Fact Sheet

Environmental Investigation at Allen Fossil Plant

TVA Submits Updated Allen Remedial Investigation Report to State

Background

In the Spring of 2017, the Tennessee Valley Authority (TVA) reported to state regulators elevated levels of arsenic, fluoride and lead in some shallow aquifer monitoring wells around the coal ash pond at the Allen Fossil Plant in Memphis. TVA, under the oversight of the Tennessee Department of Environment and Conservation (TDEC), began a remedial investigation into the nature and extent of the contamination. In 2018, TVA conducted further testing and monitoring, and preparing for removal of the contamination.

TVA also has five permitted production wells in the deep Memphis Aquifer at the Allen Gas Plant, approximately one-half mile from the fossil plant. TVA has committed to not using those wells. Instead, we have installed massive tanks to hold water purchased from Memphis Light, Gas & Water (MLGW) for cooling and as necessary at the plant.

The updated Remedial Investigation Report was submitted to TDEC on March 1, 2019.

Key Points

- TVA is committed to the health and safety of the community, our employees and the environment.
- Drinking water at the plant, and throughout Memphis, is not impacted by the issues at Allen. This is reinforced by TDEC and local health officials, and confirmed by testing of the water supply by MLGW.
- TVA is committed to not using the Memphis Aquifer wells at its gas plant and is purchasing water from MLGW and providing for a reliable water supply using water holding tanks and redundant water feed systems.

Remedial Investigation Findings

- In 2018, TVA, as part of the supplemental remedial investigation:
    - Installed additional groundwater monitoring wells on the eastern boundary of the East Ash disposal area
    - Conducted additional investigation into the Upper Claiborne confining unit
    - Confirmed the horizontal and vertical boundaries of the contamination plume
    - Collected/analyzed groundwater samples from the entire monitoring well network
- The Memphis Aquifer, which is the source of drinking water for the area, has not been affected by constituents in groundwater detected at Allen in the Alluvial aquifer.
- Sampling confirmed the highest concentrations of arsenic, fluoride and lead are limited to the north and south areas around the East Ash Impoundment, primarily in the upper 40 feet of the shallow Alluvial aquifer.
- The upper Alluvial aquifer includes an area of fine-grained clay which appears to further impede vertical movement of groundwater.
- The Alluvial aquifer is approximately 110 – 245 feet thick. Groundwater flow in the aquifer is essentially horizontal, not vertical.

April 2019

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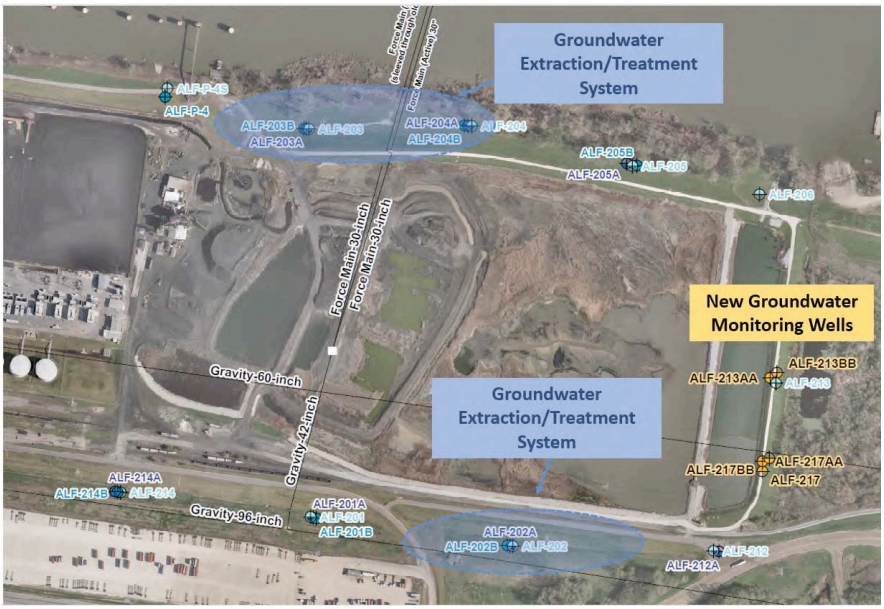
- The source evaluation concluded that several factors have possibly contributed to arsenic in groundwater near the East Ash Disposal Area. These factors include arsenic in ash, naturally occurring arsenic in soil and groundwater, releases from industrial and municipal sewers, and nearby industrial operations (approximately 80 sites within a 4-mile radius of Allen). The extent to which each possible factor has contributed cannot be determined.

TVA's Plan Forward

- TVA is continuing an environmental investigation to assess the potential environmental risks of CCR currently stored at Allen, while preparing to clean up the shallow groundwater contamination. The environmental investigation will help guide any additional corrective actions, including closure of the CCR areas, along with the federal CCR Rule.
- TVA is in the final design stage of the interim response action, which will be a groundwater extraction system to control and begin treating groundwater with elevated concentrations of arsenic.
- The coal-fired plant ceased operations in 2018 and the East Ash Disposal Area is no longer receiving CCR material. TVA plans to implement a dewatering plan for the East Ash Disposal Area in Spring 2019.
- TVA is preparing an Environmental Impact Statement (EIS) to address the potential environmental effects associated with the future management of coal combustion residual material at the Allen Fossil Plant.
- TVA's preferred alternative for the draft EIS will be closure by removal of all ash at the Allen Fossil Plant site, either to a permitted offsite landfill, or to an offsite facility for beneficial use. Closure in place will no longer be considered.

The illustration below shows the locations where groundwater extraction and treatment will take place to address contamination found in shallow monitoring wells. The illustration also shows locations of additional monitoring wells installed in 2018.



April 2019