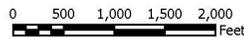


# KINGSTON ASH RECOVERY PROJECT WEEKLY REPORT November 2 - 8, 2009

Aerial Image of Kingston Ash Slide August 14, 2009



Tennessee Valley Authority  
OE&R - ER&S  
Geographic Information & Engineering

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Issue (Date/Time)  
11/10/2009 8:33:38 AM

# KINGSTON ASH RECOVERY PROJECT

## WEEKLY REPORT

November 2 - 8, 2009

### HIGHLIGHTS

- No OSHA reportable injuries this week.
- Cumulatively, just over 1,844,000 cubic yards of ash have been removed from the river and east of Dike 2.
- Submitted the Draft of Revision 4 of the Site Wide Safety and Health Plan to EPA for review.
- Have loaded and transported 91 unit trains to date for a total of approximately 809,450 tons.

### SAFETY

#### Program Summary

- 18 site specific Health Safety Environmental orientations conducted for the week, 855 to date.
- 9 Safety Observation Reports submitted for the week; 447 to date; 389 of which have been closed. 58 remain open.
- A Jacobs Safety Evaluation Report was conducted from Monday through Wednesday. Preliminary findings point to a few programmatic improvements which could be implemented. Awaiting formal report.
- Draft of Revision 4 of the Site Specific Safety Plan was sent to EPA for review.
- A TVA-wide safety stand down was completed by Thursday afternoon. All TVA personnel, contractors and subcontractors were required to participate. The subject was Hand Injury Prevention and Awareness, TVA Bulletin #10-05. Ash Recovery Project contractors and support personnel participated. Over 300 signatures were gathered and turned in.

#### Incidents

- No OSHA reportable injuries this week
- November 4, 2009 – Dredging Operations. A spud cable wrapped around a hydraulic fitting on the 20" dredge and snapped the fitting. Three (3) gallons of biodegradable fluid was released and captured. A guard has been fabricated and installed to preclude repeat incidents. Measures are being put into place to ensure that corrective actions are captured and acted upon.
- November 6, 2009 – At 11:45 am, an employee of Gibbons Farms attempted to move a hydro seeder trailer from the north end of Berkshire to the refueling point in the North Embayment. The trailer detached from the tow vehicle and rolled approximately 100 feet before rolling off the roadway and into a ditch. There was no damage to property. The investigation is underway. The responsible worker has been separated from the project.

### INFRASTRUCTURE/ASH MANAGEMENT

- Because of issues associated with elevated pore pressure ratios reported at the test embankment, a decision was made to not place ash into wet storage pending an engineering analysis of ash stability. Therefore, only 7000 cy of ash were removed from east of Dike 2 this week.
- A review of the plan to remove remaining material in the east embayment was discussed with environmental compliance. Agreement was reached to consolidate wet ash generated from the settling basin cleanout and, potentially mechanically dredging ash with the remaining ash in the east embayment pending completion of the wet storage area stability analysis.
- Dust management and HAZWOPER controls continued this week.
- At the request of perspective bidders, the bid opening for the installation of the Offsite Utilities has been postponed to November 20, 2009.
- The modified SWPPP has been submitted for review.
- Repairs to the ballfield instrumentation are being made and are expected to be completed by November 11, 2009.

### ASH DREDGING & PROCESSING

- Ash pond survey data received on November 6<sup>th</sup> indicated that additional action is required to decrease the filling rate of the ash pond. Immediate actions taken were to (1) schedule dredging on Sunday when flow turbulence is lowest (without the river dredges operating) and to inject polymer at the rim ditch to enhance settlement in the sluice trench. Evaluation of two mechanical dewatering options is running concurrently with effort to permit use of lateral expansion as disposal location

- Through November 8<sup>th</sup>, the Severson hydraulic dredged volume is estimated at 813,878 cubic yards and the total dredged from the river is at 1,289,565 cubic yards. Note: Total dredged from the river has been adjusted to include all of TransAsh and TVA reported hydraulic and mechanical dredging to date.
- The Little Rock demobilization plan was submitted and removal is scheduled for this coming week.
- Ash pond bathymetric survey was completed on Sunday, November 9<sup>th</sup>, by Hard Hat Services and calculations are underway.
- TVA survey crew completed an ash pond survey on Thursday with results indicating that storage was now at 91% of the NPDES free water volume requirement.

