

Coal Combustion Residuals Liner Documentation -

Virginia Electric and Power Company
Possum Point Power Station
Surface Impoundment D
Dumfries, Virginia

GAI Project Number: C150132.00

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Table of Contents -

Certification/Statement of Professional Opinion	ii -
Acronyms.....	iii -
1.0 Introduction	1 -
2.0 Purpose	1 -
3.0 Liner Documentation	1 -
4.0 Conclusion	1 -
5.0 References.....	2 -

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Certification/Statement of Professional Opinion

The Coal Combustion Residuals Liner Documentation Report (Report) for the Possum Point Power Station Surface Impoundment D was prepared by GAI Consultants, Inc. (GAI). The Report was based on certain information that, other than for information GAI originally prepared, GAI has relied on, but not independently verified. This Certification/Statement of Professional Opinion is therefore limited to the information available to GAI at the time the report was written. On the basis of and subject to the foregoing, it is my professional opinion as a Professional Engineer licensed in the Commonwealth of Virginia that the Report 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, at the same time, and in the same locale. It is my professional opinion that this Report is accurate and was prepared consistent with the requirements of section 257.71 of the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," published in the Federal Register on April 17, 2015 with an effective date of October 19, 2015 (40 Code of Federal Regulations (CFR) Subpart D).

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 be interpreted or construed as a guarantee, warranty, or legal opinion.

GAI Consultants, Inc.



John R. Klamut, P.E.
Engineering Manager

Date 10/13/2016



Acronyms

CCR	Coal Combustion Residuals
CCR Rule	"Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments" 40 CFR 257 Subpart D (2015)
CFR	Code of Federal Regulations
Dominion	Virginia Electric and Power Company d/b/a Dominion
EPA	United States Environmental Protection Agency
GAI	GAI Consultants, Inc.
Report	Coal Combustion Residuals Liner Documentation Report
Station	Dominion Possum Point Power Station

1.0 Introduction

The Possum Point Power Station (Station) is owned by Virginia Electric and Power Company d/b/a Dominion Virginia Power (Dominion) and is located in Prince William County, Virginia. The Station includes Surface Impoundment D, which is used for the long term storage of coal combustion residuals (CCR).

Surface Impoundment D is located on Dominion property at the Possum Point Power Station in Prince William County, Virginia (coordinates 38° 32' 05" North and 77° 16' 57" West).

Surface Impoundment D is regulated as an existing CCR surface impoundment under the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments" [40 CFR 257 Subpart D] published in the Federal Register on April 17, 2015 with an effective date of October 19, 2015 (CCR Rule). Surface Impoundment D is also regulated as a dam by the Virginia Department of Conservation and Recreation (DCR) and has an approved Operation and Maintenance Certificate with Inventory Number 15320.

2.0 Purpose

This Liner Documentation Report is prepared pursuant to the requirements in the CCR Rule. Specifically, § 257.71(a)(1) of the CCR Rule requires an owner or operator of an existing CCR unit to document whether or not the existing CCR unit was constructed with a liner meeting the requirements set forth in the section.

3.0 Liner Documentation

The references listed in Section 5.0 of this Report were reviewed to determine whether or not Surface Impoundment D was constructed with a liner meeting the requirements of § 257.71(a)(1). Information from GAI's documentation review used to reach this determination include the following:

- ▶ *Groundwater Protection Plan, Ash Pond D Expansion, Drawing No 715932-C-132, Possum Point Power Station, February, 25, 1987* (Prepared by Virginia Power) indicates that the impoundment groundwater protection system utilizes a slurry cutoff wall around the bottom of the impoundment that is keyed into the underlying clay soils, referred to as stratum E. This document also specifies the impoundment slopes be lined above the top of the cutoff wall with a clay liner.
- ▶ *Technical Specification for Installation & Construction of Clay Liner, Ash Pond D Expansion, Possum Point Power Station, June 1987* (Prepared by Virginia Power), indicates that the clay liner was specified to have a permeability of 1×10^{-7} cm/sec or less and have a minimum thickness of one foot. The construction certification report for Surface Impoundment D indicates that the clay liner met the requirements of the Technical Specifications (CTI, 1988).

4.0 Conclusion

Surface Impoundment D was designed and constructed with a groundwater protection system that utilizes in-situ clays, a slurry cutoff wall, and a constructed one-foot-thick clay liner. However, this groundwater protection system does not meet the minimum thickness required by the liner design criteria for existing CCR surface impoundments stated in the CCR Rule.

Therefore, it is GAI's determination that Surface Impoundment D was not constructed with a liner meeting the requirements of CCR Rule § 257.71(a)(1).

5.0 References

- Dames & Moore. 1986.
Groundwater Study, Ash Disposal Facility, Possum Point Power Station. August 12.
- GAI Consultants, Inc. (GAI). 1987.
Site Investigation, Ash Pond D Expansion, Possum Point Power Station. May.
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Final Design Report, Possum Point Power Station, Ash Pond 'D' Dam, DCR Inventory #15320.
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Groundwater Protection Plan, Ash Pond D Expansion, Drawing No 715932-C-132, Possum Point
Power Station. February, 25.
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Technical Specification for Installation & Construction of Clay Liner, Ash Pond D Expansion, Possum
Point Power Station, June.
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Final Design and As-Built Drawings, Possum Point, Ash Pond "D" Expansion Project, Possum Point
Power Station.
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Ash Pond D Embankment Certification Letter, Ash Pond "D" Expansion Project, Possum Point Power -
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