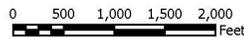


# KINGSTON ASH RECOVERY PROJECT

## WEEKLY REPORT

September 28 – October 4, 2009

Aerial Image of Kingston Ash Slide August 14, 2009



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

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# KINGSTON ASH RECOVERY PROJECT

## WEEKLY REPORT

September 28 – October 4, 2009

### HIGHLIGHTS

- Moved just over 42,000 cy of ash east of Dike 2 to storage or rail cars.
- Dredged over 73,000 cy of ash from the river through October 2<sup>nd</sup>.
- Loaded and transported over 41,000 tons of ash.
- A data quality objectives workshop was held October 1<sup>st</sup> with the regulatory agencies to scope out future investigations in the river.
- A public meeting was held October 1<sup>st</sup> to inform the public of activities to date.

### SAFETY

#### Program Summary

- 13 site specific HSE orientations conducted for the week, 791 to date.
- 18 Safety Observation Reports submitted for the week; 352 to date; 295 of which have been closed.

#### Incidents

- September 28 – A CP MVI occurred as a result of a teamster backing his artic into another artic parked directly behind him. Minor damage occurred to the parked vehicle. No injuries occurred.
- September 29 – A CP first aid occurred when a laborer complained of shoulder strain possibly as a result of using a shovel to clear ash from the tracks of heavy equipment. He was using a flat head shovel to remove the mud/ash from the tracks. When he shoved the shovel into the ash it hit a steel plate and jarred his right arm and shoulder. He was seen by the onsite paramedic and released to routine duties.
- October 1 – A CP first aid occurred when an operator attempted to access his excavator by stepping onto the tracks from a rip rap bank. The operator was not using the equipment ladder, the tracks were muddy and his foot slipped resulting in his shin scraping the excavator track causing an abrasion.

### INFRASTRUCTURE/ASH MANAGEMENT

- Moved 42,100 cy of ash from east of Dike 2 to west of Dike 2.
- Applied 9.5 acres of Flexterra for dust control.
- Performed Storm Water Pollution Prevention Plan inspections, maintained HAZWOPER controls, and applied water to roads for dust control.
- Continued working on the design for the revised Main Hazwoper Entrance and Exit Station on the South Portal of the project and plans for Winterization of Truck Wash Stations.
- TVA CP continued construction on the Peninsula Ash Temporary Storage Area. Placement of clay layer was completed and installation of liner will start the week of October 5<sup>th</sup>.
- The design and specification package for the Offsite Utility Restoration to replace the Harriman Utility Board and Kingston Utility Board water, gas, telecommunications and effluent lines destroyed by the ash spill were completed by CTI Engineering and delivered to Jacobs on October 1<sup>st</sup>.

### ASH DREDGING & PROCESSING

- Through October 4<sup>th</sup>, the Severson hydraulic dredge volume is estimated at 417,696 cy and the total dredged from the river is 893,383 cy. (Note: Total dredged from the river has been adjusted to include all of TransAsh and TVA reported hydraulic and mechanical dredging to date.)
- Dredging from the river was performed Monday through Saturday on a two-shift basis.
- The McKenzie 14" dredge operated 50.8 hours during the period. Availability for the week was 42%. Bathymetric survey data for the McKenzie has been processed through October 2<sup>nd</sup>.
- The Kylee 16" dredge operated 39.5 hours during the period. Installation and shakedown was completed

on Wednesday, September 30<sup>th</sup>, and operation started on Thursday, October 1<sup>st</sup>, at 8:45 am. The 14" McKenzie, 16" Kylee, and 20" Little Rock were operated simultaneously on the day shift Friday, October 2<sup>nd</sup>, and day and night shift Saturday, October 3<sup>rd</sup>.

- The Little Rock 20" dredge operated 102.1 hours during the week. Availability for the week was 85%. Bathymetric survey data for the Little Rock has been processed through September 30<sup>th</sup>.
- Pipeline installation was suspended for a dedicated pipeline for the TVA 14" dredge. Pipeline installation was completed for a dedicated pipeline for the new Severson 16" dredge.
- A high turbidity and TSS excursion in the ash pond was successfully captured with additional polymer treatment and no effect was noted in outfall sampling. Excursion is believed to have been associated with Little Rock Encountering a high clay area, high post storm flow rates, and ash channel erosion on the north end of the sluice trench.

## ASH DISPOSITION

- Loaded and moved 5 unit trains this week. Were not able to load the other days due to rain.
- Have loaded and transported 71 unit trains to date.
- Loaded and transported approximately 41,400 tons of ash this week, for a total of approximately 631,460 tons.
- Continued maintenance work in the rail yard which included maintenance of switches and replacing switch and regular rail ties.
- Continued evaluations on bids for installing two additional rail spurs to support railcar loading operations and signal crossing on plant main track middle crossing.
- Working with the dredging team on overall operations of the processing area.

