume only being approximately 5 percent of the total permitted disposal capacity. During the current reporting period there have been no changes to any of these factors with the exception that the Impoundment's remaining disposal volume has continued to decrease.

C. Vertically Expand Existing Impoundment and Install Liner: This option was not viable as it presented the same temporary influent rerouting issues and design, permitting and construction time constraints as the retrofitting options outlined above, with added permitting effort required through West Virginia's Dam Safety Section. During the current reporting period there have been no changes to any of these factors.

D. Construct New Impoundment in Undeveloped Area on Site: This option was not viable due to the available undeveloped acreage at the site being unable to provide sufficient operating capacity along with some available areas not being able to meet required regulatory location criteria, both of which were considered fatal flaws. During the current reporting period there have been no changes to any of these factors.

E. Vertically Expand Filled Areas Within the Impoundment Watershed: This option was not viable due to a combination of physical, regulatory, and scheduling factors, which included existing on-site utility conflicts, stability of the in-place CCR subgrade, an inability to meet some state permitting location restrictions, and significantly disrupting the site's existing state groundwater monitoring program well network. During the current reporting period there have been no changes to any of these factors.

In addition to the on-site capacity options above, off-site landfill, disposal impoundment, and commercial industrial wastewater treatment facility capacity options were also assessed and reassessed (refer to Section 2.2 of the November 2020 demonstration and Section 2.0 of the 2021 and 2022 Annual Progress Reports for details), and their current status is summarized below:

A. Utilizing Existing Commercial Industrial Wastewater Treatment (IWT) Facilities: This option was not viable due to the extremely high daily volume and significant solids content of the Station's slurry flow exceeding the typical capabilities of commercial IWT facilities, along with the prohibitive logistics of establishing a reliable means to transport the slurry from the Station to an IWT facility. During the current reporting period there have been no changes to any of these factors.
B. Developing New Off-Site Disposal Impoundment: This option was not viable as it would require completion of siting evaluations, property acquisition, and detailed field investigations and studies, engineering design, permitting, and construction, which could not be performed within a timeframe that would allow the continued operation of the Station. During the current reporting period there have been no changes to any of these factors.
C. Existing Off-Site Disposal Impoundments and Landfills in the Station's Vicinity: Based on an evaluation of 32 existing disposal impoundments and dams along with seven existing landfills located within a 50-mile radius of the Station, none were considered viable alternative disposal options due to a combination of physical, regulatory, schedule, and infrastructure limitations that included size/capacity, active/closed status, absence of or inadequate liner systems, difficulty in obtaining both regulatory agency and public approval of interstate waste transfer for facilities located in Ohio, and the likelihood that some or all of the identified sites have legacy environmental impacts. During the current reporting period there have been no changes to any of these factors.

Based on the factors summarized above, for the current reporting period there continues to be a lack of available on-site and off-site disposal capacity which necessitates the continued use of the existing Impoundment in compliance with 40 CFR 257.103(f)(2).

3.0 IMPOUNDMENT CLOSURE PROGRESS

In accordance with 40 CFR 257.103(f)(2)(v)(D), the November 2020 demonstration submission included a narrative regarding the date by which the Impoundment will cease receipt of waste in order to meet the October 17, 2028 closure deadline, along with a copy of the current Closure Plan required under 40 CFR 257.102(b) and an estimated schedule for closure. These items were included as Section 5.0, Attachment 5-1, and Figure 5-1, respectively, of the November 2020 submittal. The estimated schedule for closure was updated and included as Figure 3-1 in the 2021 and 2022 Annual Progress Reports. During the current reporting period no problems were encountered that would lead to changes to the existing Closure Plan waste cessation date. As such, the Impoundment is still expected to cease accepting waste from the Station on or before October 17, 2024 to meet the October 2028 Impoundment closure and cessation of coal-fired boilers deadlines.

With respect to the estimated schedule for closure presented as Figure 3-1 of the November 2022 Progress Report, the following activities have been completed or are in progress:

- Activity 1.1 (Field Investigations/Sampling/Testing and Studies): This work was completed by the 2nd quarter of 2021 and included geotechnical investigations of both the impounded CCRs and the potential on-site soil borrow areas.

- Activity 1.2 (Engineering Design and Permit Application Preparation and Submission): This work was initiated during the 3rd quarter of 2021 by soliciting bids for professional engineering services to complete the required design and permitting activities. An engineering firm was retained during the 1st quarter of 2022 and prepared the Engineering Design for closure. Additional engineering firms were retained in 2022 to design a new principal spillway and revise the NPDES permit for modified discharge limits. AESC submitted the following Permit Applications during this reporting period:
    - Closure Plan Permit Application (January 2023)
    - Dam Safety Application for Certificate of Approval (January 2023); and
    - NPDES Permit Application (June 2023)

- Activity 1.3 (Regulatory Agency Review/Comment/Response Cycles and Permit Issuance): State permitting requirements include modifications to the NPDES and Solid

Waste Permit and the Dam Safety Certification as listed above. The following outlines the progression of those efforts currently underway:

- AESC's Closure schedule anticipates the Closure Plan to be issued by the end of 2023. However, AESC has not yet been given a target date for which to expect approval of the Closure Plan. In order to meet the Closure schedule and complete Closure by October 2028 as required, AESC has planned to initiate site preparation work in 2024 and final cover system installation in 2025.
- AESC submitted additional information on May 12 and July 31, 2023 to address WVDEP comments received on April 7 and May 25, 2023, respectively, on the Dam Safety Application for Certificate of Approval Based on discussions with WVDEP, the target date for the Dam Safety Application for Certificate of Approval to be issued is in December 2023.
- AESC has had discussions with WVDEP on the NDPES Permit Application and the target date for the permit to be issued is in December 2023.

