

**Pollution Report (POLREP) #122
TVA Kingston Fossil Fuel Plant Release Site Time-Critical Removal Action
Harriman, Roane County, Tennessee**



March 02 – 03, 2010

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

DATE: March 03, 2010

SUBJECT: Pollution Report (POLREP) #122
TVA Kingston Fossil Fuel Plant Release Site Time-Critical Removal Action
Harriman, Roane County, Tennessee

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REPORTING PERIOD: March 02 – 03, 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 February 22 – 28 can be found at [www.epakingstontva.com/TVA Weekly Reports](http://www.epakingstontva.com/TVA%20Weekly%20Reports).

II. Site Status Highlights

A. Documents in Comment/Review:

- 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>.
- The Embayments and Dredge Cell EE/CA Report is available for public comment and can be viewed [here](#). The public comment period is 75 days beginning January 19th to April 5th. Responsiveness Summary for comments received during the public comment period on the EE/CA Work Plan have been posted [here](#).
- The [EE/CA Work Plan](#) public comment period ended December 20th.
- The [Community Involvement Plan](#) public comment period ended December 20th.

B. Significant Operational Activities:

- EPA and TVA in coordination with Coast Guard and other appropriate agencies have extended the Emory River closure to May 15th for mile marker 0 to 6. River closure will be established to the furthest dredging extent and adjusted as dredging progresses. Watch for additional dredge and closure updates at www.epakingstontva.com.

- Ash disposal transport to Perry County, AL: 2 trains transported ash during this reporting period (169 trains have left the site as of Wednesday).
- Two 16 inch dredges and two 14 inch dredges operated during this reporting period. Dredge #5 (14 inch) parts being assembled at south boat ramp. Daily work day removal average east of Dike 2 from February 1st to present (including excavation) is approximately 7,127 cys.
- OSC approved Test Embankment Buttressing Work Plan on Wednesday March 3rd.
- *Note: Safety stand down on March 3rd shutdown all operations except essential operations (air monitoring, dust control, decontamination areas, empty train receiving, full train shipping, etc.). Site meeting at end of day will discuss safety update and action items.*

C. Meteorological Conditions

- Water elevation 736.24 ft; river water flow 832 ([Oakdale](#) is used for early indication for river flow surge).
- Rainfall during this reporting period: 0.09 inches.
- Cumulative rainfall for this week: 0.09 inches.

