

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
**KINGSTON DRY FLY ASH CONVERSION**  
**Roane County, Tennessee**

In July 2009, the Tennessee Valley Authority (TVA) Board of Directors passed a resolution to review and address systems, controls, and standards related to coal combustion products (CCPs) (fly ash, bottom ash, and gypsum), which result from the burning of coal to produce electricity. TVA has subsequently reviewed its practices for handling and storing CCPs at its generating facilities, including its coal-fired Kingston Fossil Plant (KIF). An outcome of that review is the current proposal to convert the wet fly ash handling and storage facilities at KIF to a dry system.

**Alternatives**

TVA has reviewed two alternatives for handling ash at KIF, the No Action and Action Alternatives. The No Action Alternative would continue the operation of the current wet ash handling system, and the Action Alternative would involve converting the wet fly ash handling system to a dry handling system. TVA has reviewed these alternatives in an environmental assessment (EA), which is incorporated by reference.

Under the No Action Alternative, TVA would continue the use of the wet fly ash handling system and the existing impoundments. The ash generated from the operation of KIF would either be collected from the sluice channel prior to entering the existing ash pond facility or sluiced directly into the ash pond. The ash pond has been used as a settling basin for ash recovered from the Emory River. This ash, recovered from the river, would continue to be shipped off site to the Arrowhead Landfill in Perry County, Alabama for disposal. This disposal site has received regulatory approval from the United States Environmental Protection Agency (USEPA) and the Alabama Department of Environmental Management. TVA anticipates removal of the ash from the Emory River can be completed by the second quarter of 2010. Shipping all of the approximately three million cubic yards of recovered ash to appropriate facilities, however, will likely continue into the first quarter of 2011.

Under the Action Alternative, which is also the preferred alternative, TVA would remove the current wet fly ash handling system at KIF and convert it to a dry collection system. This change would require construction of dry ash silos and supporting infrastructure to transport ash by truck or rail to disposal sites or for marketing. This EA presents a reasonable set of representative and bounding disposal options, and analyzes the bounding impacts of transporting ash from KIF to potential disposal sites which include offsite landfills. Each of the identified offsite landfills is a state-approved site, permitted to receive CCPs and with adequate capacity to do so. At this time, TVA is not proposing to select among the short-term disposal options but has evaluated the impacts of all such options and currently we are evaluating a request for proposals for disposal from local landfills. In addition, TVA is currently studying the long-term disposal of ash from KIF and other fossil plants.

The new system would convey ash from the precipitators, selective catalytic reduction systems, and economizers to one of two ash storage silos to be built near the current coal pile. Dry fly ash collected in the storage silos would be loaded into trucks or rail cars for transportation to

disposal sites or for marketing. The system would be capable of handling 600,000 tons per year of dry.

The new dry ash system would include a negative pressure air system to evacuate the ash from the ash collection hoppers to the proposed ash silos. The existing water-driven hydro-evacuators would be removed from service.

### **Impacts Assessment**

The construction of the proposed dry ash handling system would occur on previously disturbed parts of the KIF site, and the Action Alternative would not affect wetlands, floodplains, wildlife, vegetation, aquatic ecology, endangered or threatened species, natural areas, prime farmland, navigation, recreation or cultural resources. Both the No Action and Action Alternatives would result in air emissions; these emissions would not exceed federal and state Prevention of Significant Deterioration thresholds prescribed under the Clean Air Act. Relative to the No Action Alternative, the Action Alternative would reduce water usage by KIF and reduce the mass loadings of certain pollutants discharged from the ash pond. Under both alternatives, TVA would either modify the Phase II gypsum landfill to accept fly ash or transport ash offsite for long-term disposal, and the solid waste, socioeconomic and transportation impacts would be the same and insignificant.

### **Public and Intergovernmental Review**

TVA accepted comments on a draft of the EA from March 5, 2010 until April 4, 2010. The draft EA was posted on the TVA website and copies were mailed to state and federal agencies. TVA also held an open house at the Roane County High School on March 16, 2010. Comments were accepted at the open house and a court reporter was available to record verbal comments.

### **Special Commitments and Mitigation Measures**

TVA would implement standard best management practices during construction and operation of the proposed dry ash system in order to reduce potential environmental impacts. TVA would also comply with the requirements of all environmental permits. To further reduce impacts, TVA would implement the following measures:

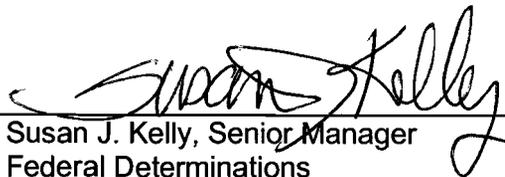
1. Portable toilets would be provided for the construction workers as needed. These toilets would be regularly pumped out, and the sewage transported by tanker truck to a publicly owned treatment works accepting sewage pump-out.
2. Depending on the types of coal being burned when the dry ash systems are implemented, the wastewaters entering the remaining CCP system and discharging through Discharge Serial Number (DSN) 001 could have a higher or lower pH. If the pH of DSN 001 fluctuates substantially, the installation of mitigating measures, such as a carbon dioxide diffuser to lower the pH, would be evaluated and implemented in order to ensure compliance with the NPDES permit limits.
3. Although the impacts of the trucks transporting ash materials would be minor on the transportation network, TVA's request for proposals (RFPs) would require potential bidders to consider reducing the potential impact of their KIF trucking activities upon the environment. The contractor would be required take into account such factors as air pollution, erosion control, noise control, solid waste disposal, and wastewater disposal. Truck owners would be required to maintain trucks properly, including tune-ups which improve fuel efficiency. Truck routes would avoid schools, historic districts, and

downtown areas to the extent possible. Additional measures such as the use of ultra-low sulfur diesel fuel and the minimizing of vehicle idling time would also be required.

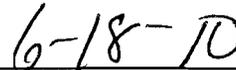
4. For onsite disposal, operational monitoring of the fly ash storage area for constituents of concern in the leachate collection system (LCS) discharge would be required in order to ensure that the concentrations of these metals and other parameters do not exceed the NPDES permit limits.

### Conclusion and Findings

TVA has determined that the construction and operation of the dry fly ash collection system at KIF would not result in significant adverse impacts, either individually or cumulatively. Consequently, we conclude that implementation of this project would not be a major federal action significantly affecting the environment. Accordingly, an Environmental Impact Statement is not required. The FONSI is contingent upon the successful implementation of the special commitments and mitigation measures listed above.



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Federal Determinations  
Environmental Permits and Compliance  
Tennessee Valley Authority



Date Signed