

# Memo

Date: Monday, April 27, 2026

To: Lori Myott, PE, Lansing Board of Water & Light (BWL)

From: Lara Zawaideh, PE, HDR Michigan, Inc.

Subject: Former Erickson Power Station CCR Impoundments Determination of Additional Statistically Significant Levels (SSL) over Groundwater Protection Standards (GPS) per Code of Federal Regulations (CFR) §257.95(g) and Michigan Part 115 Rule R 299.4441(7).

The U.S. Environmental Protection Agency's (EPA's) 2015 Coal Combustion Residuals (CCR) Rule and Michigan Part 115 regulation established a comprehensive set of requirements for the management and disposal of CCR (or coal ash) in landfills and surface impoundments by electric utilities. The Former Erickson Station had one CCR unit subject to the CCR Rule composed of three surface impoundments: the Forebay, Retention Basin, and Clear Water Pond (CWP). The three CCR impoundments were physically closed by the removal of CCR in 2024, with ongoing groundwater monitoring. The objective of this memorandum is to document the observation of additional statistically significant levels (SSLs) of CCR constituents over groundwater protection standards (GPS).

Newly identified SSLs over GPS are described below.

## **Statistically Significant Levels over Groundwater Protection Standards Under the Federal CCR Rule Compliance Program - §257.95(g)**

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### **Glacial Aquifer**

The newly identified LCLs for glacial wells that exceed the federal GPS after eight sampling events are provided in **Table 1**. The lithium LCLs following September 2025 sample event at five wells are greater than the federal GPS and represent SSLs over GPS. Since the CCR impoundments compliance monitoring program is already in assessment monitoring and assessment of corrective measures for lithium, this updated list of wells with lithium SSLs does not change the status of the groundwater monitoring program.

Table 1. Newly Identified Glacial Monitoring Wells with SSLs that Exceed Federal GPS through September 2025		
Monitoring Well	Constituent	Lithium
	Federal GPS	0.040 mg/l
MW-17A <sup>1</sup>	95% LCL	0.050
MW-17B <sup>1</sup>	95% LCL	0.078
MW-17C <sup>1</sup>	95% LCL	0.052
MW-18A <sup>2</sup>	95% LCL	0.059
MW-18B <sup>2</sup>	95% LCL	0.096

<sup>1</sup> Through the September 2025 sampling event.

<sup>2</sup> Through the August 2025 sampling event.

### Bedrock Aquifer

The newly identified LCLs for bedrock wells that exceed the federal GPS after eight sampling events are provided in **Table 2**. The exceedances of lithium at MW-18C and MW-18D are the first exceedances of federal GPS for the bedrock aquifer. Since the CCR impoundments compliance monitoring program is already in assessment monitoring and assessment of corrective measures for lithium, this updated list of wells with lithium SSLs does not change the status of the groundwater monitoring program.

Table 2. Newly Identified Bedrock Monitoring Wells with SSLs that Exceed Federal GPS through the August 2025 Sampling Event		
Monitoring Well	Constituent	Lithium
	Federal GPS	0.051 mg/l
MW-18C <sup>1</sup>	95% LCL	0.076
MW-18D <sup>1</sup>	95% LCL	0.059

<sup>1</sup> Through the August 2025 sampling event.

### SSLs Under Michigan Part 115 Compliance Program - R 299.4441(7)

Similar to the above, in accordance with Michigan Rule R 299.4441(5), downgradient well concentrations were compared against background values, and some concentrations were found to be above background values and above the State compliance program GPS.

### Glacial Aquifer

The newly identified LCLs for glacial wells that exceed the State compliance program GPS after eight sampling events are provided in **Table 3**. Additional SSLs were observed at other wells; however, those SSLs have been detected and reported previously. The LCLs of boron, lithium, sulfate, and total dissolved solids (TDS) are greater than the State GPS and represent SSLs over GPS. Since the CCR impoundments are already in assessment monitoring and assessment of corrective measures, the updated SSL results do not change the status of the ongoing groundwater monitoring program.

Monitoring Well	Constituent	Boron	Lithium	Sulfate	TDS
	State GPS	0.50 mg/l	0.040 mg/l	344 mg/l	1,169 mg/l
MW-17A <sup>1</sup>	95% LCL	3.8	0.050	630	1,300
MW-17B <sup>1</sup>	95% LCL	1.8	0.078	-	-
MW-17C <sup>1</sup>	95% LCL	2.0	0.052	420	-
MW-18A <sup>2</sup>	95% LCL	0.93	0.059	-	-
MW-18B <sup>2</sup>	95% LCL	2.0	0.096	-	-

<sup>1</sup> Through the September 2025 sampling event.

<sup>2</sup> Through the August 2025 sampling event.

"-" Denotes the LCL did not exceed GPS along with wells not listed.

### Bedrock Aquifer

The newly identified LCLs for bedrock wells that exceed the State compliance program GPS after eight sampling events are provided in **Table 4**. The LCLs of lithium, sulfate, and total dissolved solids (TDS) are greater than the State GPS and represent SSLs over GPS. Since the CCR impoundments are already in assessment monitoring and assessment of corrective measures, the updated SSL results do not change the status of the ongoing groundwater monitoring program.

Monitoring Well	Constituent	Lithium	Sulfate	TDS
	State GPS	0.051 mg/l	250 mg/l	500 mg/l
MW-16C	95% LCL	-	-	-
MW-18C <sup>1</sup>	95% LCL	0.076	340	820
MW-18D <sup>1</sup>	95% LCL	0.059	-	-

<sup>1</sup> Through the August 2025 sampling event.

