

TVA Kingston Coal Ash Release

Fact Sheet



Revised as of January 26, 2010

The cleanup at the Tennessee Valley Authority (TVA) Kingston Fossil Plant continues under the oversight of the U.S. Environmental Protection Agency (EPA) in accordance with the federal Superfund law, and the Tennessee Department of Environment and Conservation (TDEC). TDEC and EPA are working closely together and with other state and federal agencies to protect public health and address environmental issues during both the time critical and non-time critical phases of the cleanup.

• Update on Spill Cleanup

To date, more than 2.2 million cubic yards of the estimated three million cubic yards of ash released into the Emory River and Swan Pond Embayment has been recovered and removed from the water. River dredging operations and excavating from dry areas continue on-site. The removal rate is on track to have the dredging completed by Spring 2010.

Approximately 917,308 cubic yards of the ash removed from the river has been shipped off-site by rail for disposal in an approved landfill in Alabama. Disposal of the remainder of the ash removed from the river is expected to be complete in Fall 2010.

The dredging and disposing of ash from the Emory River are “time critical” actions under EPA’s Administrative Order on Consent. Once the time critical work is complete, work at the site will transition to “non-time critical” actions, which include removing the remaining ash from embayments, sloughs, tributaries and ground surface and also closing the failed landfill. TDEC has communicated to TVA the department’s expectation that ash removal and restoration of the waters of the state will continue without interruption during the transition from time critical to non-time critical actions. The public has input into what actions are taken under this long-term recovery phase of the cleanup.

• Long-Term Recovery Phase

Work under the long-term recovery phase is guided by an Engineering Evaluation and Cost Analysis (EE/CA) Report. This report is currently out for public review and comment. It contains cleanup alternatives for restoration of the Swan Pond embayment area and addresses stabilization and closure of the failed dredge cell. EPA and TVA have extended the public comment period to March 20, 2010.

The EE/CA Report is available for review on EPA and TVA’s Web sites at www.epakingstontva.com and www.tva.com/kingston, respectively. They also are available at the TVA Outreach Center at 509 N. Kentucky Street, the Kingston Public Library at 1004 Bradford Way and the Harriman Public Library at 601 Walden Street. Comments should be submitted by e-mail to kingstoncomm@tva.gov or by mail to:

TVA
P.O. Box 40
Kingston, TN 37763-0400
Attn: Kingston Public Comments

• Environmental Monitoring and Sampling

TDEC continues to conduct independent environmental monitoring and sampling activities on and around the Kingston site, as well as review samples taken by other agencies, including EPA, TWRA and TVA. In general, monitoring and sampling results have remained consistent throughout the course of the cleanup. A general overview and update is included below.

Air – When TVA changed labs in September 2009, the new lab did not conduct analysis of PM 10 and PM 2.5 in accordance with the EPA-approved Federal Reference Method. That data has, therefore, been rejected and TVA is no longer utilizing that lab. These deficiencies prompted an EPA-led evaluation of all the site’s perimeter air monitoring measures. The quality assured data from the time period in question, which includes TDEC’s air monitoring data, indicates that air quality at the site did not pose a threat to public health.

Tapered element oscillating microbalance, or TEOM, samplers give continuous air quality assessments and do not rely on lab analysis. TDEC operates a PM 10 TEOM sampler and TVA operates a PM 2.5 TEOM sampler at Site #7 on the TVA property. Data from these monitors has not been compromised. Site #7 represents the worst-case scenario for potential air quality issues based on its proximity to the spilled ash and prevailing wind direction.

Filter-based sampling for silica and metals, including a Hi Vol sampler operated by TDEC for metals sampling at Site #7, also met quality assurance requirements during the time period in question and indicate that airborne concentrations were below reference values.

In addition, thousands of mobile PM10 readings from the area and approximately 150 industrial hygiene sampling events taken on-site indicate the site’s air quality objectives were being met during the time period in question.

While usable data from the site indicates air quality was protective, corrective actions are being required to ensure all data from the site meets federal standards going forward.

Drinking Water and Well Water – Regular testing performed by TDEC of municipal drinking water supplies indicates drinking water continues to meet drinking water standards established by EPA for public health protection.

Sample results for more than 100 private wells have not detected metals above primary drinking water standards. The department continues to sample “sentinel” wells at least quarterly to evaluate ground water quality over time. The last well samples were taken Nov. 16, 2009, and were well

within drinking water standards for metals. The next sentinel wells samples are scheduled for the week of Feb. 10, 2010.

River Water – The Department of Environment and Conservation began independent surface water sampling of the Emory, Clinch and Tennessee Rivers immediately following the release and continues to sample at least twice per week. Metals levels were highest immediately following the spill and whenever the ash has been re-suspended in the water column by heavy rainfall, or disturbances such as boat traffic. Generally, higher metals have been observed to be associated with solids in water samples.