III. Superfund Division Operations, Coordination, and Oversight Activities

A. Current EPA Incident Management Staffing

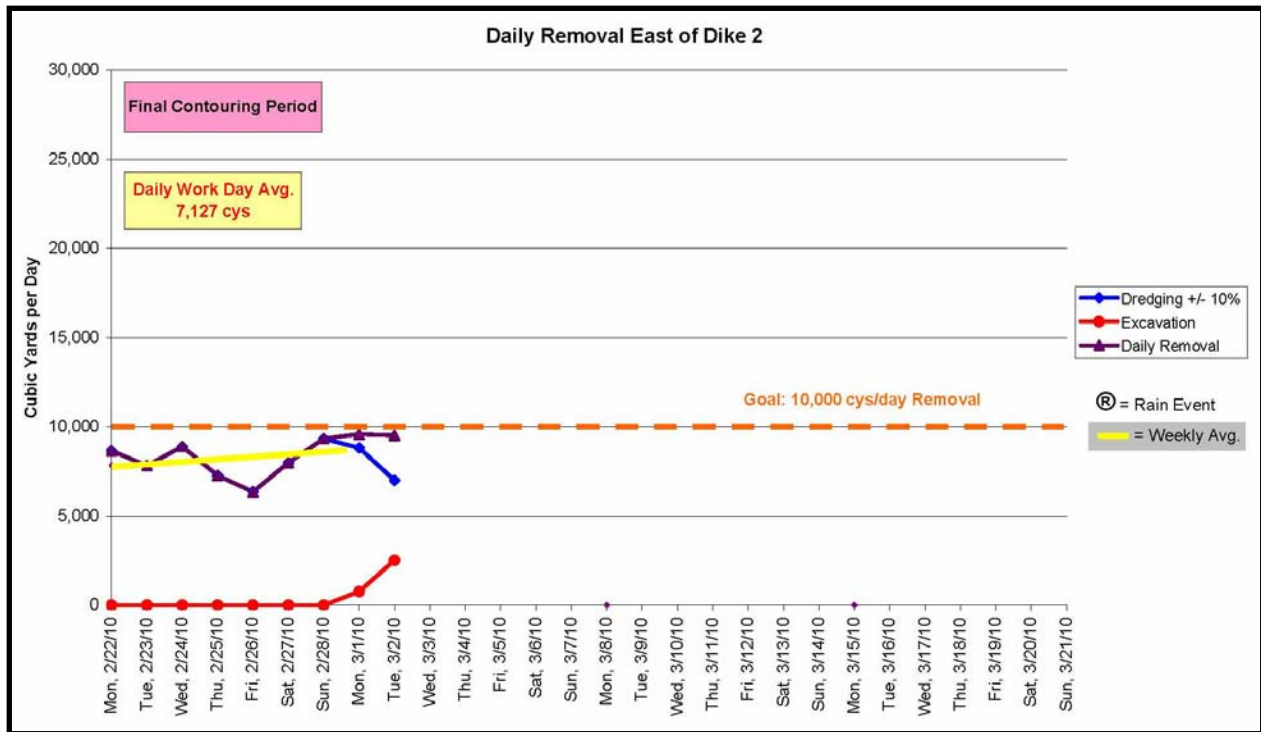
- 1 EPA On-Scene Coordinator (OSC)
- 1 EPA Remedial Project Manager (RPM, offsite)
- 1 EPA Community Involvement Coordinator (CIC)
- 5 Superfund Technical Assessment and Response Team (START) Contractors
- 2 US Coast Guard (Gulf Strike Team)
- 1 US Army Corps of Engineers (USACE, offsite in consult)
- 3 Bureau of Reclamation (BOR, 3 offsite)
- 2 EPA Emergency Response Team (ERT) National Health and Safety (offsite) and QAPP reviewer (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	2,132,516 cys*	15,815 cys*	Mar. 01 – 02
Excavation	583,337 cys	18,154 cys	Mar. 01 – 02
Total (dredging + excavation)	2,715,852 cys	33,969 cys	Mar. 01 – 02
Disposal	1,566,977 tons	16,600 tons	Mar. 02 – 03

*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](#))

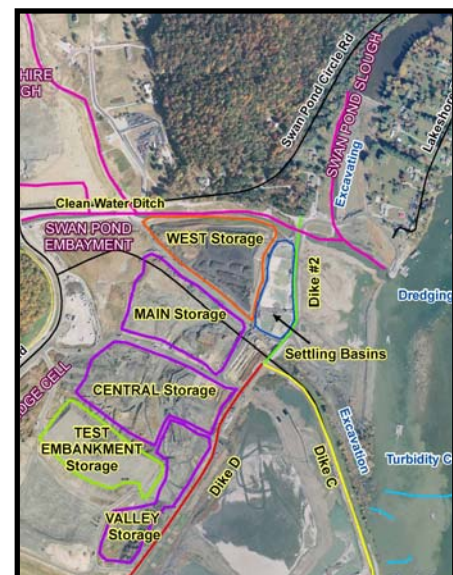
- TVA 14 inch, 12 inch, and 10 inch dredges being used to maintain settling capacity in ash settling pond.
- 4 dredges were in operation Monday and Tuesday March 1st and 2nd. Dredge #5 (14 inch) parts being assembled at south boat ramp.
 - 16 inch dredge (Kylee): 29.8 hours
 - 16 inch dredge (Shirley): 34.3 hours
 - 14 inch dredge (McKenzie): 40.0 hours
 - 14 inch dredge (Adelyn): 16.0 hours

2. TVA Excavation ([excavation work plans link](#))

- Excavation on Monday and Tuesday March 1st and 2nd 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: 174,016 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: 170,385 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: 330,585 cys.

3. TVA Fly Ash Loading and Disposal ([disposal work plans link](#))

- Drying agents continue to be added to railcars.



