

Allen Fossil Plant



MEMPHIS, TENNESSEE



QUICK FACTS



EPA CCR Rule Groundwater Monitoring for 2019

This fact sheet summarizes groundwater monitoring conducted by TVA for the Allen Fossil Plant, as required by the U.S. Environmental Protection Agency (EPA) Coal Combustion Residuals (CCR) Rule for the 2019 calendar year. The EPA published the CCR Rule on April 17, 2015. It requires companies operating coal-fired power plants to study whether constituents in CCR have been released to groundwater from active, inactive and new CCR impoundments, as well as active and new CCR landfills.

The CCR Rule establishes multiple phases of protective groundwater monitoring including baseline sampling, Detection Monitoring and Assessment Monitoring. Corrective action may be necessary at the completion of this process. For more information on the CCR Rule Groundwater Monitoring requirements, refer to the Executive Summary that can be found by clicking on the following hyperlink www.tva.com/ccr.

Allen Plant CCR Rule Groundwater Monitoring Network

In addition to ongoing groundwater monitoring required under State regulations, TVA established a monitoring well network for the East Ash Disposal Area consisting of “background,” or upgradient, wells in locations that were not expected to be affected by the management of CCR and wells around the edge of the areas where CCR is managed. These wells are sometimes referred to as “downgradient wells” and placed in locations to monitor for releases to groundwater. This CCR Rule groundwater monitoring well network is monitored in accordance with the CCR Rule during the baseline, Detection Monitoring, and Assessment Monitoring phases. The locations of the wells are shown on the figure on the next page.

Commissioning Date: 1959

Closed: March 31, 2018

Output Was: 741 Megawatts

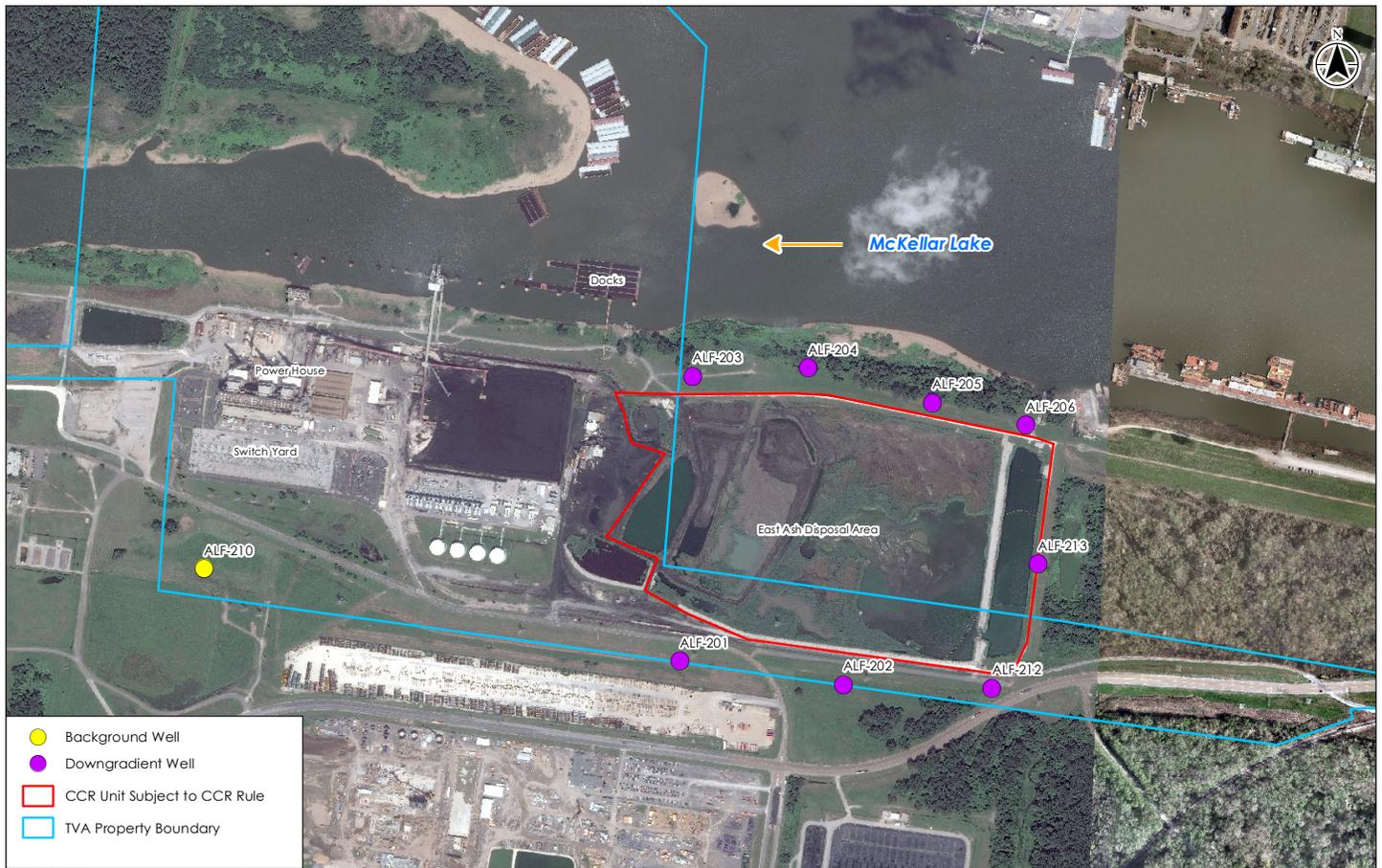
Plans for updating/expansion:

A natural gas generation plant began operations in 2018.

