Stantec Consulting Services Inc.
3052 Beaumont Centre Lane, Lexington KY 40513-1074

April 12, 2018
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Revision 0

Tennessee Valley Authority
1101 Market Street
Chattanooga, Tennessee 37402

Re: Initial Hazard Potential Classification Assessment
Bottom Ash Pond
EPA Final Coal Combustion Residuals (CCR) Rule
TVA John Sevier Fossil Plant
Rogersville, Tennessee

1.0 PURPOSE

This letter documents Stantec Consulting Services Inc.'s (Stantec) certification of the initial hazard potential classification assessment for the TVA John Sevier Fossil Plant's Bottom Ash Pond. The EPA Final CCR Rule requires owners or operators of CCR surface impoundments to conduct initial and periodic hazard potential classification assessments of the unit, assign one of three potential hazard classification ratings to it, and provide the basis for the rating, as per 40 CFR 257.73(a)(2). Hazard potential classification ratings define the consequences in the event of a failure – *the ratings have nothing to do with the likelihood of failure or the structural stability of the impoundment*. Based on this assessment, the Bottom Ash Pond has been assigned a low hazard potential classification rating.

2.0 BASIS FOR CLASSIFICATION RATING

As described in the attached assessment report, the hazard potential classification rating of "low" was assigned to the Bottom Ash Pond because a failure or mis-operation would result in no probable loss of human life, and potential impacts would likely be minor and principally limited to TVA property.

3.0 SUMMARY OF FINDINGS

The attached report presents the analysis for the initial hazard potential classification assessment. The results demonstrate that the impoundment meets the hazard potential classification of "low."

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4.0 QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

I, John S. Montgomery, being a Professional Engineer in good standing in the State of Tennessee, do hereby certify, to the best of my knowledge, information, and belief:

1. that the information contained in this certification is prepared in accordance with the accepted practice of engineering;

2. that the information contained herein is accurate as of the date of my signature below; and

3. that the initial hazard potential classification assessment for the TVA John Sevier Fossil Plant's Bottom Ash Pond meets the requirements specified in 40 CFR 257.73(a)(2).

SIGNATURE John S. Montgomery DATE April 12, 2018

ADDRESS: Stantec Consulting Services Inc.
3052 Beaumont Centre Circle
Lexington, Kentucky 40513-1703

TELEPHONE: (859) 422-3000

ATTACHMENTS: Initial Hazard Potential Classification Assessment

Initial Hazard Potential Classification Assessment

John Sevier Fossil Plant
Bottom Ash Pond
Rogersville, Tennessee

Prepared for:
Tennessee Valley Authority
Chattanooga, Tennessee

Prepared by:
Stantec Consulting Services Inc.
Lexington, Kentucky

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LIST OF FIGURES

1.0 RATING

The Bottom Ash Pond (BAP) at the John Sevier Fossil Plant (JSF) is regulated under 40 CFR § 257 Subpart D as an inactive surface impoundment. 40 CFR § 257.100(e)(3)(v) of the EPA Final Coal Combustion Residuals (CCR) Rule requires that a hazard potential classification assessment be prepared and placed in the facility's operating record by April 17, 2018.

Hazard potential classifications are based on the consequences of failure or mis-operation and are not a measure of the condition of the unit. The applicable hazard potential classifications are defined in 40 CFR § 257.53 as follows:

> (1) High hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation will probably cause loss of human life.
>
> (2) Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.
>
> (3) Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.

Based on these definitions the BAP is classified as a low hazard potential CCR surface impoundment.

This report contains supporting documentation for the hazard potential classification assessment. The hazard potential classification for this structure was determined by a review of available data.

2.0 BASIS OF RATING

2.1 INTRODUCTION

The Tennessee Valley Authority (TVA) has contracted Stantec Consulting Services Inc. (Stantec) to review and update previous hazard potential classification assessments as needed for selected impoundments at various TVA Plants.

JSF is a former coal-fired electric generating plant located in Hawkins County, Tennessee adjacent to the Holston River, approximately three miles south of Rogersville, Tennessee. The BAP is located southwest of the former powerhouse. TVA ceased operations at JSF at the end of calendar year 2012. A Notice of Intent to Initiate Closure was placed in the operating record on December 15, 2015. A Notification of Closure Completion was placed in the operating record on December 19, 2017.