- Activity 1.4 (Construction Bid Package Preparation):
  AESC is in the process of preparing the Construction Bid Package for site preparation and will complete the Bid Package by the end of the first quarter of 2024 in accordance with the schedule on Figure 3-1.

The durations allotted for regulatory review and approval of the required permit submissions as well as for the construction bidding and cap installation process provide flexibility in completing these tasks in time to maintain the October 2024 waste cessation milestone as well as the October 2028 completion of closure and cessation of coal-fired boilers deadlines. As such, the estimated schedule has been updated to reflect current and anticipated timing for Activities 1.3 and 1.4. No changes are proposed to Activities 2.1 to 2.7 (Construction and Closure Certification). The updated schedule is attached as Figure 3-1 of this report.

4.0 CONTINUED CCR RULE COMPLIANCE

Since the publication of the final CCR Rule in April of 2015, AESC has managed a comprehensive CCR Rule compliance program for the McElroy's Run Disposal Facility, which includes both the Impoundment and a lined CCR landfill. The CCR Rule compliance program has been, is currently, and will continue to address all applicable engineering, groundwater monitoring, recordkeeping, notification, and public information accessibility requirements of the Rule. As required by 40 CFR 257.103(f)(2)(v)(C)(1), a signed certification from AESC documenting that the facility is in compliance with all applicable requirements of the CCR Rule was provided as Attachment 4-1 to the November 2020 demonstration submission. As part of the 2021 and 2022 Annual Progress Reports, all of the various CCR Rule compliance requirements that were fulfilled after the November 2020 demonstration submissions were reported (refer to Table 4-1 of those reports for details).

During the current reporting period continued CCR Rule compliance activities have been required and Table 4-1 summarizes the various inspections, records, plans, reports, notifications, and other supporting information prepared for the Impoundment and landfill between December 2022 and November 2023, all of which are available on the FirstEnergy publicly accessible CCR Compliance website (http://ccrdocs.firstenergycorp.com) unless specifically noted.

Table 4-1. CCR Rule Compliance Summary (December 2022 through November 2023)

CCR Rule Citation	Description	CCR Unit[1]	Date Posted on Publicly Accessible Website
Engineering Requirements			
40 CFR §257.73(a)(3)(i)(E)	Annual EAP Local Emergency Responders Meeting	I	Meeting to be held December 21, 2023
40 CFR §257.80(c)	2022 Fugitive Dust Control Annual Report	I & LF	January 9, 2023
40 CFR §257.83(a)(1)(iv)	Weekly Inspections (Commenced October 2015)	I	Only required to be placed in Operating Record

CCR Rule Citation	Description	CCR Unit[1]	Date Posted on Publicly Accessible Website
40 CFR §257.84(a)(1)(ii)	Weekly Inspections (Commenced October 2015)	LF	Only required to be placed in Operating Record
40 CFR §257.83(b)(2), 84(b)(2)	2022 Annual Inspection Waiver	I & LF	February 9, 2023
40 CFR §257.103(f)(2)(x)	2022 Annual Progress Report for Alternative Closure Demonstration	I & LF	December 20, 2022
Groundwater Requirements			
40 CFR §257.90(e)	2022 Annual Groundwater Monitoring and Corrective Action Report	I & LF	February 16, 2023
40 CFR §257.97(a)	Semi-Annual Selection of Remedy Report (included as part of Annual GW Monitoring and Corrective Action Report)	I & LF	February 16, 2023

1. On-site CCR units include the Impoundment (I) and Landfill (LF).

Ongoing and future CCR Rule compliance activities will continue through the requested extension period and completion of closure for both the Impoundment and landfill. As they become required, AESC will complete the various inspections, records, plans, reports, notifications, and other supporting information required by the CCR Rule for the remaining active life and post-closure care period for the facility in accordance with applicable sections of the Rule.

FIGURES

FIGURE 3-1. ESTIMATED CLOSURE SCHEDULE (REV. 3)

Activity		2021				2022				2023				2024				2025				2026				2027				2028			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Field Investigations, Planning, Design, and Permitting																															
1.1	*Field investigations/sampling/testing and studies*																														
1.2	*Engineering Design and Permit Application Preparation and Submission*																														
1.3	*Regulatory Agency Review/Comment/Response Cycles and Permit Issuance*																														
1.4	*Construction Bid Package Preparation*																														
Construction and Closure Certification																															
2.1	*Construction RFP, Bid Evaluation, and Award* ***(Annual Work Packages)***																														
2.2	*Mobilize / Site Preparation*																														
2.3	*Cease CCR Disposal / Dewatering*																														
2.4	*Supplemental Dewatering and Surface Contouring*																														
2.5	*Final Cover System Installation*																														
2.6	*Site Restoration / Demobilization*																														
2.7	*Construction Certification / Notifications / Approval*																														

= Construction timeframe with seasonally-limited activities and/or possible winter shutdown period

AlleghenyEnergy Supply
A FirstEnergy Company