



**Stantec Consulting Services Inc.**  
11687 Lebanon Road, Cincinnati, OH 45241

October 10, 2016  
File: 175543017  
Revision 0

Ohio Valley Electric Corporation  
3932 U.S. Route 23  
P.O. Box 468  
Piketon, Ohio 45661

**RE: Liner Design Demonstration  
South Fly Ash Pond  
EPA Final Coal Combustion Residuals (CCR) Rule  
Kyger Creek Station  
Cheshire, Gallia County, Ohio**

---

## **1.0 PURPOSE**

This letter documents Stantec's certification of the existing liner assessment for the Ohio Valley Electric Corporation (OVEC) Kyger Creek Station's South Fly Ash Pond. Based on the assessment, the South Fly Ash Pond is considered an unlined CCR surface impoundment as described in the EPA Final CCR Rule at 40 CFR 257.71(a)(3).

## **2.0 EXISTING LINER ASSESSMENT**

An existing surface impoundment must be evaluated as to whether or not it was constructed with a liner as described in 40 CFR 257.71(a)(1)(i)-(iii).

## **3.0 SUMMARY OF FINDINGS**

The attached report presents the analysis for the existing liner assessment. The report concludes that the South Fly Ash Pond at the Kyger Creek Station was not constructed with a liner that complies with the requirements of §257.71 of the EPA CCR Rule. Therefore, this unit is considered an unlined surface impoundment that is allowed to remain in operation in compliance with the requirements of §257.101(a).

## **4.0 QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION**

I, Stan A. Harris, being a Professional Engineer in good standing in the State of Ohio, 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

Design with community in mind



October 10, 2016  
Page 2 of 2

**RE: Liner Design Demonstration  
Boller Slag Pond  
EPA Final Coal Combustion Residuals (CCR) Rule  
Kyger Creek Station  
Cheshire, Gallia County, Ohio**

3. that the OVEC Kyger Creek Station's South Fly Ash Pond is considered an unlined CCR surface impoundment as described in 40 CFR 257.71(a)(3).

SIGNATURE

  
\_\_\_\_\_

DATE

10/10/16

ADDRESS: Stantec Consulting Services Inc.  
11687 Lebanon Road  
Cincinnati, OH 45241

TELEPHONE: (513) 842-8200

ATTACHMENTS: Kyger Creek South Fly Ash Pond Liner Design Demonstration



# Liner Design

**CFR 257.71**

South Fly Ash Pond

Kyger Creek Station

Cheshire, Ohio

October 2016

Prepared by: Ohio Valley Electric Corporation

3932 U.S. Route 23

Piketon, OH 45661



## **Table of Contents**

1.0	OBJECTIVE	1
2.0	DESCRIPTION OF THE CCR UNIT	1
3.0	DETERMINATION OF LINER DESIGN 257.71(a)(3)(i)	1

## **1.0 OBJECTIVE**

This report has been prepared to fulfill the requirements of 40 CFR 257.71 of the Coal Combustion Residuals (CCR) Rule to develop a document whether the Kyger Creek Station's South Fly Ash Pond (SFAP) is equipped with a liner as defined in 40 CFR 257.71(a)(1)(i)-(iii).

## **2.0 DESCRIPTION OF THE CCR UNIT**

The Kyger Creek Station is located on the shore of the Ohio River near Cheshire, Ohio, and consists of five coal-fired electric generating units; each nominally rated at 217 megawatts, that began producing electricity in 1955 to support the Department of Energy's (DOE's) Portsmouth Gaseous Diffusion Plant located near Piketon, Ohio. The SFAP is located immediately west of the Station and west of State Route 7. Upon commencing operation, the Kyger Creek Station began sluicing CCRs into the SFAP for purposes of storage. Originally, the SFAP, which is approximately 68 acres, was originally constructed to store boiler slag, but is now currently used to store fly ash.

## **3.0 DETERMINATION OF LINER DESIGN 257.71(a)(3)(i)**

***[An existing CCR surface impoundment is considered to be an existing unlined surface impoundment if... (i) The owner or operator of the CCR unit determines that the CCR unit is not constructed with a liner that meets the requirements of paragraphs (a)(1)(i), (ii), or (iii)...]***

Definitive information is not available to demonstrate that the Kyger Creek Station's SFAP was constructed with a liner system that meets the definitions found in 40 CFR 257.71(a)(1)(i), (ii), or (iii). A complete set of design plans and associated documents are not available for review, resulting in the inability to confirm the presence of two feet of compacted soil in the base of the impoundment or the hydraulic conductivity thereof. However, based on the information and plans that are available, the SFAP was constructed in a controlled manner, which included an executed soil boring plan, excavation to controlled elevations, placement and compaction of soil-type materials across the impoundment base and embankments. This work was performed by Geo. B. Herring & Sons, Inc. of Mansfield, Ohio and completed in 1955.