Impoundments Liner System Certification Pursuant to 40 CFR §257.71

for Compliance with the Coal Combustion Residuals (CCR) Rule

Erickson Power Station

Lansing Board of Water and Light

March 26, 2020

Table of Contents

1.0 Introduction

The U.S. Environmental Protection Agency's (EPA) final Coal Combustion Residuals (CCR) Rule 40 CFR §257 establishes a comprehensive set of requirements for the management and disposal of CCR (or coal ash) in surface impoundments by electric utilities. Erickson Power Station (Erickson or site) is an electrical power generation facility located at 3725 South Canal Road in Delta Township, Eaton County, Michigan owned and operated by Lansing Board of Water & Light (BWL). The Erickson Power Station contains a single coal-fired generator capable of producing 165 megawatts of electricity. CCR generated at Erickson is stored in dewatering tanks (hydro-bins) and three active CCR impoundments: the Forebay, Retention Basin, and Clear Water Pond (CWP).

Section §257.71 of the CCR Rule requires the owner or operator of an existing CCR surface impoundment to document whether or not the unit was constructed with a liner system meeting criteria outlined in Section §257.71(a)(1). This report certifies that no liner constructed per the requirements of 40 CFR §257.71 exists beneath the three CCR surface impoundments at the Erickson Power Station.

2.0 CCR Impoundments Liner Description

Currently, bottom ash from the coal-fired boiler is sluiced from the plant to dewatering tanks (hydro-bins). The dewatered bottom ash is trucked to a sanitary landfill and the decant water is hydraulically fed through the current impoundment system, which consists of a series of three impoundments: the Forebay, Retention Basin and CWP. The Forebay and Retention Basin were constructed in 2014, and the CWP was constructed in 1970.

As described in the 2015 Mayotte Design & Engineering, P.C.(MD&E) Construction Documentation Report for the Ash Impoundment System Reconfiguration, the interior embankments and floors of both the Forebay and Retention Basin are lined with a layer of geosynthetic clay (GCL) overlain with a 40-millimeter-thick flexible polyvinylchloride membrane liner (FML) (MD&E, 2015). Each FML is protected with geofabric and a 6 to 12-inch layer of sand. The tops of the embankments that are subject to wave action are protected with an additional layer of geofabric and 6 to 12 inches of stone rip-rap (MD&E, 2018).

Due to the age of the CWP, less historical documentation exists for the liner construction of the CWP. According to the Location Restriction Report, the CWP is "lined with compacted clay" (MD&E, 2018).

No information was found from review of the historic documentation that would indicate that the liner systems placed beneath the three CCR surface impoundments at Erickson were constructed as described in 40 CFR §257.71, as follows:

- A liner consisting of a minimum of two feet of compacted soil with a hydraulic conductivity of no more than 1x10-7 cm/sec as required in Section §257.71(a)(1)(i)[1];

[1] The prepublication of the proposed CCR Rule change from November 4, 2019, *A Holistic Approach to Closure Part A: Deadline to initiate Closure*, changed this 40 CFR §257.71(a)(1)(i) classification from lined to unlined.

- A composite liner that meets the requirements of Section §257.70(b)[2]; or
- An alternative composite liner that meets the requirements of Section §257.70(c).

3.0 Conclusions

Available historic documentation does not indicate that the existing liner systems beneath the Forebay, Retention Basin, and CWP CCR impoundments were constructed in compliance with the criteria provided in 40 CFR §257.71(a)(1)(i) – (iii). This report must be placed in the facility's operating record in accordance with Section §257.105(f) and must be made available on the facility's publicly accessible internet site in accordance with Section §257.107(f).

4.0 References

Mayotte Design & Engineering, P.C. (MD&E), 2018. Compliance with 40CFR257-Locations Restrictions. Lansing Board of Water & Light Erickson Station. October 10, 2018.

MD&E, 2015. Construction Documentation Report for the Ash Impoundment System Reconfiguration. Lansing Board of Water & Light Erickson Station. May 2015.

Qualified Professional Engineer Certification

In accordance with 40 CFR §257.71(a), the owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer attesting that the Active CCR impoundments meet the liner criteria.

I hereby certify that the liners for the listed Active CCR units DO NOT meet the design criteria of 40 CFR §257.71(a) and that I am duly registered Professional Engineer under the laws of the State of Michigan.

SIGNATURE:

Lara L. Zawaideh-Syrocki, PE ENV SP
Michigan Licensed Professional Engineer No. 6201065363
My License renewal date is 10/31/2021

[2] A *composite liner* must consist of two components; the upper component consisting of, at a minimum, a 30-mil geomembrane liner, and the lower component consisting of at least a two foot layer of compacted soil with a hydraulic conductivity of no more than 10-7 centimeters per second. GM components consisting of high density polyethylene must be at least 60-mil thick.