## ASH DISPOSITION

- Loaded and transported 6 unit trains this week.
- Have loaded and transported 91 unit trains to date for a total of approximately 809,450 tons.
- Continued putting polymers in rail cars prior to shipping to Alabama. Making adjustments to the amount of polymer depending on the composition of the ash.
- Continuing work on the overall operations of the ballfield/processing area.
- The trial of the new piece of equipment to help reduce the moisture content was successful. Making preparations to utilize the equipment full time.

## CENOSPHERE RECOVERY

- Outreach calls remain minimal and all new calls were closed out by the end of the week. There are three EPA confirmed sites below TRM 530.
- The three barge-mounted vacuum units worked in the Emory and Clinch Rivers.
- Large amounts of cenospheres continue to collect in the Ash Pond and the Dike 2 Sediment Basins. Crews worked on keeping the weir areas clean.

## SKIMMER WALL

- Work on the Skimmer Wall has been suspended until early next year.

## DIKE REINFORCEMENT

- MACTEC began collecting samples of materials to be delivered to the site for construction of the buttress.
- Stantec addressed final comments and began preparing final TVA construction drawings.
- Continued to monitor the dikes at Kingston on a daily basis.

## ROUTINE MONITORING

### Surface Water Sampling

- Routine surface water fixed station monitoring occurred on Monday, November 2<sup>nd</sup>, and Friday, November 6<sup>th</sup>. Samples for nutrient analyses were also collected on Monday, November 2<sup>nd</sup>. Through October 12<sup>th</sup>, there have been no detections above any criteria (i.e., ambient water quality, domestic water supply) for the three constituents of primary interest in ash (arsenic, selenium, mercury). Since the May 4, 2009 Emory River high flow event, the total suspended solids (TSS) concentrations at the fixed stations have consistently averaged less than 20 mg/L.
- Daily monitoring of dredge plumes continued. On Monday, November 2<sup>nd</sup>, and Wednesday, November 4<sup>th</sup>, TVA and EPA continued the compilation of turbidity measurement data from the mouth of the Emory River to ERM 4.0. The data are being compiled and plotted on Mondays and Wednesdays to determine that turbidity curtain placement is effective to prevent any adverse trends as the dredging operation continues.
- A total of 1,579 plume monitoring surface water analyses have been received from the analytical laboratories for sample dates March 19, 2009 – October 15, 2009. Trends are reported below for samples collected between September 1, 2009 and October 15, 2009. On September 24, 2009, a field turbidity measurement and subsequent laboratory results of 1840 mg/L TSS and 0.194 mg/L arsenic were reported for a dredge plume sample. A subsequent review of these data and other downstream data concluded that the plume was localized and created no downstream impacts. Arsenic was detected in all samples with the exception of those collected on August 25, 2009. Sixteen of 26 results were greater than the Tennessee Department of Water Safety (TDWS) (ranging from 0.0114 to 0.194, mg/L). All concentrations were less than the Fish & Aquatic Life (F&AL) except for the maximum result of 0.194 mg/L observed on September 24<sup>th</sup>. Selenium was detected above the F&AL (0.005 mg/L) on September 24<sup>th</sup> (0.0123mg/L). The concentration was less than the TDWS.
- Swan Pond Embayment surface water sampling continues routinely twice per week at two locations along the Swan Pond Embayment drainage ditches. Since the tie-in of the Embayment settling basins, TSS results from samples

collected at the settling basin effluent and from the clean water ditch average below 20 mg/L, except during elevated rainfall events. Over the past several weeks of heavy rainfall, TSS results in the clean water ditch have averaged around 50 mg/L, with the exception of an October 14 storm flow event was 217 mg/L, with the color observed as "muddy brown." Most detected arsenic concentrations from the Embayment samples exceed the TDWS, but are below the F&AL.

#### **Waste Characterization**

- Results were received and reported to the Arrowhead Landfill operator for Radium-228 (Ra-228)/Radium 226 (Ra-226) collected from rail cars on September 30<sup>th</sup>, in accordance with waste acceptance criteria requirements. All results were <10 pCi/g combined Ra-228/Ra-226.

