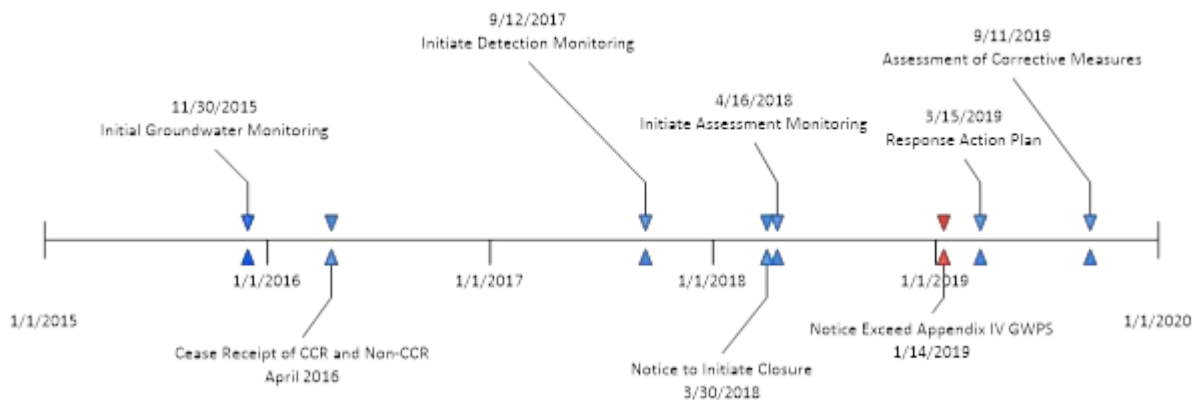


Initial Semiannual Progress Report - Selection of Final Remedy

BC Cobb Bottom Ash Pond and Ponds 0-8 CCR Units
Michelle Marion, Consumers Energy
January 30, 2020

This Semi-annual Progress Report, prepared as a requirement of §257.97(a) of the federal Coal Combustion Residual (CCR Rule), describes progress toward selecting and designing the final remedy for CCR units that triggered Assessment of Corrective Measures (ACM) under the CCR Rule: the BC Cobb Bottom Ash Pond and Ponds 0-8 (BCC Ponds). A progress report is required to be prepared semiannually upon completion of the Assessment of Corrective Measures Report until the final remedy is selected.

As presented in the key milestones timeline below, a groundwater monitoring system was installed for the BCC Ponds and background monitoring commenced in December 2015. Consumers Energy Company (CEC) 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)" (CEC, January 2019). Subsequently, the Assessment of Corrective Measures Report (TRC, September 2019) was completed on September 11, 2019.



Source Control Measures Undertaken

In 2018, CEC placed the February 2018 Closure Plan, prepared and certified by Golder Associates, Inc. in the Operating record and provided formal Notification of Intent to Initiate Closure on March 30, 2018 confirming that CEC plans to close the BCC Ponds under the CCR Rule's closure by removal provision in §257.102(c). Consumers Energy also submitted a closure work plan to the Michigan Department of Environmental Quality, now the Department of Environment, Great Lakes, and Energy, who approved it on October 16, 2018 and clarified the workplan on August 13, 2018 and September 20, 2019. Excavation of CCR removal is planned to commence in 2020; with elements of construction such as design, permitting, and procurement having already commenced. Removal activities are planned to be completed and documented in an excavation completion report by 2023.

Results of 2019 Semi-Annual Sampling Events

The statistical assessments from both 2019 semiannual groundwater monitoring events have confirmed that lithium is the only Appendix IV constituent present at statistically significant levels above the Groundwater Protection Standard (GWPS). Although lithium concentrations exceed the site-specific GWPS in on-site groundwater, the property containing the site is owned and operated by Consumers Energy and on-site groundwater is not used for drinking water. Additionally, concentrations of lithium are below applicable State of Michigan unrestricted cleanup criteria. The nearest off-site drinking water well is more than 2,000 feet away on the other side of the North Branch of the Muskegon River. Groundwater chemistry already appears to be improving as a result of discontinuing the hydraulic loading to BCC Ponds and is expected to further improve following the completed source removal of CCR.

Progress Towards Remedy Selection

Consumers Energy first provided the Michigan Department of Environment, Great Lakes, and Energy (EGLE) a Response Action Plan prepared in accordance with Part 115 on March 15, 2019 after calculating a potential SSI for lithium at BCC Ponds. 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 BCC Ponds. This report was approved by EGLE on May 14, 2019. CEC also committed to initiate an Assessment of Corrective Measures (ACM) which was submitted to EGLE on September 11, 2019. This ACM stated that Consumers Energy plans to use an adaptive management strategy that includes measures to remove source material, reduce infiltration, and/or minimize the potential future migration.

Source removal is schedule to begin in 2020 and will consist of dewatering to allow for excavation of the vertical and lateral extent of waste CCR. The reduction of hydraulic loading and recharge of the aquifer are expected to have changed groundwater redox conditions (e.g. from aerobic to anaerobic) and the physical removal of CCR is expected to further improve groundwater quality. It is anticipated that the remedy selection process for addressing affected groundwater will proceed following the implementation of the CCR source material

management strategies. Additionally, CEC will continue executing the self-implementing groundwater compliance schedule in conformance with §257.90 - §257.98, which includes semiannual assessment monitoring in accordance with §257.95 to monitor groundwater conditions and inform the remedy selection. The final remedy 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

- Consumer Energy Company. March 30, 2018. Notification of Intent to Close Two CCR Units. B.C. Cobb Generating Facility Bottom Ash Pond and Ponds 0-8 Closure Plan, Muskegon, Michigan. Prepared for Consumers Energy Company.
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- Golder Associates Inc. February 2018. BC Cobb Generating Facility Bottom Ash Pond and Ponds 0-8 Closure Plan, Muskegon, Michigan. Prepared for Consumers Energy Company.
- Golder Associates Inc. 2018, May 30, 2018 clarified October 16, 2018 and September 20, 2019. BC Cobb Ponds 0-8 and Bottom Ash Closure Work Plan, Muskegon, Michigan. Prepared for Consumers Energy Company.
- TRC Environmental Corporation. September 11, 2019. Assessment of Corrective Measures, Consumers Energy, Former BC Cobb Power Plant, Bottom Ash Pond & Ponds 0-8, Muskegon, Michigan. Prepared for Consumers Energy Company.