The samples are analyzed for a number of constituents. Among the most closely watched are arsenic, mercury and selenium. Results of TDEC water quality samples include:

- **Arsenic:** Fourteen arsenic samples of 362 samples taken in the lower Emory River downstream of the spill exceeded the lowest water quality standard of 10 parts per billion. There have been no arsenic exceedances noted in the Clinch River. Local drinking water has been extensively monitored at the water intake from the river and in the finished water going to customers. No exceedance has ever been found in the raw or finished water. As dredging operations continue, the department is carefully watching the arsenic levels in the dredge plume and ash pond effluent.
- **Mercury:** The Emory River has a fish consumption advisory for mercury that predates the ash spill. There have been numerous exceedances of the water quality criterion of 0.05 parts per billion for mercury noted in the water column. The most recent was an exceedance at Emory River Mile 1.7 of 0.09 parts per billion. Mercury exceedances also include areas well upstream of the ash spill, including Emory River Mile 12.1 in Harriman and in the Clinch River upstream of the confluence with the Emory.
- **Selenium:** There has, to date, been one river sample that exceeds water quality criterion for selenium of 5 parts per billion. Almost all water column samples at all sites are non-detect for selenium, though there have been a few low detects at all stations, including the upstream control sites.

Fish Tissue Monitoring – Fish are being collected each spring and fall by the Tennessee Wildlife Resources Agency, Oak Ridge National Lab and TVA to be analyzed for metals associated with coal ash. Fall collection was done in the last quarter of 2009. The agencies collected largemouth bass, bluegill, and channel catfish from Emory River Mile 0.9, 2.5 and 8.0; and Clinch River Mile 1.5 and 8.0. Largemouth and bluegill also were collected in the vicinity of Lower Emory River Mile 2.0 and composite samples of gizzard shad were collected at several locations for analysis of metals in whole fish. Those results will be made available once the analysis is complete. If the updated data indicates a need, TDEC will update the existing fishing advisory, which predates the ash spill. Until that time, the public is urged to follow the existing advisory. There was no justification, based on the Spring 2009 results, to modify the advisory.

- **Gypsum Pond Update**

Last week, the department issued two approvals for the gypsum area. The corrective action plan for the Flue Gas Desulfurization Stormwater Pond, also known as the gypsum stilling pond, was issued on Jan. 19, 2010. As included in the December 2009 and January 2010 Monthly Updates from the department, TDEC's Division of Water Pollution Control issued a Notice of Violation on Nov. 25, 2009 for a loss of water from the gypsum stilling pond. This pond is separate from the gypsum pond itself, which is sometimes referred to as the gypsum disposal area.

The NOV cites TVA for failing to make timely notification of a possible leak as required by permit, and for an unpermitted discharge. It required investigation and corrective action. TDEC received investigative information as well as a corrective action plan from TVA, which includes the installation of a synthetic liner. The stilling pond cannot be utilized until the liner is installed.

The NOV, investigative information and corrective action plan submitted to TDEC, as well as TDEC's approval letter, are all posted on the department's TVA Kingston Update Web page at www.tn.gov/environment/kingston/community_guidance.shtml.

On January 20, 2010, TDEC's Division of Solid Waste Management approved the Construction Quality Assurance (CQA) report submitted by TVA for the gypsum pond/disposal area, which is separate from the stilling pond. The CQA report is a third-party engineering report certifying the structure is built in accordance with TDEC's solid waste permit requirements. TDEC had requested additional information to complete the CQA review and received that information on Jan. 19, 2010. The review was completed and approval to use the gypsum pond/disposal area was granted on Jan. 20, 2010. No discharge from the gypsum pond/disposal area can enter the stilling pond until the liner is installed in the stilling pond.

- **Department of Health Public Comment Period**

The Tennessee Department of Health's Environmental Epidemiology Program, under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR), has completed a draft Public Health Assessment (PHA) for the TVA Kingston coal ash release and now is accepting public comments. The comment period has been extended until March 9, 2010. For links to the report and information on how to make a public comment, visit the Tennessee Department of Health's Web page at www.health.state.tn.us/coalashspill.

• Monthly Update

TDEC is compiling a monthly update as an additional tool to provide the community with information related to the department's role in the ongoing monitoring and cleanup at the TVA Kingston site. We welcome feedback from the community regarding this report and its usefulness so we may evolve it to meet the community's needs. The newsletter is available the middle of each month on TDEC's TVA Kingston Update Web site at www.tn.gov/environment/kingston. Interested parties may also request an e-mail copy by contacting Ask.TDEC@tn.gov and including "TVA Kingston Monthly Newsletter" in the subject line.

TDEC On-Scene Coordinator

TDEC's representative at the TVA Kingston recovery site is Barbara Scott. She can be reached at 865-230-1211 or Barbara.Scott@tn.gov.

EPA Community Involvement Coordinator

EPA has a community involvement coordinator to assist the community with questions about the site. Stephanie Y. Brown may be reached at 800-564-7577 or 678-575-8505.

Useful Web sites

Tennessee Department of Environment and Conservation:
<http://www.tn.gov/environment/kingston>

Environmental Protection Agency:
<http://www.epakingstontva.com>

Tennessee Department of Health:
<http://www.tn.gov/health>

TVA:
<http://www.tva.gov/kingston>

Important Numbers

TDEC: 888-891-8332

EPA Community Involvement
Coordinator: 800-564-7577

TN Dept. of Health: 800-404-3006

Roane Co. Health Dept.: 865-354-1220

TVA Public Information: 865-717-4006

TVA Outreach Office: 865-632-1700

**If you have questions,
contact:**

**Tennessee Department of
Environment and
Conservation
888-891-8332**

**Updates, including sample
results, monitoring plans,
enforcement orders and TVA
submittals are available on the
Internet at:**

**www.tn.gov/environment
under "TVA Kingston Update."**