#### **Sediment Sampling**

- The TVA vibracore rig commenced ash characterization along Dike C in preparation for the Dike C reinforcement project. The stretch inside the Intake Channel bridge was completed. Work continues along the Emory River portion of the dike.
- The sampling plan for characterization of ash from ERM 0.0 to CRM 2.5 was transmitted to TDEC and the DOE Interagency Group for concurrence. Field work will be initiated following concurrence and completion of the Dike C ash characterization.

#### **Air Sampling**

- The majority of air monitoring results, including fixed-station and real-time monitoring results continue below ambient air quality criteria.
- TVA's real-time tapered element oscillating microbalance (TEOM) PM2.5 instrument is operating at the Lakeshore Drive (PS07) air monitoring location. Data for this instrument are available on the regulator website.

#### **Data Management**

- TVA project staff met with Oak Ridge National Laboratory (ORNL) Environmental Sciences Division staff supporting the ongoing fish health studies. The meeting was held to learn about ORNL's quality assurance program and to facilitate the incorporation of ORNL data into the Equis database. A follow up meeting is planned to work on the database compatibility.

#### **Biota Sampling**

- Mammal trapping has been initiated in collaboration with the University of Tennessee.
- ORNL, TWRA, and TVA continued fall fish collection as part of the overall ongoing fish health study.

### **FINAL REMEDIATION**

- The draft EE/CA for the dredge cell and embayment underwent TVA review this past week.
- Work continues on the sampling and analysis plan for the river.

### **DREDGE CELL**

- Due to elevated readings from the piezometers under the test embankment, work on the test was suspended until Wednesday. After that time, between 3,000 and 5,000 cy were placed on the test cell each day. The source material was the relic area and the ash in the ballfield.

### **COMMUNICATIONS**

#### **Communications**

- Posted to TVA's Kingston Webpage: Air Quality Information Updated, Weekly Report Added, Kingston Site Update
- Drafted talking points for various site-related activities.
- Continued to handle daily calls from the news media.