## CENOSPHERE RECOVERY

- Outreach calls from local have increased. Calls have been related to light cenospheres at locations where cenospheres have been removed before.
- Heavier rains and increased winds have increased the cenosphere activity on the river. The large majority of the cenospheres are being contained in the booms. The windy conditions allowed some cenospheres to stay suspended below the water and travel longer distances down river. Rising lake levels have also washed residual cenospheres off the shoreline back into the lake.
- The three barge mounted vacuum units worked in Division A removing cenospheres. Cenospheres from the dredging area and remaining ash east of dike C continue to generate cenospheres.
- Large amounts of cenospheres have collected in the ash pond and sediment ponds. VAC trucks and pumps have been used to remove these cenospheres. However, work and weather activities continue to add cenospheres to these collection areas.

## SKIMMER WALL

- TVA Supply Chain awarded the contract for the Underwater Salvage Operations for the Excavator Removal from the river to TVA HED. The TVA HED will develop the work plan for performing all phases of the week and submit to Jacobs for review. The work plan will be submitted to regulators for review/approval, prior to HED mobilization.

## DIKE REINFORCEMENT

- Work plan for Section D was reviewed. Comments are pending.
- Stantec provided the United States Coast Guard with a navigation channel for the Emory River.
- Jacobs continued to monitor the dikes at Kingston on a daily basis. Civil Projects worked on an area along the intake channel to prevent water from ponding along the toe of the upper dike.

## ROUTINE MONITORING

### Surface Water Sampling

- Routine surface water fixed station monitoring occurred on Monday, September 28<sup>th</sup>, and Friday, October 2<sup>nd</sup>. Samples for nutrient analyses were also collected on Monday, September 28<sup>th</sup>. Through September 10<sup>th</sup>, there have been no ash-related constituents detected above any criteria (i.e., ambient water quality, domestic water supply) for the three constituents of primary interest (arsenic, selenium, mercury). Since the May 4, 2009 Emory River high flow event, the total suspended solids (TSS) concentrations have consistently averaged less than 20 mg/L.
- Daily monitoring of dredge plumes continues. On Thursday October 1<sup>st</sup>, TVA and EPA began

collaborating on compilation of turbidity measurement data from the mouth of the Emory River to ERM 4.0. The data will be compiled and plotted on Mondays and Wednesdays to determine if there are any adverse trends as the dredging operation continues. Since aggressive dredging began, arsenic has been detected in seven plume samples (data through September 10<sup>th</sup>) above the Tennessee Drinking Water Standard (TDWS), with a maximum in one sample of 0.024 mg/L. Selenium was also detected in two plume samples (September 9<sup>th</sup> and 10<sup>th</sup>), but at values less than the TDWS and the Aquatic Water Quality Standard (AQWS).

- Swan Pond Embayment surface water sampling continues twice weekly at two locations along the Swan Pond Embayment drainage ditches. Since the tie-in off 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, although the September 27<sup>th</sup> rain event resulted in a TSS result at the Embayment settling basin of 179 mg/L. Total and dissolved arsenic and selenium concentrations have declined as the settling basins and clean water ditch have come on line. The arsenic concentrations sporadically exceed the TDWS, but are below the AWQS. Selenium concentrations are well below the TDWS, but continue to be, on average, above the AWQS.

### **Sediment Sampling**

- The new vibracore unit was deployed to collect additional visual data to verify sub-bottom profile data. TVA collaborated with a team from Appalachian State University to obtain samples in the Clinch River near the mouth of the Emory River.
- Sub-bottom data continue to be reduced and interpreted and the sub-bottom crew continues profile work along the Emory, Clinch, and Tennessee Rivers.

### **Air Sampling**

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

### **Data Management**

- Comments for the KIP Quality Assurance Project Plan were received from EPA Region 4. TVA is incorporating the comments as well as updating the document to reflect current practices since the original draft was issued in April 2009.

### **Biota Sampling**

- Turtle trapping and collection of blood samples continue.
- Mammal trapping has been initiated.
- ORNL and TVA have initiated fall fish collection as part of the overall ongoing fish health study..

## **FINAL REMEDIATION**

- Held a data quality objectives workshop on October 1<sup>st</sup> to scope out the investigation activities needed to make a decision on the river system once the time-critical ash is removed.
- Completed the initial draft of the alternative description section of the EE/CA.