"-" Denotes the LCL did not exceed GPS along with wells not listed.

BWL shall incorporate these newly detected SSLs (MW-17 well series and MW-18 well series) into the list of prior SSL observations results in the detected SSLs for the impoundments through September 2025

Attachments: Groundwater Protection Standards for Glacial Monitoring Wells at Former Erickson Power Station, Groundwater Protection Standards for Bedrock Monitoring Wells at Former Erickson Station

<b>Groundwater Protection Standards for Glacial Monitoring Wells at Former Erickson Power Station</b>					
<b>Constituent</b>	<b>Site-Specific Background Level Upper Tolerance Limit (UTL) (mg/L)</b>	<b>Federal Maximum Contaminant Level (mg/L)</b>	<b>State Non-Residential Drinking Water Cleanup Criteria for Groundwater (mg/L)</b>	<b>State Compliance Program Groundwater Protection Standards for Site (mg/L)</b>	<b>Federal Compliance Program Groundwater Protection Standards for Site (mg/L)</b>
Antimony	0.005	0.006	0.006	0.006	0.006
Arsenic	0.021	0.01	0.01	0.021	0.021
Barium	0.168	2	2	2	2
Beryllium	0.001	0.004	0.004	0.004	0.004
Boron <sup>1</sup>	0.48	NV	0.5	0.5	No GPS
Cadmium	0.0005	0.005	0.005	0.005	0.005
Calcium <sup>1</sup>	188	NV	NV	No GPS	No GPS
Chloride <sup>1</sup>	94.377	250	250	250	No GPS
Chromium	0.005	0.1	0.1	0.1	0.1
Cobalt	0.005	0.006	0.1	0.006	0.006
Copper <sup>1</sup>	0.005	1.3	1	1	No GPS
Fluoride	1	4	2	2	4
Iron <sup>1</sup>	23.5	0.3	0.3	23.5	No GPS
Lead	0.003	0.015	0.004	0.004	0.015
Lithium	0.0397	0.04	0.35	0.04	0.04
Mercury	0.0002	0.002	0.002	0.002	0.002
Molybdenum	0.024	0.1	0.21	0.1	0.1
Nickel <sup>1</sup>	0.021	NV	0.1	0.1	No GPS
Radium-226/228	5.00 pCi/L	5 pCi/L	NV	5 pCi/L	5 pCi/L
Selenium	0.005	0.05	0.05	0.05	0.05
Silver <sup>1</sup>	0.0005	0.1	0.098	0.098	No GPS
Sulfate <sup>1</sup>	344	250	250	344	No GPS
Thallium	0.002	0.002	0.002	0.002	0.002
Total Dissolved Solids <sup>1</sup>	1168.639	500	500	1168.639	No GPS
Vanadium <sup>1</sup>	0.005	NV	0.062	0.062	No GPS
Zinc <sup>1</sup>	0.036	5	5	5	No GPS

1) Constituent not included in the Federal CCR Rule Assessment Monitoring Program.

<b>Groundwater Protection Standards for Bedrock Monitoring Wells at Former Erickson Power Station</b>					
<b>Constituent</b>	<b>Site-Specific Background Level Upper Tolerance Limit (UTL) (mg/L)</b>	<b>Federal Maximum Contaminant Level (mg/L)</b>	<b>State Non-Residential Drinking Water Cleanup Criteria for Groundwater (mg/L)</b>	<b>State Compliance Program Groundwater Protection Standards for Site (mg/L)</b>	<b>Federal Compliance Program Groundwater Protection Standards for Site (mg/L)</b>
Antimony	0.005	0.006	0.006	0.006	0.006
Arsenic	0.009	0.01	0.01	0.01	0.01
Barium	0.081	2	2	2	2
Beryllium	0.001	0.004	0.004	0.004	0.004
Boron <sup>1</sup>	3.52	NV	0.5	3.52	No GPS
Cadmium	0.0005	0.005	0.005	0.005	0.005
Calcium <sup>1</sup>	69.6	NV	NV	No GPS	No GPS
Chloride <sup>1</sup>	5	250	250	5	No GPS
Chromium	0.005	0.1	0.1	0.1	0.1
Cobalt	0.005	0.006	0.1	0.1	0.006
Copper <sup>1</sup>	0.005	1.3	1	1	No GPS
Fluoride	1	4	2	2	2
Iron <sup>1</sup>	3.04	0.3	0.3	3.04	No GPS
Lead	0.003	0.015	0.004	0.004	0.015
Lithium	0.051	0.04	0.35	0.051	0.051
Mercury	0.0002	0.002	0.002	0.002	0.002
Molybdenum	0.011	0.1	0.21	0.1	0.1
Nickel <sup>1</sup>	0.011	NV	0.1	0.1	No GPS
Radium-226/228	5.5 pCi/L	5 pCi/L	NV	5 pCi/L	5.5 pCi/L
Selenium	0.005	0.05	0.05	0.05	0.05
Silver <sup>1</sup>	0.0005	0.1	0.098	0.098	No GPS
Sulfate <sup>1</sup>	5	250	250	250	No GPS
Thallium	0.002	0.002	0.002	0.002	0.002
Total Dissolved Solids <sup>1</sup>					No GPS
Vanadium <sup>1</sup>	380	500	500	500	No GPS
	0.005	NV	0.062	0.062	No GPS
Zinc <sup>1</sup>	0.042	5	5	5	No GPS

1) Constituent not included in the Federal CCR Rule Assessment Monitoring Program.