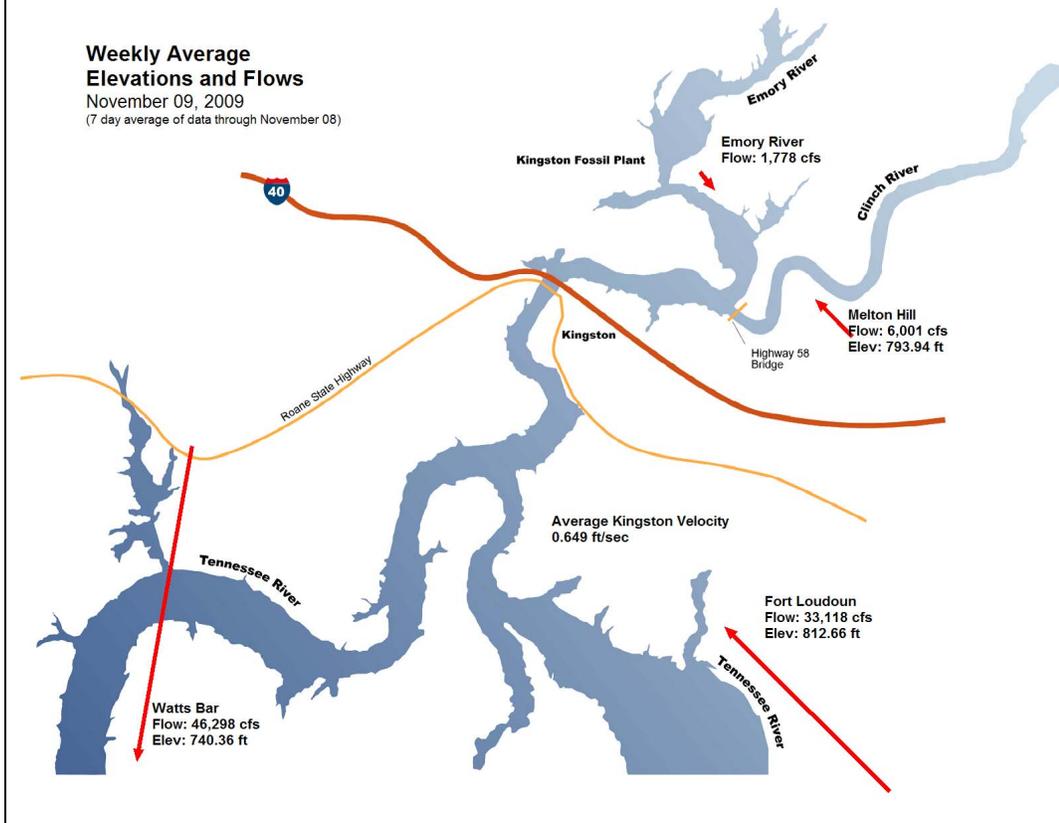
#### **Outreach**

- Attended CAG meeting.
- Update from Kingston Site sent to CAG.
- Sent revised Technical Assistance Plan to CAG.
- Met with individual residents about property and operations issues.
- Continued to handle calls and visits from residents.
- Responded to Congressional Inquiries and TVAINFO letters about residents.

## Valley/Government Relations

- Various meetings with local public officials.

