

Bull Run Fossil Plant

CLINTON, TENNESSEE



QUICK FACTS



EPA CCR Rule Groundwater Monitoring

This fact sheet summarizes groundwater monitoring conducted by TVA for the Bull Run Fossil Plant, as required by the U.S. Environmental Protection Agency (EPA) Coal Combustion Residuals (CCR) Rule. 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, go to www.tva.com/ccr.

Bull Run Plant CCR Rule Groundwater Monitoring Network

In addition to ongoing groundwater monitoring required under State regulations, TVA installed additional wells around the CCR management unit, as needed, and TVA implemented a baseline sampling program. After completion of baseline sampling, TVA began Detection Monitoring. The constituents specified by the CCR Rule for Detection Monitoring are boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS). These seven constituents can occur naturally in soils, rock, groundwater and surface water, and can also be present in coal and CCR. They were selected by EPA because they can indicate groundwater conditions that may require further evaluation.

Commissioning Date: 1967

Output: 881 Megawatts
(6 Billion kilowatt-hours per year)

Number of homes powered:
Approximately 400,000 homes

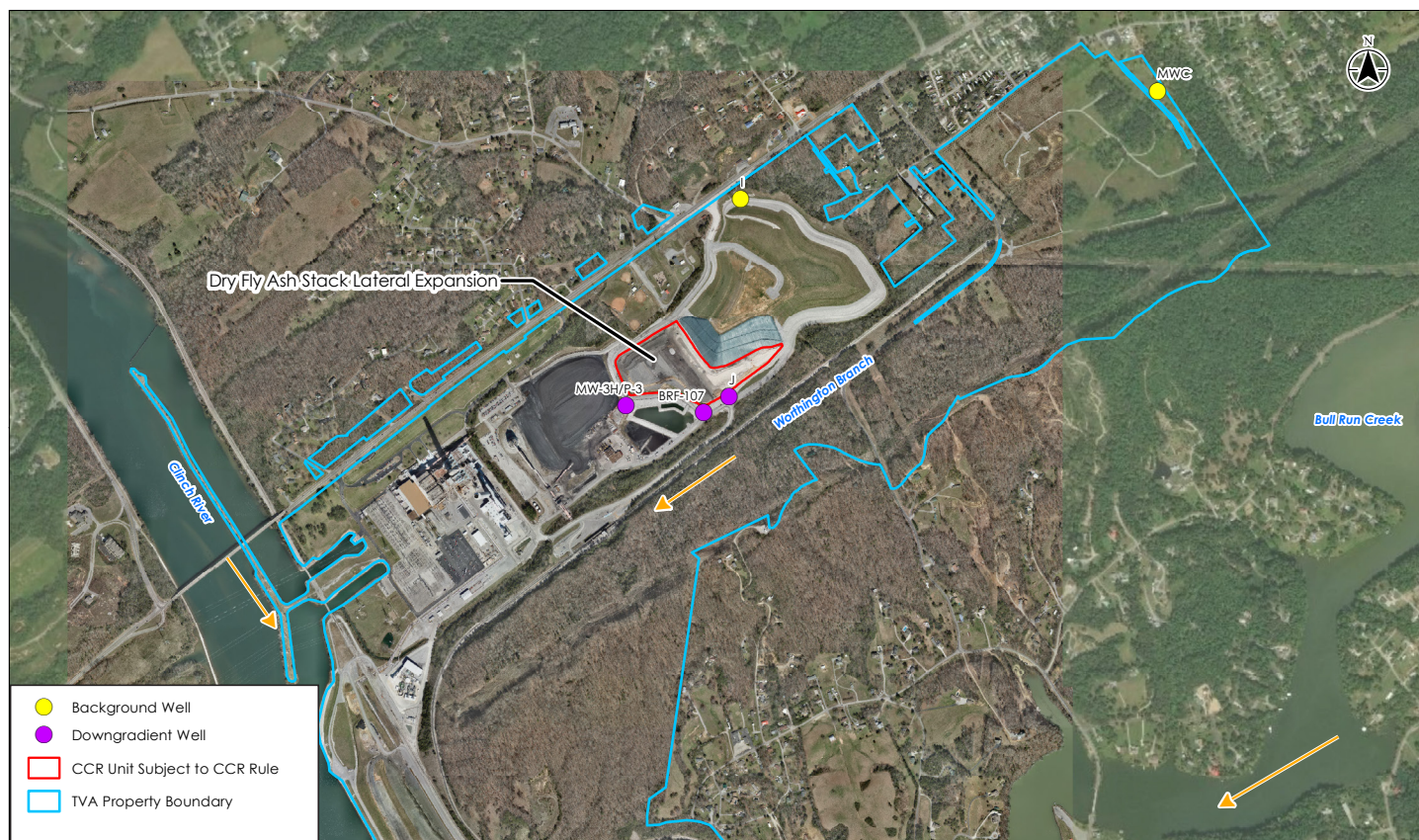
Main outputs: Power and fly ash
(used as a concrete additive)

Wet to Dry / Dewatered Conversion Program: Complete for
fly ash, bottom ash, and gypsum

CCR Units Closed: 82 acres

TVA Wide CCR Conversion Program Total Spend:
Approximately \$1.3 Billion

TVA installed “background”, or upgradient, wells in locations that are not expected to be affected by the management of CCR. Other wells were drilled around the edge of the areas where CCR is managed or already existed and were being monitored. These wells are sometimes referred to as “downgradient wells” and placed in locations to monitor for releases to groundwater. The locations of the wells are shown below.



CCR Rule Detection Monitoring Results for Bull Run Fossil Plant

TVA prepared its initial **2017 Groundwater Monitoring and Corrective Action Report** for the Bull Run Fossil Plant, which analyzed the detection monitoring results to determine where there were statistically significant increases (SSIs) over background levels. The report was posted publicly March 2, 2018, and can be found by clicking on the following hyperlink www.tva.com/ccr. The initial comparison of downgradient wells to upgradient wells shows that concentrations of boron, calcium, fluoride, sulfate and TDS around the CCR management units may be greater than naturally occurring levels. Data does not reflect the quality of public drinking water supplies, which are regularly tested to confirm they are meeting safe drinking water standards.

2018 Groundwater Monitoring Activities

Since the initial groundwater monitoring results identified SSIs, TVA conducted an alternate source demonstration to determine if the exceedances were the result of another source or the result of an error in the sampling or analytical method, or natural variability in groundwater quality. The demonstrations determined the SSIs were due to sources other than the Dry Fly Ash Stack Lateral Expansion CCR unit. The demonstration is contained in the **2018 Annual Groundwater Monitoring and Corrective Action Report**. The report can be found at www.tva.com/ccr.

Next Steps for Bull Run Fossil Plant CCR Rule Groundwater Monitoring

TVA will continue detection monitoring for the Dry Fly Ash Stack Lateral Expansion Unit. In addition, the Bull Run Plant has two CCR impoundments that did not require detection monitoring under the original CCR Rule. However, these units are now included under the revised CCR Rule on a different schedule, and the initial results of the Detection Monitoring are included in the Initial Annual Groundwater Monitoring and Corrective Action Report which will be posted to the CCR website on September 3, 2019.