## **DREDGE CELL**

- Continued to move ash into the test cell. Results still show little movement of the underlying ash.

## **COMMUNICATIONS**

### **Communications**

- Completed communications plan for introduction of new site General Manager, Steve McCracken.
- Media tour of site followed by press conference with Anda Ray and Steve McCracken.
- Issued response to 60 Minutes story.
- Posted to TVA's Kingston Webpage: Weekly Report Added, Air Quality Information Updated, October 1<sup>st</sup> Public Meeting Update, Meeting Program Information, New Video Illustrating Progress, Updated Information on Coal Test Burn, Response to 60 Minutes Story.
- Continued to handle daily calls from the news media.

### **Outreach**

- Held Public Meeting with EPA and TDEC.
- Updated Community Advisory Group on high flow event.
- 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**

- Completed introductions of Steve McCracken.
- Coordinated and set up agenda for the RC Foundation Board meeting.

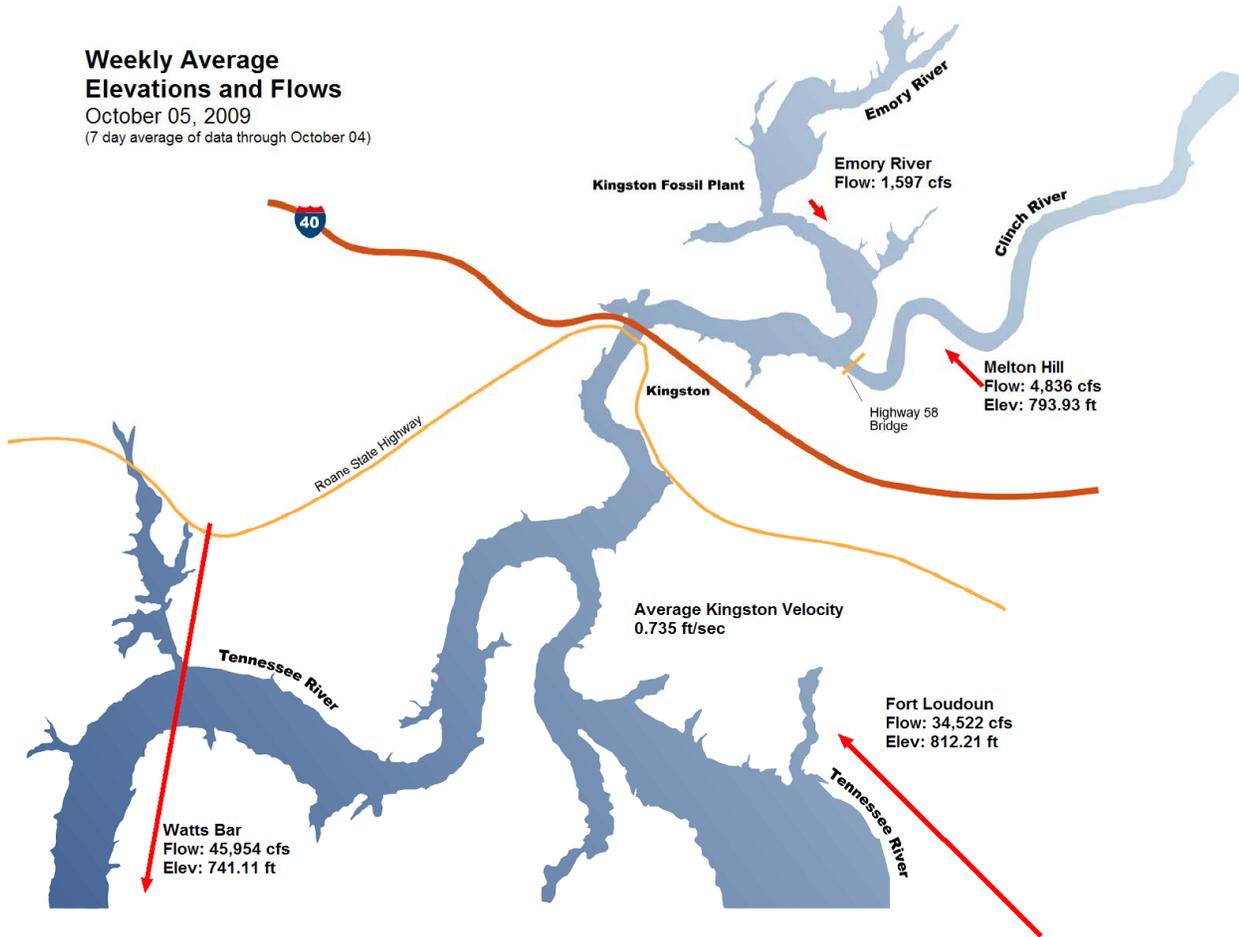
**Other**

- Resubmitted Community Involvement Plan and Technical Assistance Plan to EPA.

