

**U. S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303-8960**

DATE: January 13, 2010

SUBJECT: Pollution Report (POLREP) #101
TVA Kingston Fly Ash Release Time-Critical Removal Action
Harriman, Roane County, Tennessee

FROM: On-Scene Coordinator Leo Francendese
Emergency Response and Removal Branch

TO: Shane Hitchcock, Chief
Emergency Response and Removal Branch

James Webster, Chief
Removal Management and Oil Section

REPORTING PERIOD: January 12 – 13, 2010

I. Background and Site Description

On Monday, December 22, 2008, a dike failure at the Tennessee Valley Authority (TVA) Kingston Fossil Fuel Plant caused the release of an estimated 5.4 million cubic yards of fly ash to the nearby Emory River. The overland impact was estimated at between 250-300 acres. EPA remobilized to the Site to begin work under the EPA/TVA Administrative Order on May 11, 2009. TVA's weekly report dated January 04 –10 can be found at [www.epakingstontva.com/TVA Weekly Reports](http://www.epakingstontva.com/TVA%20Weekly%20Reports).

II. Site Status Highlights

Documents in Comment/Review:

- The EPA Science Panel Selenium Review Paper 30 day comment period ended. Comments are being reviewed by the Agency. A response to comments was released Thursday December 17th and has been posted [here](#).
- The [EE/CA Work Plan](#) public comment period ended December 20th.
- The [Community Involvement Plan](#) public comment period ended December 20th.
- TDH released draft Public Health Assessment for public comment on Friday December 11th. Document can be found at <http://health.state.tn.us/coalashspill.htm>.

Significant Operational Activities:

- Ash disposal transport to Perry County, AL: 2 trains transported ash during this reporting period (136 trains have left the site as of Wednesday).
- 20 inch, 16 inch, and 14 inch dredges operated during this period. Daily work day removal average east of Dike 2 (including excavation) is approximately 14,014 cys.
- Dry ash hauling from the east embayment and east of Dike 2 has resumed after evaluating data from Stantec. TVA has submitted a work plan to address wet ash storage on the failed dredge cell concerns. Main Wet Ash Storage Slope Remediation Work Plan is being revised for resubmission.
- Lateral Expansion continues to be used as additional settling basin for ash recovery system.

- Mechanical Filter Press became operational Monday and is being used to assist in ash drying activities.
- SESD’s EPA Performance Audits for field sampling and QAPP audit being conducted Monday through Thursday January 11th – 14th.
- OSC approved New Sluice Trench Road Work Plan and Settling Areas Maintenance and Clean Out Work Plan on Tuesday January 12th.

A. Meteorological Conditions

- Water elevation 736.12 ft; river water flow 567 ([Oakdale](#) is used for early indication for river flow surge).
- Rainfall during this reporting period: 0.00 inches.
- Cumulative rainfall for this week: 0.00 inches.

