

January 30, 2020

Ms. Lori Babcock
Michigan Department of Environment, Great Lakes, and Energy
Materials Management Division
Saginaw Bay District Office
401 Ketchum St, Suite B
Bay City, Michigan 48708

**SUBJECT: Initial Semiannual Progress Report – Selection of Final Remedy
JC Weadock Bottom Ash Pond Coal Combustion Residuals (CCR) Unit**

Dear Ms. Babcock,

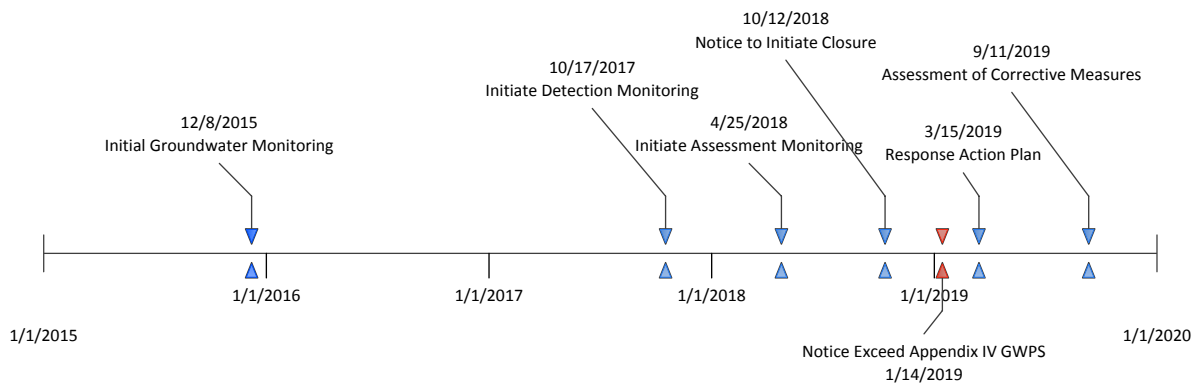
This Semiannual Progress Report, prepared as a requirement of §257.97(a) of the Federal Coal Combustion Residual (CCR Rule), describes progress towards selecting and implementing the final remedy for the Weadock Bottom Ash Pond. A progress report is required to be prepared semiannually upon completion of the Assessment of Corrective Measures (ACM) Report until the final remedy is selected. This progress report is the first developed following the completion of the Weadock Bottom Ash Pond ACM Report.

As presented in the key milestones timeline below, a groundwater monitoring system was installed for the bottom ash pond and background monitoring commenced in December 2015. Consumers Energy first reported the potential for statistically significant increases (SSIs) for Appendix IV constituents in the "Notification of Appendix IV Constituent Exceeding Groundwater Protection Standard per §257.95(g)" (TRC, January 2019). Subsequently, the Assessment of Corrective Measures Report (TRC, September 2019) was completed on September 11, 2019 as a step towards developing a final remedy.

Source Control Measures Undertaken

On October 17, 2016, in accordance with the schedule defined in §257.102 of the CCR Rule, Consumers Energy placed into the Operating Record an Initial Written Closure Plan for the Weadock Bottom Ash Pond that detailed a plan for closing the unit in place. This plan was revised on January 12, 2018 to reflect that the bottom ash pond would be closed by removing the CCR. The Weadock Bottom Ash Pond ceased plant operations on April 15, 2016 when the JC Weadock coal-fired units 7&8 ceased operations. Notification for Intent to Initiate Closure of the Weadock Bottom Ash Pond was posted on October 12, 2018 once agreement for the CCR removal criteria had been established with the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Consumers Energy intends to commence active dewatering and excavation of CCR early in 2020 and expects that all removal and decontamination activities will be completed and documented in an excavation completion report that was submitted to EGLE by the end of 2020.

JC Weadock Bottom Ash Pond Timeline for Corrective Action



Results of 2019 Semi-Annual Sampling Events

Statistical analysis from semiannual groundwater monitoring events verified that the only constituents of concern that were present at statistically significant levels above the established Groundwater Protection Standard (GWPS) are beryllium and lithium. Groundwater chemistry already appears to be improving as a result of discontinuing the hydraulic loading to the Weadock Bottom Ash Pond and is expected to further improve once the source removal of the CCR has been completed. Beryllium and lithium concentrations at JCW-MW-15010 demonstrate a decreasing trend from last monitoring event, as discussed in the "2019 Annual Groundwater Monitoring and Corrective Action Report" (TRC, January 2020).

Progress Towards Remedy Selection

Consumers Energy first provided the EGLE a Response Action Plan prepared in accordance with Part 115 on March 15, 2019 after calculating a potential SSI for beryllium and lithium for the Weadock Bottom Ash Pond. This report documents identified potential sources of contamination, interim response activities taken to control possible sources of contamination, and a schedule for terminating receipt of waste and initiating closure of the bottom ash pond. This report was approved by EGLE on May 14, 2019.

The Response Action Plan explicitly committed to providing an assessment for potential remedial actions based on recommendations from the ACM Report submitted to EGLE on September 11, 2019. This report stated that the remedial strategy was to manage CCR source material by excavating CCRs consistent with the closure plan and then to manage residual contamination in groundwater.

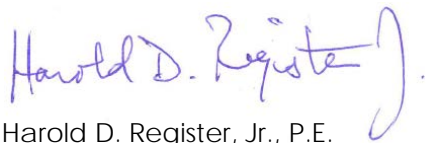
The ACM Report indicated that groundwater management alternatives under consideration that could potentially address the residual beryllium and lithium under *known* groundwater conditions were identified as: 1) Source removal with post-remedy monitoring, 2) Source removal with groundwater capture/control, 3) Source removal with impermeable barrier, 4) Source removal with active geochemical sequestration, and 5) Source removal with passive

geochemical sequestration. These groundwater monitoring alternatives were considered to be technically feasible final groundwater management strategies when following a source removal activity.

Once the source removal activities are completed for the Weadock Bottom Ash Pond next year and the excavation has been restored and graded to minimize future infiltration, groundwater monitoring will be conducted to confirm groundwater improvements. Additional sampling events will be needed to monitor improvements as the groundwater conditions return to a new equilibrium based on site hydrogeology and groundwater and porewater chemistry. These subsequent sampling events will inform the on-going improvements and retention of monitoring-only, passive, or active remedial options following the source removal. The final remedy for the Weadock Bottom Ash Pond will be formally selected per §257.97 and Michigan Solid Waste requirements once the selected option is reviewed and commented on by EGLE and a public meeting is conducted at least 30-days prior to the final selection as required under §257.96(e).

The next semiannual progress report will be submitted in six months by July 30, 2020. Please feel free to contact me with any questions or clarifications.

Sincerely,



Harold D. Register, Jr., P.E.

Principal Engineer

Landfill Operations Compliance

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