

Coal Combustion Residuals Ash Pond Closure Assessment



AECOM's thorough pond closure assessment will help the client and regulators determine the safest and most cost-effective closure options for the sites that were evaluated.

Client

Virginia-based Energy Company

Location

Virginia, USA

Contract Value

USD 1.5MM

Years

2017

More Information

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Project Overview

Per Virginia Senate Bill (SB) 1398, AECOM analyzed the closure options for coal ash ponds at four power stations and evaluated groundwater and surface water quality at each station. The results were presented to the Virginia State Senate.

Client Benefits

- AECOM's technical information on coal ash recycling/beneficial use, remedial engineering, and environmental assessments was presented to make it easy for lay readers to understand.
- Collaboration between various AECOM offices allowed for a wide range of technical capabilities in one team.
- AECOM's SB 1398 response provides in-depth information that can be used to guide future Virginia CCR legislation and decisions, including coal ash beneficiation.
- AECOM provided the client a nimble, flexible, knowledgeable, and strategic team that completed a detailed report of the analysis results within an expedited time frame.

Work Performed

In April 2017, the Virginia legislature passed Senate Bill (SB) 1398, which required a study of all the coal ash ponds in the Chesapeake Bay watershed to determine available closure options while ensuring that safety, environmental, and community impacts of the pond closures were managed. The required study included an evaluation of groundwater and surface water quality surrounding each applicable pond and any necessary corrective measures. SB 1398 was applicable to 11 ash ponds at four power stations operated by the client.



As part of the study, AECOM collected coal ash quality data via drilling and sampling activities at three of the four stations and performed an ash market study that consisted of an evaluation of the demand for fly ash for use in concrete production in a 50-mile radius of each station and of the regional market in Virginia, Maryland, North Carolina, and the District of Columbia.

AECOM provided an in-depth assessment of each pond closure option, including implementation duration, cost, and potential impact to the environment and community. An assessment of closure-by-removal options included an analysis of coal ash transportation alternatives (truck, rail, barge), on- and off-site landfill locations (constructing new landfills or hauling to existing facilities), and the long-term stability of the ash ponds. At the client's direction, AECOM's analysis did not include closure option recommendations.

Existing groundwater and surface water data were evaluated to determine current water quality conditions compared to state and federal groundwater quality standards. Based on the results of the evaluation, groundwater corrective measure options were screened against feasibility, costs, benefits, and challenges, but as with the pond closure options, recommendations were not included.

The final report was submitted to the Virginia State Senate in November 2017. AECOM received a commendation letter from the client in December 2017 for the effort that was required to complete the study. The letter stated "Thank you for the outstanding work AECOM performed in the development of the Senate Bill 1398 response... the entire AECOM team pulled together a tremendous amount of information and performed a thorough evaluation of the myriad of options. The report provided the evaluation results in a format that was clear, easy to understand and backed up by factual information. It was a pleasure to work with AECOM and we look forward to working with AECOM in the future."