## RIVER OPERATIONS

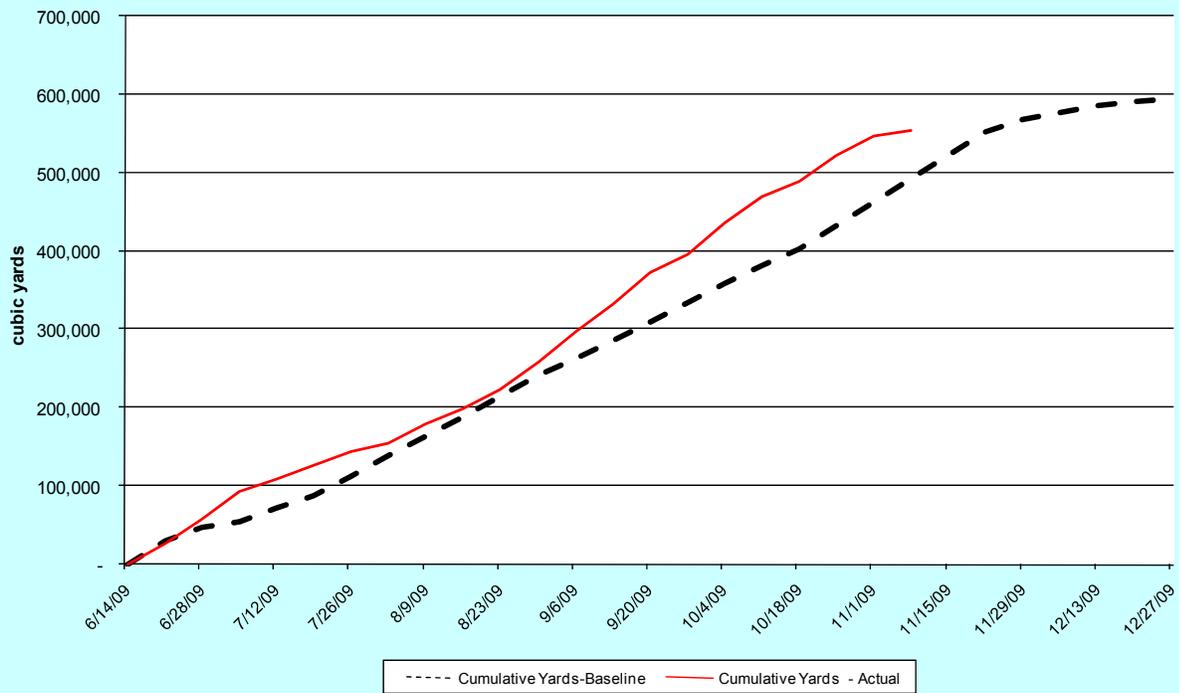


<b>MEETINGS/CONFERENCE CALLS</b>		
<b>Date</b>	<b>Time</b>	<b>Subject</b>
11/09	0730	Environmental Meeting (ICP Conference Room)
11/09	0900	Dike C Buttress Intake Channel (ICP Conference Room)
11/09	1000	Aquatic Resources Studies (Team Room)
11/09	1300	REE Corrective Action Meeting (Team Room)
11/10	1000	Project Review Meeting (ICP Conference Room)
11/10	1100	Move Video Equipment (ICP Conference Room)
11/10	1300	Dredge Team Meeting (Team Room)
11/10	1400	Move Video Equipment (Team Room)
11/11	0800	Time Critical Weekly Meeting (ICP Conference Room)
11/11	0900	Data Management Meeting (ICP Conference Room)
11/11	1100	MRC Environmental & Safety (ICP Conference Room)
11/11	1330	Test America Weekly Call (Conference Call)
11/12	0730	Environmental Meeting (ICP Conference Room)
11/12	0900	KIF SOP Meeting (Team Room)
11/12	1000	Pace Telecon (Conference Call)
11/12	1130	HSE Staff Meeting (ICP Conference Room)
11/12	1330	Dike C construction Planning Meeting (ICP Conference Room)
11/13	0900	Jacobs Senior Managers Meeting (ICP Conference Room)
Daily	0730	Site Safety Orientation (Team Room)
Daily	1600	Planning Meeting (ICP Conference Room)

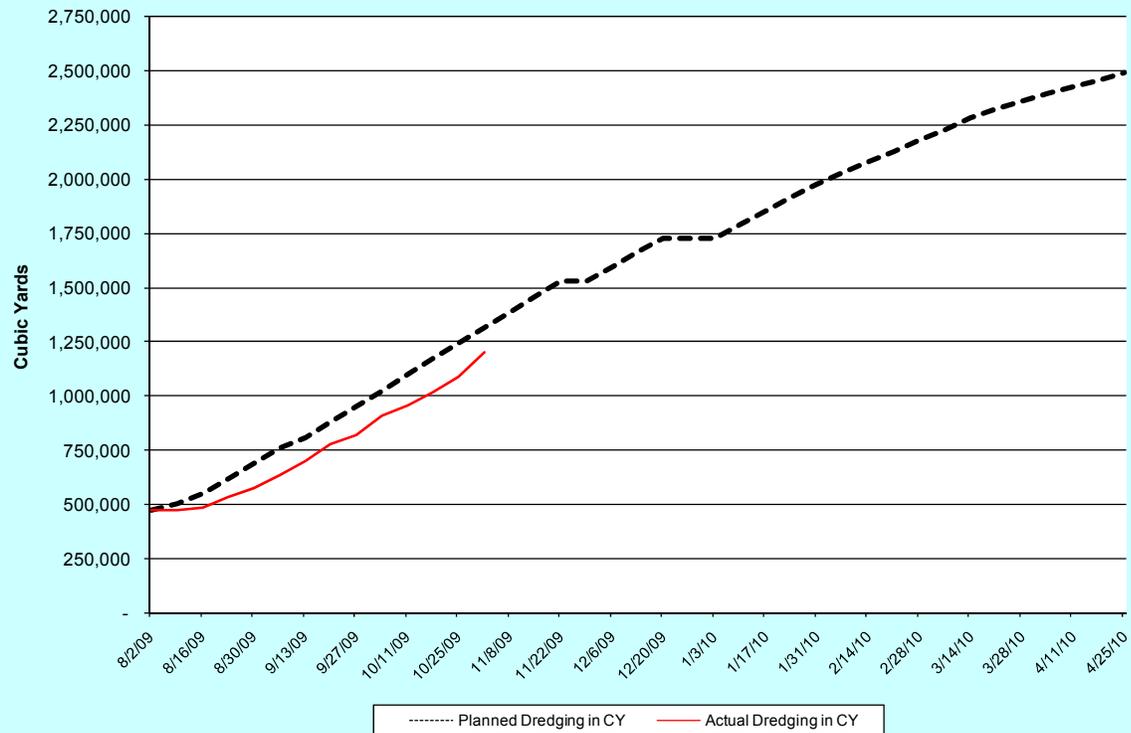
Kingston Recovery Project		Date: November 2 - 8, 2009	Field Report	
<b>Safety</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
First Aid Incidents			0	25
Recordable Incidents			0	7
Lost Time Incidents			0	2
<b>Cenosphere/Debris Removal</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
Outreach	Light Debris Removal – Land (bags)		0	18,867
Divisions A, B,C,D Cleanup	Division Shoreline Cleanup (bags)		1,020	84,706
Total	Tons of Light Debris		0	959.57
Cenosphere Slurry	Gallons		274,500	9,275,500
<b>Environmental</b>				
<b>Org</b>	<b>Matrix</b>		<b>Total # Analysis Performed Through 11/04/09</b>	
TVA	Air - Real-Time		128,877	
TVA	Air – Fixed		963	
TVA	Surface/Utility Water		17,969	
TVA	Ground Water (spring and well)		498	
TVA	Ash		104	
TVA	Soil/Sediment		91	
TVA	Biota		745	
<b>Ash Dredging &amp; Excavation</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
River	Estimated Cubic Yards thru November 8, 2009 (see Note)		88,621	1,289,565
Ash Excavation (east of Dike 2)	Estimated Cubic Yards **Modified to an in-place volume		7,000	554,479**
Ash Excavation (other)	Estimated Cubic Yards **Modified to an in-place volume		0	73,000**
Ash Disposal	Estimated Tons		55,350	809,450