III. Superfund Division Operations, Coordination, and Oversight Activities

A. Current EPA Incident Management Staffing

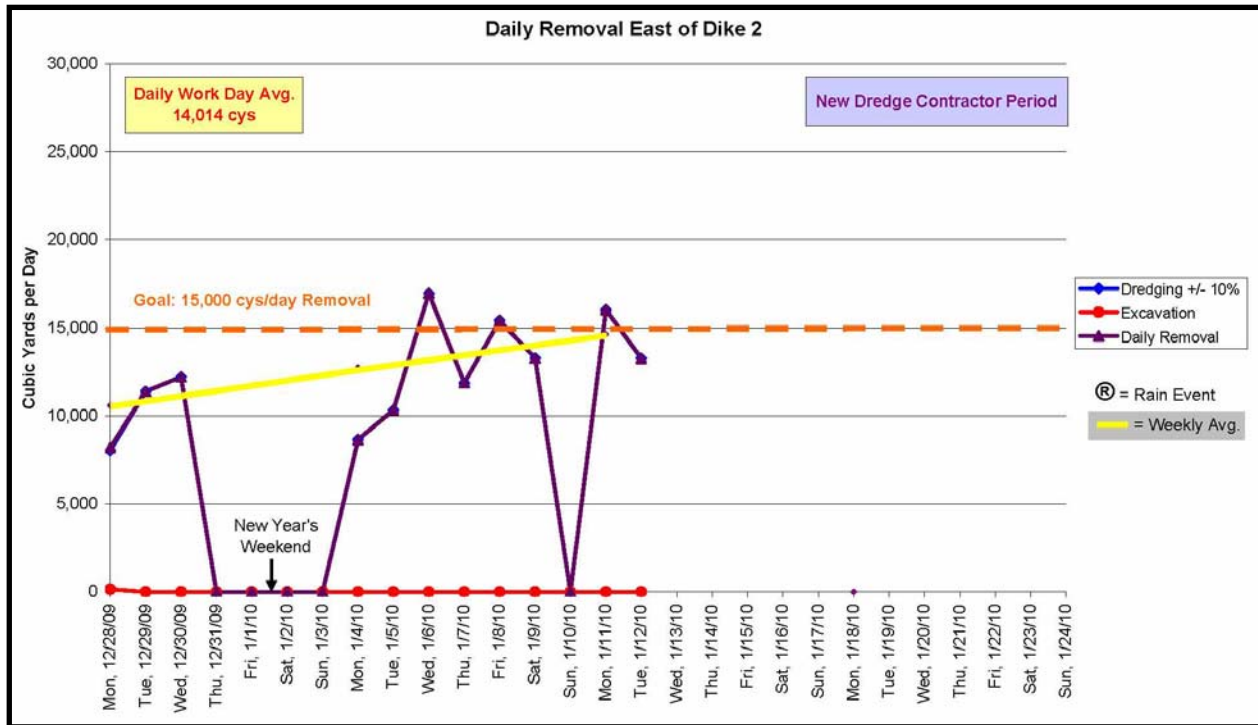
- 1 EPA On-Scene Coordinator (OSC)
- 1 EPA Remedial Project Manager (RPM, offsite)
- 1 EPA Community Involvement Coordinator (CIC)
- 5 Superfund Technical Assessment and Response Team (START) Contractors
- 2 US Coast Guard (Gulf Strike Team)
- 1 US Army Corps of Engineers (USACE, offsite in consult)
- 3 Bureau of Reclamation (BOR, 3 offsite)
- 1 EPA Emergency Response Team (ERT) National Health and Safety (offsite)

B. Time Critical (East of Dike 2) Fly Ash Excavation, Dredging, and Disposal Operations

<i>Estimated Amounts</i>	Cumulative	During This Period	Dates of this Period
Dredging	1,809,124 cys*	29,291 cys*	Jan. 11– 12
Excavation	557,882 cys	0 cys	Jan. 11– 12
Total (dredging + excavation)	2,367,006 cys	29,291 cys	Jan. 11– 12
Disposal	1,275,077 tons	17,800 tons	Jan. 12– 13

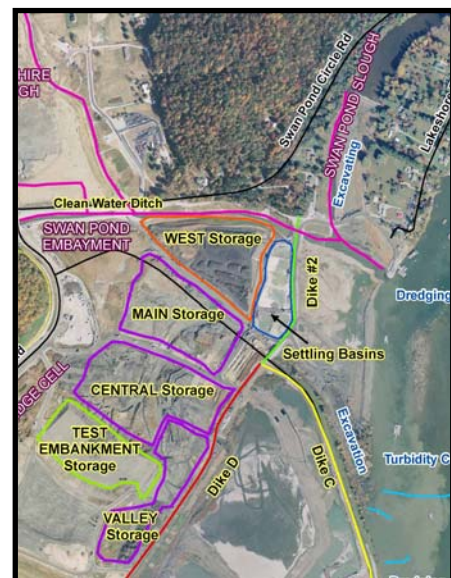
*Dredge values are estimated due to position of dredges making areas not able to be surveyed. Validated numbers require 3 to 5 working days to be updated.

Note: All graphs and cumulative amounts have been updated with latest validated dredge values. Graph of previous production periods available [here](#) for viewing.