TVA Wide CCR Conversion

Program Total Spend:

Approximately \$1.3 Billion



2019 Allen Fossil Plant CCR Rule Assessment Monitoring Results

The Assessment Monitoring results are contained in the **2019 Annual Groundwater Monitoring and Corrective Action Report***. The report can be found on the CCR Rule website at www.tva.com/ccr.

For the 2019 assessment monitoring sampling events, no new statistically significant levels (SSLs) above the groundwater protection standards (GWPS) were observed at monitoring wells. As identified in the 2018 Annual Groundwater Monitoring and Corrective Action Report, there continue to be SSLs above GWPS for arsenic in wells AFL-202, ALF-203, and ALF-204; for lead in well ALF-203; and for molybdenum in wells ALF- 202 and ALF-203. However, unlike 2018, there are no longer SSLs for fluoride in well ALF-203 and for molybdenum in well ALF-205.

*The results in this report reflect quality of groundwater beneath the East Ash Disposal Area.

The following table shows the reported statistical exceedances of GWPS, as reflected by the red dots. Out of the nine wells sampled, three wells contain SSLs for one to three constituents (arsenic, lead, and/or molybdenum). Refer to Appendix A – Statistical Analysis Report of the 2019 Annual Groundwater Monitoring and Corrective Action Report for more information.

2019		GROUNDWATER QUALITY MONITORING WELL LOCATIONS								
		Background Well	East Ash Disposal Area							
Constituent	GWPS mg/L	ALF-210	ALF-201	ALF-202	ALF-212	ALF-213	ALF-206	ALF-205	ALF-204	ALF-203
Antimony	0.006	●	●	●	●	●	●	●	●	●
Arsenic	0.01	●	●	●	●	●	●	●	●	●
Barium	2	●	●	●	●	●	●	●	●	●
Beryllium	0.004	●	●	●	●	●	●	●	●	●
Cadmium	0.005	●	●	●	●	●	●	●	●	●
Chromium	0.1	●	●	●	●	●	●	●	●	●
Cobalt	0.006	●	●	●	●	●	●	●	●	●
Fluoride	4	●	●	●	●	●	●	●	●	●
Lead	0.015	●	●	●	●	●	●	●	●	●
Lithium	0.04	●	●	●	●	●	●	●	●	●
Mercury	0.002	●	●	●	●	●	●	●	●	●
Molybdenum	0.1	●	●	●	●	●	●	●	●	●
Rad226+228	5 pCi/L	●	●	●	●	●	●	●	●	●
Selenium	0.05	●	●	●	●	●	●	●	●	●
Thallium	0.002	●	●	●	●	●	●	●	●	●

Color Coding Key

- Monitoring data results are below groundwater protection standards (GWPS)
- Monitoring data results are below GWPS, but results are 65% or more of the GWPS
- Monitoring data results exceed GWPS (TVA has initiated and completed assessment of corrective measures report)

Next Steps for Allen Fossil Plant CCR Rule Groundwater Monitoring

The Allen Fossil Plant ceased operations in 2018, and the East Ash Disposal Area is no longer receiving CCR material. In addition, TVA has conducted a remedial investigation on the arsenic exceedances found in the shallow aquifer and has provided the Tennessee Department of Environment and Conservation (TDEC) with a recommended interim corrective action to address the environmental impacts**. TVA will continue to monitor and evaluate the groundwater at the site.

A revised Closure Plan, dated April 23, 2019, was placed in the facility operating record and posted to the CCR website. The Closure Plan states that, subject to the completion of all necessary environmental reviews, TVA intends to close the East Ash Disposal Area by removal. TVA has completed an Assessment of Corrective Measures Report to analyze the potential effectiveness of potential corrective measures. This report was posted on the CCR Rule website on August 14, 2019.

As a final groundwater remedy has not been selected for the East Ash Disposal Area, a Semiannual Report on the Progress of Remedy Selection was prepared and posted on the CCR Rule website on February 14, 2020.

** During the baseline sampling phase of the CCR Rule, prior to Detection Monitoring, arsenic was found at uniquely high levels that exceeded Maximum Contaminant Levels (MCLs) in the upper Alluvial aquifer (shallow aquifer) associated with the East Ash Disposal Area in some of the monitoring wells. TVA conducted additional investigations of groundwater conditions at the Allen Fossil Plant and provided the results to the TDEC.