

**United States Environmental Protection Agency**  
**Region IV**  
**POLLUTION REPORT**

**Date:** Sunday, January 4, 2009

**From:** Leslie Sims

**Subject:** Continuation of ER

TVA Kingston Flyash Release  
714 Swan Pond Road, Harriman, TN  
Latitude: 35.8949290  
Longitude: -84.5347440

|                          |            |                            |                |
|--------------------------|------------|----------------------------|----------------|
| <b>POLREP No.:</b>       | 4          | <b>Site #:</b>             | A4XP           |
| <b>Reporting Period:</b> | 1/1-3/2009 | <b>D.O. #:</b>             |                |
| <b>Start Date:</b>       | 12/22/2008 | <b>Response Authority:</b> | CERCLA         |
| <b>Mob Date:</b>         | 12/22/2008 | <b>Response Type:</b>      | Emergency      |
| <b>Demob Date:</b>       |            | <b>NPL Status:</b>         | Non NPL        |
| <b>Completion Date:</b>  |            | <b>Incident Category:</b>  | Removal Action |
| <b>CERCLIS ID #:</b>     |            | <b>Contract #</b>          |                |
| <b>RCRIS ID #:</b>       |            |                            |                |

**Site Description**

On Monday 12/22/2008, in response to NRC report #893129, and at the request of Roane County EMA and Tennessee EMA, OSC Sims and START responded to a catastrophic dike failure at the Tennessee Valley Authority Kingston Fossil Plant, Harriman, Roane County, TN. A breached settling pond retaining wall caused the release of an estimated 5.4 million cubic yards (approximately 300 acres outside the ash storage areas) of fly ash to the Emory and Clinch Rivers. The incident occurred around 0100 hrs. The cell was one of three at the facility used for dewatering fly ash. The release caused a massive slide that disrupted power, ruptured a major gas line, and destroyed several homes. As a result of the incident, residents in a nearby neighborhood were evacuated and relocated to temporary shelters.

**Current Activities**

EPA continues to assist as part of TVA Kingston Fly Ash Unified Command operations. Activities conducted during this reporting period (1/1-3/09) include the following:

1/1/09

EPA continued to monitor airborne ambient particulate levels. Twenty readings were collected at sampling locations in the immediate area of the release and in surrounding off-site areas. The results ranged from 5.0 ug/m<sup>3</sup> to 23.8 ug/m<sup>3</sup> (PM 10). EPA reviewed ash data from the 12/27-28 sampling of the TVA dredge cell and of ash deposited nearby. One sample was collected from an undisturbed portion of the cell and the other from the disturbed portion. Additionally, three ash samples were collected from the nearby roadway. Analytical results from the samples revealed total arsenic levels ranging from 25.8 mg/kg to 81.3 mg/kg.

Sampling data related to SESD's sampling effort (private wells and water treatment plant intakes) is currently being processed at the USEPA Laboratory, Athens, GA.

1/2/09

EPA collected 4 composite soil and 2 surface water samples 2-5 miles upgradient of the Site along the Clinch and Emory Rivers to obtain background level data for the area. All samples were collected from the banks of the rivers.

OSC Hughes and START provided a demonstration of field air monitoring and sampling methodologies for the local news media. EPA continued its PM10 ambient air particulate monitoring program. Twenty-eight readings were recorded at locations in the immediate area of the release and in surrounding off-site areas (refer to sampling location Map under Documents). The readings ranged from 8.4 to 26.7 ug/m<sup>3</sup>.

OSC Sims and TVA Kingston Unified Command representatives (TDEC, TVA, Roane County EMA), the Mayor of Kingston, and others, attended a press conference at the JIC. TVA, TDEC, and EPA provided a summary of sampling and analytical data received to date. EPA informed the media of its finding of elevated levels of arsenic detected in the ash samples collected at the dredge pile and a nearby

roadway. Water intake and finished water samples, collected by SESD at the Kingston, Cumberland and Rockwood Water Treatment Plants, and at four private drinking water wells revealed no constituents of concern were detected above the MCLs in the samples tested.

TVA continued to provide airborne ambient air particulate matter sampling and monitoring. Data provided by TVA indicated readings remain at acceptable levels.

1/3/09

No air monitoring was conducted due to rain and heavy fog. EPA continued to review sampling and analytical data and summarize findings.

**TVA ACTIVITIES**

TVA has completed construction of Weir #1 across the Emory River. Approximately 50% of Swan Pond Circle was cleared of fly ash. Aerial seeding continued today, with 9.6 tons of grass seed and fertilizer dropped by helicopter. A total of 20.8 tons have been dropped to date. TVA plans to seed a total of 213 acres by helicopter. TVA began reconstruction of the railroad track, located immediate west of the dredge cell.

**Planned Removal Actions**

**EPA PLANNED ACTIONS:**

OSC Nattis continued to assist TVA and TDEC in building a centralized data management system. It is anticipated that the system should be operational and transitioned to TVA and TDEC soon.

EPA will continue to provide independent ambient air sampling and monitoring of site activities.

**TDEC PLANNED ACTIONS**

TDEC has committed to sampling private drinking wells located within a 4 mile radius of the Site. Surface water intakes and finished water samples were collected at the Kingston and Rockwood WTPs and submitted for analysis. Expedited turnaround time was requested and the results should be available soon.

**TVA PLANNED ACTIONS:**

TVA has to date contacted and attained authorization from five property owners in order to establish long term high volume air monitoring locations.

A second weir is under design to confine ash and prevent it from entering the river. The 2000 foot rock weir will extend from Swan Pond Circle south to the the plant river bank. Dredging plans are under development with the US Army Corps of Engineers.

**Next Steps**

EPA will continue as needed in its support and monitoring role, and conduct all actions necessary to ensure the protection of public welfare and/or the environment.

**Key Issues**

TVA has taken full responsibility for the cleanup and engaged the necessary resources to mitigate the incident.

**Estimated Costs \***

|                         | <b>Budgeted</b> | <b>Total To Date</b> | <b>Remaining</b> | <b>% Remaining</b> |
|-------------------------|-----------------|----------------------|------------------|--------------------|
| <b>Extramural Costs</b> |                 |                      |                  |                    |
| RST/START               | \$100,000.00    | \$66,258.00          | \$33,742.00      | 33.74%             |
| <b>Intramural Costs</b> |                 |                      |                  |                    |
|                         |                 |                      |                  |                    |
| <b>Total Site Costs</b> | \$100,000.00    | \$66,258.00          | \$33,742.00      | 33.74%             |

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

[response.epa.gov/TVAKingstonFlyAshRelease](http://response.epa.gov/TVAKingstonFlyAshRelease)

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