1. TVA Dredging ([dredging work plans link](#))
 - TVA 14 inch (yellow dredge) being used to maintain settling capacity in settling pond.
 - 3 dredges were in operation Monday and Tuesday January 11th and 12th.
 - 20 inch dredge (Sandpiper): 34.6 hours
 - 16 inch dredge (Kylee): 38.8 hours
 - 14 inch dredge (McKenzie): 44.0 hours

2. TVA Excavation ([excavation work plans link](#))
 - Excavation continued Monday and Tuesday January 11th and 12th for area east of Dike 2 and Swan Pond Slough.
 - Ash being hauled to WEST storage west of Dike 2.
 - Volume stored in west ash area: 134,417 cys.
 - Ash being hauled to MAIN storage west of Dike 2.
 - Volume stored in main ash area: 1,129 cys.
 - Ash being hauled to VALLEY storage west of Dike 2.
 - Volume stored in valley ash area: 95,154 cys.
 - Ash being hauled to CENTRAL storage area.
 - Volume stored in central storage area: 114,589 cys.
 - Ash being hauled to TEST EMBANKMENT storage area.
 - Volume stored in test embankment area: 280,407 cys.
 - Dry ash hauling from the east embayment and east of Dike 2 has resumed after evaluating data from Stantec. TVA has submitted a work plan to address wet ash storage on the failed dredge cell



concerns. Main Wet Ash Storage Slope Remediation Work Plan is being revised for resubmission.

3. TVA Fly Ash Loading and Disposal ([disposal work plans link](#))
 - Drying agents continue to be added to railcars.
 - Two 88 railcar trains transported during this period. One train each day on Tuesday and Wednesday January 12th and 13th.
4. Ash Recovery System Improvements
 - Lateral Expansion continues to be used as additional settling basin for ash recovery system. Daily average: 1,583 cys.
 - Mechanical Filter Presses became operational Monday and is being used to assist in ash drying activities. Design production for 24-hour work day is 4,600 cys.
5. Other Site Operations ([time critical work plans link](#))
 - OSC approved New Sluice Trench Road Work Plan and Settling Areas Maintenance and Clean Out Work Plan on Tuesday January 12th.

C. Time Critical Support Activities

- **BOR** offsite consulting OSC as per Interagency Agreement (IAG) on construction and engineering assessments of:
 - stability of dikes
 - ash stacking height in ash processing areas
 - rim ditch stability
 - additional wet ash processing areas
- **US Coast Guard (Gulf Strike Team)** as per IAG to provide health and safety oversight, and river closure management.
 - As part of health and safety oversight, providing perimeter monitoring of truck movement as well as enforcement of on-site exclusion zones including Emory River closure area.
 - EPA and TVA in coordination with Coast Guard closed Emory River from river mile marker 3 to 1.5 on August 11th for 30 days. Closure extension coordinated with Coast Guard (GST and Ohio Valley Sector) and other appropriate agencies has been extended through February 2010. Map available at www.epakingstontva.com.
- **EPA Data Team** providing oversight to SCRIBE database activities.
 - TDEC continues to compile SCRIBE database and publishing analytical data.
 - START has published EPA and TVA analytical data to SCRIBE database.
- **START** conducting cenosphere and field sampling activities.
 - Conducting cenosphere and debris location reconnaissance focusing on historically known collection areas on the Emory, Clinch, and Tennessee Rivers. Reports are coordinated with TVA for response actions.
 - Event sampling took place on Friday December 18th due to rain fall. Results are pending.
- TVA Phase 2 bathymetry was completed week of January 4th. Data and maps are pending. Phase 1 maps available at www.epakingstontva.com/Nature and Extent. Work plan available at www.epakingstontva.com/Nature and Extent/Sub-bottom Profiling Workplan Final.

D. Public Information and Community Involvement Activities

- **Community Involvement Coordinator Activities**
 - Second quarterly EPA factsheet will be mailed out to residents on January 18th.