NOTE: Total dredged from the river has been adjusted to include ongoing survey adjustments and all of TransAsh and TVA reported hydraulic and mechanical dredging to date.

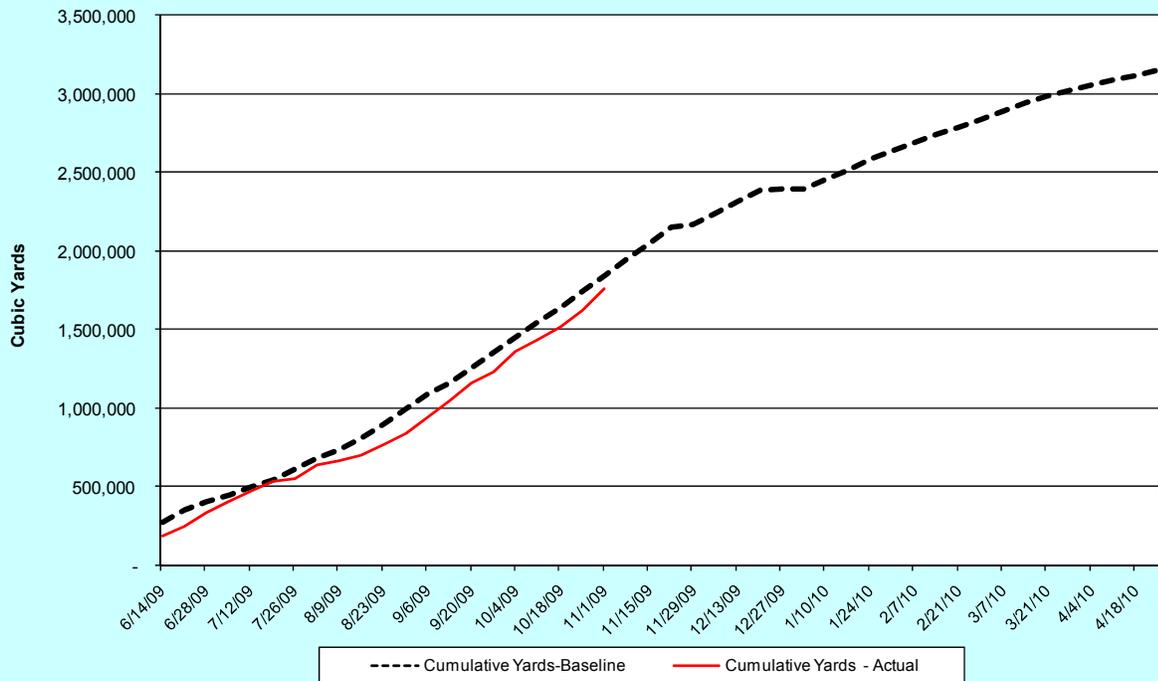
**Ash Removal East of Dike 2 - Weekly  
as of November 8th**



**River Dredging - Weekly  
as of November 1st**



**Time Critical Ash Removal - Weekly  
as of November 1st**



**Ash Loading to Trains - Weekly  
as of November 8th**

