

PROJECT BRIEF

# Tennessee Valley Authority (TVA) Risk Monitoring & Management

## PROJECT PROFILE

CLIENT:  
Tennessee Valley Authority (TVA)

LOCATION:  
Chattanooga, TN

- VALUE:
- Using risk monitoring to help manage major risks for public safety
  - Automatically notify required staff on issues and problem solve quickly and efficiently

- SERVICES PROVIDED:
- Real-time monitoring and warning system for all of TVA's coal ash facilities

“Alert messages, processed data, and other information are provided across TVA’s network in real-time to allow TVA’s risk management team to stay informed and react quickly if a threatening event occurs.”



## INSTALLATION OF GEOTECHNICAL INSTRUMENTS & DATA MANAGEMENT COLLECTION

TVA retained Geocomp to develop and implement a real-time monitoring and warning system for many of its coal ash facilities. The web-based GIS data and information management systems collects data from sensors and compares the recorded values with allowable limits. Alert messages, processed data, and other information are provided across TVA’s network in real-time to allow TVA’s risk management team to stay informed and react quickly if a threatening event occurs. A specific application of this system allows TVA to monitor heavy rains over each waste storage facility to determine when conditions warrant releasing excess storm water to the river. Regulations permit such a release without penalty to avoid potential failure. The system is working so well that TVA is using to help manage risk for their dam and environmental well programs. Geocomp personnel also assist TVA in developing risk-based approaches to designing closure facilities to safely retire these waste storage facilities.



## BACKGROUND

Tennessee Valley Authority (TVA) experienced a failure at one of their at the Kingston Fossil Plant in 2008 that resulted in the spillage of 5.4 million cubic yards of coal ash up and down the Clinch and Emory Rivers. The event has cost TVA billions of dollars in cleanup costs and additional damage claims. TVA is working diligently to clean up the land and water in the area affected by the ash spill and has implemented major risk monitoring programs for their higher risk facilities in the area. This program consists of engineering assessments to determine potential failure modes, definition of factors that could be monitored to help detect an impending failure, selection of locations and types of sensors that could give early warnings of unacceptable performance and contingency plans to invoke when the observations and monitoring data indicates that action is needed.