Memo

Date: Thursday, November 19, 2020

To: Lori Myott, Lansing Board of Water & Light

From: Lara Syrocki, HDR, Inc.

Subject: Erickson Power Station CCR Units

Determination of Statistically Significant Increases over Background per §257.93(h)(2)

The U.S. Environmental Protection Agency's (EPA's) final Coal Combustion Residuals (CCR) Rule establishes a comprehensive set of requirements for the management and disposal of CCR (or coal ash) in landfills and surface impoundments by electric utilities. Erickson Power Station, owned by Lansing Board of Water & Light (BWL) and located in Delta Township, Michigan has one CCR unit subject to the CCR Rule composed of three surface impoundments: the Forebay, Retention Basin, and Clear Water Pond. The CCR unit operation and groundwater monitoring are described further in the Erickson Station Groundwater Monitoring System Certification (HDR 2020).

The objective of this memorandum is to document the identification of statistically significant increases (SSIs) over background water quality at the Erickson CCR unit. As stipulated in the CCR Rule, eight background groundwater sampling events were completed between April and October 2020. Hydrogeologic characterization of the site is provided in the Erickson Station Groundwater Monitoring System Certification (HDR 2020). Groundwater monitoring occurs at five wells around the CCR surface impoundments: MW-1 and MW-4 (background wells) and at wells MW-2, MW-5, and MW-6 for comparison against background water quality. Background groundwater samples were analyzed for all of the parameters in Appendices III and IV of CCR Rule Part §257. The water quality collected from the monitoring wells located upgradient of the CCR unit has been compiled and statistically analyzed to develop background threshold values (BTVs) for each constituent of interest (COI). The Background Water Quality Statistical Certification (HDR 2020b) documents the background sampling and describes the data evaluation performed to select the appropriate statistical method in the background data.

The first detection monitoring event was conducted on October 19, 2020 and the downgradient monitoring well data were compared against the BTVs and SSIs were identified. Detection monitoring groundwater samples were analyzed for all of the parameters in Appendix III of CCR Rule Part §257. The detection monitoring event will be

described in detail in the Annual Groundwater Monitoring and Corrective Action Report due January 31, 2021. The annual report will include all laboratory data for the reporting period.

SSI Determination

Groundwater sampling for detection monitoring was analyzed for the CCR Rule Appendix III COIs. The concentrations of Appendix III COIs from each downgradient monitoring well at the impoundments were compared against the BTVs and the COIs with SSIs are listed below.

MW-2	boron, calcium, chloride, sulfate, total dissolved solids (TDS)
MW-5	boron, calcium, sulfate, TDS
MW-6	boron, sulfate, TDS

The monitoring wells evaluate groundwater immediately adjacent to the CCR unit and measure groundwater conditions within the Erickson Station property boundary. As a next step, pursuant to §257.94(e)(1), BWL is establishing an assessment monitoring program for the CCR unit. Within 90 days sampling under the assessment monitoring program will begin by sampling and analyzing for Appendix IV constituents in groundwater from wells in the certified monitoring network.

References

HDR, 2020. Groundwater Monitoring System Certification - Compliance with the Coal Combustion Residuals Rule Valmont Station. May 4, 2020.

HDR, 2020b. Erickson Station Background Water Quality Statistical Certification for Compliance with the Coal Combustion Residuals Rule. November 19, 2020.