



Engineering Sciences Section - 2015

D37 Federal Court Testimony — Tennessee Valley Authority (TVA) Kingston Slurry Ash Spill

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The goal of this presentation is to help attendees learn how to evaluate large volumes of information in preparation for federal court testimony on a large-scale environmental case.

This presentation will impact the forensic science community by describing how potential expert witnesses are often retained to play a key role on projects, even though the whole case involves many disciplines. There may be a large volume of historical data and many moving parts during legal discovery. The performance of an expert witness in federal court depends on the expert's ability to stay abreast of findings, and new facts, during the discovery process. This presentation will describe how the evaluation steps during this case were undertaken, as a review of data, reports and correspondence revealed that promises to monitor the water levels in a coal ash pile were made then found not to be done. This presentation will focus on the nature of specific testimony and questioning and how the court's decision(s) relied in part on this testimony.

A coal fly ash slurry spill occurred just before 1:00 a.m. on Monday, December 22, 2008, at the TVA Kingston Fossil Fuel Power Plant, in Roane County, TN. A reported 1.1 billion gallons of coal fly ash slurry was released from a large vertical wet pile which has been variously described as a solid waste containment area or a diked area with ponds, much of which was found to be saturated. "Dredge cells" were not constructed as described in a number of documents and drawings and the slurry traveled across the Emory River and the Swan Pond embayment, covering up to 300 acres of land, damaging homes, and flowing into waterways, including the Emory River and the Clinch River, which are tributaries of the Tennessee River. The coal ash release has been called one of the world's worst environmental disasters and was the largest coal ash release in United States history.

Questions arose regarding why the environmental release happened and who had responsibility, from an environmental standpoint, for the release. A professional engineer in 18 states, including Tennessee, provided expert witness testimony in federal court. A team of experts were retained by the parties whose homes and/or property were damaged by the coal ash release, a large number of documents from TVA and the Tennessee Department of Environmental Conservation were reviewed, and a large volume of documents continued to be produced during the discovery process.

Certain items presented in the engineer's federal court testimony were not answered by TVA and aspects of Subtitle D Resource Conservation and Recovery Act provisions were an issue. Ultimately, the court decided that there was liability on the part of TVA, based on a number of key technical facts and permitting items. Key to the court's decisions were responsibilities for properly monitoring and operating the disposal facility.

This presentation will describe the process of reviewing documents, coordinating with legal counsel on the key issues, and the approach for presenting testimony in an appropriate and organized manner. There was testimony focus on environmental management issues that did not receive attention but had been promised to regulatory agencies in the time frame leading up to the major coal ash release. When the release from the 84-acre unlined aboveground ash fill area occurred, which was 60 feet high, a mud flow wave reached out over more than 300 acres and contamination was experienced for many areas down the Emory and Clinch Rivers.

Potential expert witnesses can learn how to evaluate and focus on key issues related to large-scale environmental problems when faced with very large volumes of data, historical information, and reports to provide testimony in federal court, which focuses on the causes of, and the liability associated with, major environmental problems.

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