

Ash Release at TVA's Kingston Fossil Plant

January 8, 2009

On Monday, December 22, a dike failed at the Tennessee Valley Authority's Kingston Fossil Plant releasing about 5.4 million cubic yards of coal ash that now cover about 275 acres. No injuries occurred, but about 40 area homes were affected. TVA and Roane County Office of Emergency Management and Homeland Security responded immediately and response and recovery continues. TVA has activated a Unified Incident Command System response organization to manage the recovery project. Members include TVA, U.S. EPA Region 4, the Tennessee Department of Environment and Conservation (TDEC), the Roane County EMHS, Tennessee Emergency Management Agency (TEMA), and Tennessee Department of Health (TDH).



TVA's Kingston Fossil Plant is located on the Emory River close to the confluence of the Clinch and Tennessee Rivers near Kingston, Tennessee. Construction of the plant began in 1951 and was completed in 1955.

Kingston generates 10 billion kilowatt-hours of electricity a year, enough to supply the needs of about 670,000 homes in the Tennessee Valley. The plant consumes approximately 14,000 tons of coal every day when operating at full power.

Ash Containment Area

Ash, a by-product of a coal-fired power plant, is stored in containment areas. The retention wall failure resulted in about 60 acres of ash in the 84 acre containment area to be displaced. The containment area affected is one of three at the Kingston plant.

At the time of the slide, the area contained about 9.4 million cubic yards of ash. The Kingston ash pond is visually inspected each day. Quarterly solid waste inspections are completed by State personnel in coordination with permitting requirements. Kingston plant personnel conduct seep inspections of the dikes quarterly. Detailed inspections of the ash handling and storage dikes are done annually by TVA engineering staff with written reports that include findings and recommendations.

The most recent annual inspection at Kingston was conducted in October 2008. There were no significant problems found that indicated that the dikes were unstable to the point of failure.

Community Outreach

TVA organized four community outreach teams made up of plant employees and retirees to reach out to homeowners in the affected areas. These teams visit 10 - 15 homeowners each day and continue to attend meetings with homeowner and community groups to answer their questions and listen to their concerns.

TVA has activated a phone number, 1-800-257-2675, for property owners to call if they need an assessment of property damages.

A TVA Outreach Center opened Tuesday, January 6, at 509 North Kentucky Street in Kingston where residents can report damages of any kind. This may include property, loss of business or other types. The center will be open Monday through Saturday from 7 a.m. to 7 p.m. and 1 p.m. to 7 p.m. on Sunday. The local phone number for the Outreach Center is 865-632-1700. If residents are unable to come to the center, they can call 1-800-257-2675 to report their claims.

All other members of the public should continue to use 865-717-4006 with their questions or concerns.



Roadway and Railway Cleanup

Public access on Swan Pond Road past the Kingston plant and Swan Pond Circle remain closed except for construction as TVA removes material off the roads. Safety is the priority for anyone entering the area. Currently, there is no estimate for when the road will reopen for public use.

About 3,000 feet of rail were damaged when the ash release occurred. All rails and ties have been removed. TVA has rebuilt the railroad base and Norfolk Southern has begun work on setting the tracks.

Ash Dust - Erosion Control

Fly ash is mostly inert, and breathing the ash for a short period of time is unlikely to be a health concern. Breathing particulates (fly ash or other airborne particulates) over long periods of time can irritate the respiratory system. TVA is taking measures to reduce the amount of airborne dust that may arise in the future.

To minimize dust and erosion, the undisturbed portion of the ash cell is being treated with a liquid dust suppression agent. For any exposed ash that is easily accessible by air, TVA will spray seed and fertilizer, followed by straw, using a helicopter. This process is similar to the one used by highway departments to provide ground cover. For areas that can not be easily accessed by air, TVA will use an amphibious vehicle to apply dust suppression materials.

More than 47 tons of grass seed and fertilizer have been dropped by helicopter. Two hundred thirteen total acres will be seeded by helicopter.

This is a temporary measure for controlling dust and erosion. Long term recovery efforts will continue.

For the area around Swan Pond Road where work is continuing, the ash will be sprayed with water.

Emory and Clinch Rivers

Kingston Fossil Plant is located on the Emory River, which feeds into the Tennessee River. The Emory River remains closed from mile marker zero through mile marker 4. The Kingston Fossil Plant Boat Ramp and fishing area have also been closed due to large equipment being moved into the area for clean-up. Coast Guard and TVA Police marine units are assisting with security in the area.

Work is complete on a rock weir built on the Emory River, just north of the existing intake skimmer weir. The weir is about 615 feet long. The weir will allow water to continue flowing, but will contain the ash.

A second weir is being designed and when complete will confine the ash and keep it from entering the river during the river dredging process. This approximately 2000-foot rock weir will extend from Swan Pond Circle south to the plant river bank.

TVA is coordinating with the Corps of Engineers to address the dredging process on the Emory River in the vicinity of the release.



Water Quality

TVA continues to manage river flows on the Clinch and Tennessee Rivers to minimize impact on recovery and monitoring activities associated with the ash release. The Kingston water supply intake is located on the Tennessee River about one half mile upstream from its confluence with the Clinch River. By managing river flows through the Kingston area, TVA expects to keep ash that might be flowing down the Clinch River from moving upstream toward the water intake.

All EPA, TDEC and TVA water treatment plant sampling results indicate municipal drinking water continues to be safe. Each agency is using certified labs for the analysis. Water samples have been tested from four local water treatment facilities, Rockwood, Harriman, Cumberland and Kingston.

The most recent results of water sampling near the ash release area indicate that the concentrations of sampled contaminants either met or were below detection levels established by the Tennessee Department of Environment and Conservation to protect fish and aquatic life.

Results for 22 private groundwater wells showed all were within safe drinking water standards. TDEC will continue well sampling and will contact residents as results become available.

Air Monitoring

Air particulates continue to be less than the National Ambient Air Quality Standard. Analytical results for 12/31/2008 for four samplers located on-site and for 01/01/2009 for five samplers located in residential areas immediately adjacent to the plant indicate that concentrations of all metals analyzed are below detection limits.

Radiation Results

Ash samples, as well as a sample of soil from an unaffected area, were taken on December 29 and 30 in the Kingston area and analyzed for radioactivity. The final analysis confirms the conclusion that the radioactive material present is mostly naturally occurring and is similar to what we would normally find in soil in the Tennessee Valley area. It is also representative of what would be expected in coal ash.

Soil Sampling

Preliminary testing of the offsite soil samples show that toxic metals are well below (on the order of 10-100 times) the limits for classification as a hazardous waste. The trace concentrations of toxic metals in the offsite material sampled are consistent with and generally lower than that of the historic sampling results from the ash dredge cell that collapsed. The data shows that the concentrations of most metals in the deposited ash are not dramatically different from concentrations found in natural, non-agricultural soils in Tennessee, with the exception of arsenic. Total arsenic results were above the average naturally occurring, but well below levels found in soils that are well fertilized and significantly below the limits to be classified as a hazardous waste.

TVA, TDEC and EPA continue to work together to develop a long range sampling plan for air, water and soil.

