

July 30, 2020

Subject:

Semiannual Progress Report - Selection of Remedy
 JH Campbell Bottom Ash Ponds 1-2 CCR Unit
 JH Campbell Pond A CCR Unit

This Semiannual Progress Report, prepared as a requirement of §257.97(a) of 40 CFR Parts 257 and 261, Disposal of Coal Combustion Residuals from Electric Utilities, under subtitle D of the Resource Conservation and Recovery Act (RCRA), also known as the Coal Combustion Residuals (CCR) rule, describes progress toward selecting and designing remedies for two CCR units that triggered Assessment of Corrective Measures (ACM) under the CCR Rule at the JH Campbell Solid Waste Disposal Area: Bottom Ash Ponds 1-2 and Pond A. Based on the schedule of self-implementation prescribed in the CCR Rule, a progress report is required to be prepared semiannually upon completion of the Assessment of Corrective Measures Report until the remedy is selected. It is noteworthy that remedy selection for the Bottom Ash Ponds 1-2 and Pond A, prescribed by the CCR Rule, is being undertaken in coordination with a Michigan Department of Environment, Great Lakes, and Energy (EGLE) Consent Agreement 115-01-2018, which was executed on December 28, 2018.

Consumers Energy (CE) reported statistically significant increases (SSIs) above the groundwater protection standard (GWPS) for a single Appendix IV constituent, arsenic, in the "Notification of Appendix IV Constituent Exceeding Groundwater Protection Standard per §257.95(g)" (Consumers Energy Company, January 2019).

Unit with SSI	Constituent	# of Downgradient Wells Observed
Pond A	Arsenic	1 of 6
Bottom Ash Ponds 1-2	Arsenic	2 of 5

Subsequently, Assessment of Corrective Measures Reports (TRC, September 2019) were completed on September 11, 2019 for Bottom Ash Ponds 1-2 and Pond A.

An initial semi-annual progress report dated January 30th, 2020 was made available on the CE public-facing website as part of the "2019 Annual Groundwater Monitoring and Corrective Action Report" (TRC, January 2020) for Bottom Ash Ponds 1-2 and Pond A.

Consumers Energy continues to monitor Bottom Ash Ponds 1-2 and Pond A semi-annually for Appendix III and IV constituents. Results from semi-annual sampling will be provided in the appropriate annual groundwater monitoring report in January 2021. Statistical analysis will be conducted to determine the presence or absence of SSLs for Appendix IV constituents.

Progress Towards Remedy Selection

As detailed in the initial semi-annual progress reports, source control activities implemented in 2018 and 2019 will have long-term effects on constituent concentrations in groundwater. Ongoing activities to monitor the impact of source control and, if necessary, to evaluate the formal selection of remedies following those source control activities are summarized below.

Bottom Ash Ponds 1-2

Consumers Energy has performed CCR removal at Bottom Ash Ponds 1-2 as documented in the "JH Campbell Generating Facility Bottom Ash Ponds 1-2 Closure Plan," (Golder, January 2018). Following the permanent cessation of hydraulic loading, CCR removal activities were completed in October 2018. On October 22, 2019 EGLE provided written concurrence that all bottom ash had been removed from Bottom Ash Ponds 1-2 based on multiple lines of evidence described in the approved closure work plan.

The removal of all CCRs and the cessation of hydraulic loading create the potential for significant changes in local groundwater flow and chemistry. Consumers Energy continues to monitor the effects of source removal on the groundwater near the former footprint of Bottom Ash Ponds 1-2. Continued monitoring is crucial to understand the new equilibrium being established at the former pond and, if necessary, to develop an additional remedy as soon as feasible.

Pond A

Consumers Energy closed Pond A according to the "JH Campbell Generating Facility Pond A Closure Plan, West Olive, Michigan" (Golder, October 2016) and an updated closure plan detailing the final cover system submitted to EGLE in February 2019. The state closure certification as required by Paragraph 4.2 of Consent Agreement WMRPD No. 115-01-2018 was approved by EGLE on November 25, 2019.

Since the certification of the final cover, two rounds of sampling have been conducted at Pond A. In accordance with Consent Agreement 115-01-2018, a revised Hydrogeological Monitoring Plan, *Pond A Hydrogeological Monitoring Plan, JH Campbell Power Plant, West Olive, Michigan* (TRC, March 2019; Revised July 2019) was submitted to EGLE and approved in August 2019. The Pond A well network is being sampled quarterly for two years following the certification of the final cover; after two years the well network will be sampled semi-annually.

The final cover system over Pond A is expected to have significant impact on local groundwater chemistry. Continued observation is critical to understanding those local changes and determine the need for additional action.

Remedy Selection Process

The ACM Report identified source removal and final cover as primary corrective actions for Ponds 1-2 and Pond A, respectively, but also considered five technically feasible groundwater management alternatives to address the potential for residual arsenic. Additional data collected under the state and federal groundwater monitoring programs will be used to inform remedy selection and the creation of a Remedial Action Plan under the December 2018 agreement with EGLE.

If necessary, following the source control activities, the remedy for Ponds 1-2 and Pond A will be formally selected per §257.97 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).

References

- Consumers Energy Company. January 2020. Initial Semiannual Progress Report, JH Campbell Bottom Ash Ponds 1-2 CCR Unit, JH Campbell Pond A CCR Unit.
- Consumers Energy Company. January 14, 2019. Notification of Appendix IV Constituent Exceeding Groundwater Protection Standard per §257.95(g), JH Campbell Pond A CCR Unit.
- Consumers Energy Company. January 14, 2019. Notification of Appendix IV Constituent Exceeding Groundwater Protection Standard per §257.95(g), JH Campbell Ponds 1-2 CCR Unit.
- Golder Associates. October 2016. JH Campbell Generating Facility Pond A Closure Plan, West Olive, Michigan. Prepared for Consumers Energy Company.
- Golder Associates. January 2018. JH Campbell Generating Facility Bottom Ash Ponds 1-2 Closure Plan, West Olive, Michigan. Prepared for Consumers Energy Company.
- TRC Environmental Corporation. January 2020. 2019 Annual Groundwater Monitoring and Corrective Action Report, JH Campbell Power Plant, Ponds 1-2 North and 1-2 South CCR Unit. Prepared for Consumers Energy Company.
- TRC Environmental Corporation. January 2020. 2019 Annual Groundwater Monitoring and Corrective Action Report, JH Campbell Power Plant, Pond A CCR Unit. Prepared for Consumers Energy Company.
- TRC Environmental Corporation. September 2019. Assessment of Corrective Measures, Consumers Energy Company JH Campbell Ponds 1-2 North and 1-2 South and Pond A Coal Combustion Residual Units. Prepared for Consumers Energy Company.
- TRC Environmental Corporation. March 2019; Revised July 2019. Pond A Hydrogeological Monitoring Plan, JH Campbell Power Plant, West Olive, Michigan. Prepared for Consumers Energy Company