- Public meeting tentatively scheduled for January 26th at Roane County High School from 5 – 8:30 pm.
- CIP and EE/CA Work Plan public comment period ended December 20th. CIP is available [here](#).
- EPA has provided an independent Interim Technical Advisor (TA) to the CAG until they receive all proposals and hire a TA.
- START contractor providing technical support to EPA OSC and CIC for public information.
- **Public Information**
 - Press release for river closure extension can be found at [www.epakingstontva.com/Lists/River Page Documents](http://www.epakingstontva.com/Lists/River%20Page%20Documents).

E. State Coordination

- Tennessee Department of Health’s Environmental Epidemiology Program, under a Cooperative Agreement with the Federal Agency for Toxic Substances and Disease Registry, announces the release of the draft Public Health Assessment for the TVA Kingston Coal Ash Release for public comment.
 - Already had internal government review
 - 4-page fact sheet summary and full 200-page Public Health Assessment are both available at <http://health.state.tn.us/coalashspill.htm>.
 - Comments must be received by February 9, 2010.
- TDEC released [“Lessons Learned from the TVA Kingston Dredge Cell Containment Facility Failure: TDEC Advisory Board Recommendations for Safe Performance”](#) on Monday November 30th.
- Tennessee Department of Environment and Conservation (TDEC) coordinating with USACE/ERDC on “Evaluation of Metals Release from Oxidation of Fly Ash during Dredging of the Emory River, TN”. Report was released Tuesday October 20th and can be viewed [here](#).
- TDEC is addressing fugitive dust issues outside of houses.
- TDEC forwarding community concerns to START in response to cenosphere reports.
- TDEC and Tennessee Department of Health (TDH) in coordination with OSC continue to address concerns related to lower Emory River advisory. Contact TDH or TDEC’s Barbara Scott (865-696-9614) for concerns.
- Full TDEC report regarding the September 18th stack emissions event can be found [here](#).

IV. Water Protection Division Activities

- No report during this reporting period.

V. Resource Conservation and Recovery Act (RCRA) Division Activities

- No report during this reporting period.

VI. Air, Pesticides and Toxics Management Division (APTMD) Activities

- Air monitoring network operated by TVA and TDEC continues collecting PM data that is in compliance with the National Ambient Air Quality Standards.
- EPA submitted the Performance Audits and Network Assessment of the Ambient Air Monitoring Network at the Kingston, Tennessee Fossil Plant Fly Ash Removal Project, Friday August 21st and available at [www.epakingstontva.com/EPA Air Audits and Reviews](http://www.epakingstontva.com/EPA%20Air%20Audits%20and%20Reviews).
- *EPA continues reviewing the air quality monitoring conducted by TDEC and TVA and confirms TDEC's belief that there is no known threat to public health from an air pollution exposure associated with the clean-up of the ash spill at the TVA Kingston Steam*

Plant. National ambient air quality standards for inhalable particulate (PM10) and respirable particulate (PM2.5) are being met. Air sampling continues to show no metal concentrations of concern. Persons wishing to view the monitoring data can see it at the following web address: <http://www.state.tn.us/environment/kingston/air/>.

- SESD's EPA Performance Audits and Network Assessment of the Ambient Air Monitoring Network is pending release.

VII. Science and Ecosystem Support Division (SESD) Activities

- SESD's EPA Performance Audits and Network Assessment of the Ambient Air Monitoring Network is pending release.
- SESD's EPA Performance Audits for field sampling and QAPP audit being conducted Monday through Thursday January 11th – 14th; 2 personnel for field sampling and 3 personnel for QAPP review.

VIII. Non-Time Critical Removal Action Activities

- EPA approved the Engineering Evaluation and Cost Analysis (EE/CA) Work Plan October 16th; it is available [here](#). Document public review and comment period ended December 20th.
- EE/CA Report for the material West of Dike 2 is expected to be out for 30-day public comment period in mid-January.
- River sampling work plan based on Wednesday October 7th meeting for ecological risk sampling on Emory, Clinch, and Tennessee Rivers is expected for release early March. Additional sampling based on this work plan is expected in spring 2010.

IX. Recommended Sources for Additional Information

- TVA's weekly report dated January 04 –10.