Closure of the pond involved: removal of impounded water, consolidation of CCR materials into the eastern half of the facility, construction of an engineered cap over the consolidated CCR materials, lowering the crest elevation of the perimeter berms, construction of stormwater ditches and culverts, and establishment of vegetative cover. The facility no longer functions as an impoundment. A plan view showing the surface contours of the closed facility is provided as Figure 1.

The hazard classification of the BAP was assessed in 2013 at a time when the pond operated as a CCR impoundment. Due to revised conditions following closure, Stantec has prepared this updated assessment.

2.2 SOURCE DATA

The following information was used to perform the hazard assessment of the BAP:

- Publicly available aerial imagery.
- Basis of Design Report (dated December 22, 2016) documenting closure design of the unit.
- Construction Certification Report (dated November 14, 2017) documenting completion of closure.

2.3 POTENTIAL FAILURE SCENARIOS

The BAP is closed and no longer impounds water or functions to retain water. Therefore, a traditional breach analysis is not appropriate. Any failure of the facility would likely involve sloughing of the perimeter slopes. It is anticipated that any sloughing that would occur would likely be limited in size, could be mitigated, and any off-site release would be de minimis.

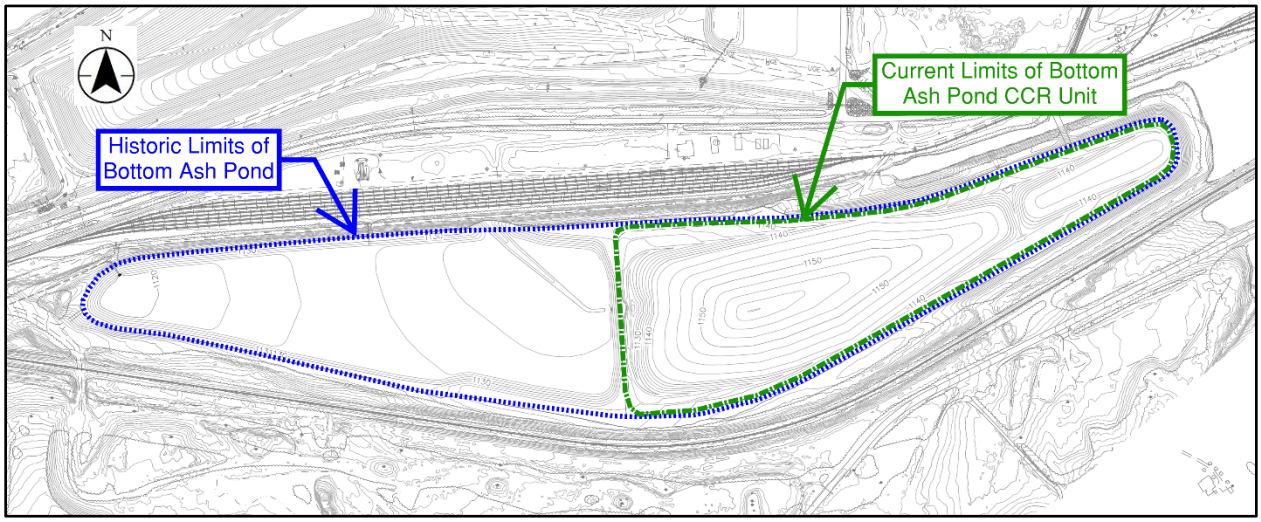

Figure 1 Site Overview

2.4 HAZARD CLASSIFICATION

It is Stantec's opinion that any impacts from a failure of the BAP would be principally limited to TVA property and would result in no probable loss of life. Therefore, the impoundment fits the definition for a low hazard potential CCR surface impoundment as defined in the EPA Final CCR Rule §257.53.

3.0 REFERENCES

1. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule. 80 FR 21301, April 17, 2015.

2. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Extension of Compliance Deadlines for Certain Inactive Surface Impoundments; Response to Partial Vacatur. 81 FR 51802, August 5, 2016.

3. Stantec Consulting Services Inc., September 30, 2013. Dam Safety Hazard Classification Projects Summary Report.

4. Stantec, December, 22, 2016. Basis of Design Report (Rev. 0) Bottom Ash Pond Final Closure, John Sevier Fossil Plant.

5. Stantec, November 14, 2017. Construction Certification Report - Bottom Ash Pond Final Closure, John Sevier Fossil Plant.