

McElroy's Run Impoundment Liner Design Criteria Demonstration

Allegheny Energy Supply Company, LLC
A FirstEnergy Company
Pleasants Power Station
Pleasants County, West Virginia

October 2016

Prepared for:
Allegheny Energy Supply Company, LLC
A FirstEnergy Company
800 Cabin Hill Drive
Greensburg, Pennsylvania 15601

Prepared by:
GAI Consultants, Inc.
Murrysville Office
4200 Triangle Lane
Export, Pennsylvania 15632-1358

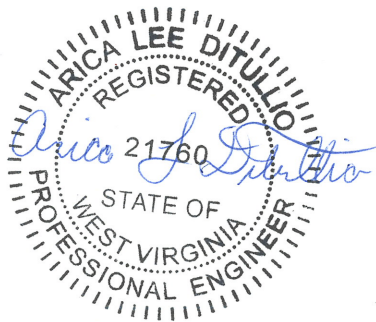
Table of Contents

| | | |
|-----|--------------------|---|
| 1.0 | Introduction | 1 |
| 2.0 | Assessment | 1 |
| 3.0 | Conclusion..... | 1 |

Certification/Statement of Professional Opinion

The Liner Design Criteria Demonstration for the McElroy's Run Impoundment was prepared by GAI Consultants, Inc. (GAI). The Demonstration was based on certain information that, other than for information GAI originally prepared, GAI has relied on, but not independently verified. Therefore this Certification/Statement of Professional Opinion is limited to the information available to GAI at the time the Demonstration was written. On the basis of and subject to the foregoing, it is my professional opinion as a Professional Engineer licensed in the State of West Virginia, that the Demonstration has been prepared in accordance with good and accepted engineering practices as exercised by other engineers practicing in the same discipline(s), under similar circumstances, and at the time and in the same locale. It is my professional opinion that the Liner Design Criteria Demonstration was prepared consistent with the requirements of the United States Environmental Protection Agency's Federal Coal Combustion Residuals (CCR) Rule 40 CFR § 257.71, published in the Federal Register on April 17, 2015 with an effective date of October 19, 2015.

The use of the words "certification" and/or "certify" in this document shall be interpreted and construed as a Statement of Professional Opinion and is not and shall not to be interpreted or construed as a guarantee, warranty or legal opinion.



Arica L. DiTullio, P.E.
Engineering Manager

1.0 Introduction

The McElroy's Run CCR Surface Impoundment (Impoundment) is a captive facility to the Pleasants Power Station located in Willow Island, Pleasants County, West Virginia (WV). The Impoundment is permitted as a solid waste facility according to the West Virginia Department of Environmental Protection (WVDEP) Permit No. 0079171 (Permit). The impoundment receives coal combustion residuals (CCR) in the form of flue gas desulfurization scrubber by-product and other material generated at the Station as specified in the Permit.

2.0 Assessment

GAI conducted a review of various permit and construction documents to determine if the Impoundment was constructed with any of the following liners [pursuant to 40 CFR § 257.71(a)(1)]:

- (i) A liner consisting of a minimum of two feet of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec;
- (ii) A composite liner that meets the requirements of § 257.70(b); or
- (iii) An alternative composite liner that meets the requirements of § 257.70(c).

3.0 Conclusion

The Impoundment embankment is constructed of compacted fly ash, bottom ash, and compacted clay soils. The floor of the impoundment consists of in-place soils some of which may be native clay soils, however the hydraulic conductivity of the soil is unknown. McElroy's Run Impoundment was permitted by WVDEP to be constructed without a liner system. Based on this information, McElroy's Run Impoundment has been determined to be an existing unlined CCR surface impoundment pursuant to 40 CFR Part 257.