- Two 83 railcar trains transported on Tuesday and Wednesday March 2nd and 3rd.
4. Ash Recovery System Improvements
 - Lateral Expansion continues to be used as additional settling basin for ash recovery system. Daily average: 1,781 cys.
 - Mechanical Filter Presses continues to operate in assisting ash drying activities. Design production for 24-hour work day is 4,600 cys. Daily average since January 11th: 756 cys. For the week of March 1st through 6th: 1,481 cys.
 - Lime drying/stabilization has been added as an operational improvement with an intent to reduce moisture content in ash to be handled.
 5. Other Site Operations ([time critical work plans link](#))
 - OSC approved Test Embankment Buttressing Work Plan on Wednesday March 3rd.
 - 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.

C. Time Critical Support Activities

1. **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
 - additional onsite construction management support is scheduled by March 1, 2010
2. **US Coast Guard (Gulf Strike Team)** on-site as per IAG to provide health and safety oversight, decontamination oversight and river closure management.
 - As part of health and safety oversight, providing perimeter monitoring of truck movement, vehicle/equipment decontamination as well as enforcement of on-site exclusion zones including Emory River closure area.
 - EPA and TVA in coordination with Coast Guard and other appropriate agencies have extended the Emory River closure to May 15th for mile marker 0 to 6. River closure will be established to the furthest dredging extent and adjusted as dredging progresses. Watch for additional dredge and closure updates at www.epakingstontva.com.
3. **EPA Data Team** offsite 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.
4. **START** on-site conducting cenosphere recon and independent 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.
 - Storm event split sampling occurred Monday February 22nd. Results are pending.
 - Began conducting bi-monthly water quality routine split sampling February 2010.
5. **ERT** offsite providing technical assistance.

- Assists OSC in reviewing QAPP's from non-governmental organizations.
 - Assists OSC in Health and Safety audits and plan reviews.
6. **USACE** offsite providing support to OSC.
- Reviewing productivity and practicality of draft dredge addendum.
 - Providing expertise for Weir 1 decision making.
 - Providing storm event sediment migration modeling.

D. Public Information and Community Involvement Activities

1. Community Involvement Coordinator Activities

- CIC tentatively scheduled to attend CAG meeting on Thursday February 4th.
- Availability Session scheduled for Tuesday March 9th at TVA Outreach Center.
- The Embayments and Dredge Cell EE/CA Report is available for public comment and can be viewed [here](#). The public comment period is 75 days beginning January 19th to April 5th.
- CIP and EE/CA Work Plan public comment period ended December 20th. CIP is available [here](#).
- START contractor providing technical support to EPA OSC and CIC for public information.

2. Public Information

- Press release for the Emory River closure can be found [here](#).
- Press release for the Embayments and Dredge Cell EE/CA Report can be found [here](#).

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, draft Public Health Assessment for the TVA Kingston Coal Ash Release for public comment until March 9, 2010 can be found at <http://health.state.tn.us/coalashspill.htm>.
- 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 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/>.*

VII. Science and Ecosystem Support Division (SESD) Activities

- SESD's EPA Performance Audits and Network Assessment of the Ambient Air Monitoring Network has been posted [here](#).
- SESD's EPA Performance Audits for field sampling and QAPP audit conducted Monday through Thursday January 11th – 14th. Audit report can be found [here](#). SESD continues to provide audit follow-up activities to OSC including participating in data management quality assurance weekly calls and scheduling for lab audits.

VIII. EPA Federal Facilities Division Activities

- Reviewing Emory River mile marker 0 to 1 and Clinch River legacy sediment issues as part of the DOE interagency workgroup.

IX. Non-Time Critical Removal Action Activities

- Embayments and Dredge Cell EE/CA Report is available for public comment and can be viewed [here](#). The public comment period is 75 days beginning January 19th to April 5th.
- 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.
- Responsiveness Summary for comments received during the public comment period on the EE/CA Work Plan have been posted [here](#).

X. Recommended Sources for Additional Information

- TVA's weekly report dated February 22 – 28.