**RIVER OPERATIONS**

**Weekly Average Elevations and Flows**

October 05, 2009  
(7 day average of data through October 04)

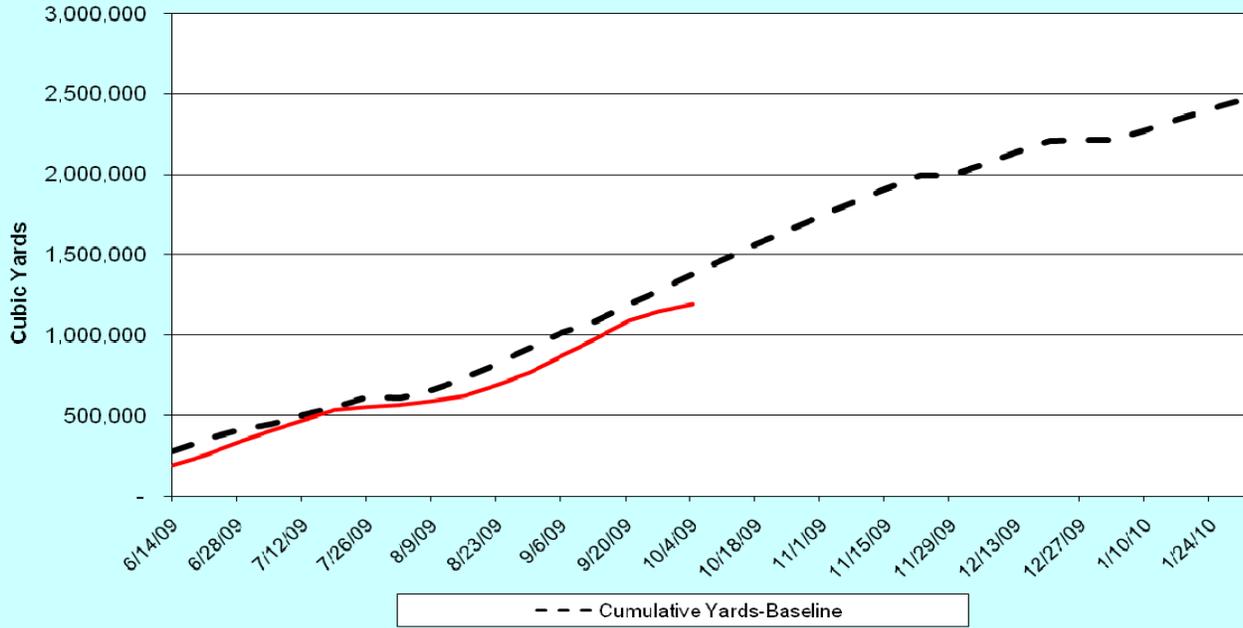


<b>MEETINGS/CONFERENCE CALLS</b>		
<b>Date</b>	<b>Time</b>	<b>Subject</b>
10/05	0730	Environmental Meeting (ICP Conference Room)
10/05	0900	Dike C Buttress Intake Channel (ICP Conference Room)
10/05	1000	Aquatic Resources Studies (Team Room)
10/06	1000	Project Review Meeting (ICP Conference Room)
10/06	1300	Site Access Meeting (ICP Conference Room)
10/06	1300	Dredge Team Meeting (Team Room)
10/06	1400	Waste Management Meeting (ICP Conference Room)
10/06	1430	Radiological Analysis Meeting for Water Sampling (Team Room)
10/06	1700	Sevenson Dredge Recovery Meeting (Team Room)
10/07	0800	Time Critical Weekly Meeting (ICP Conference Room)
10/07	0900	Data Management Meeting (ICP Conference Room)
10/07	1100	MRC Environmental & Safety (ICP Conference Room)
10/07	1330	Test America Weekly Call (Conference Call)
10/08	0730	Environmental Meeting (ICP Conference Room)
10/08	0900	KIF SOP Meeting (Team Room)
10/08	0900	KIF FLAC Analysis Status Meeting (ICP Conference Room)
10/08	1000	Pace Telecon (Conference Call)
10/08	1030	QA Quarterly Update (Team Room)
10/08	1130	HSE Staff Meeting (Team Room)
10/08	1300	Environmental Key Performance Meeting (Team Room)
10/08	1400	Site Wide Safety & Health Plan Review Meeting (Team Room)
10/08	1700	Sevenson Dredge Recovery Meeting (Team Room)
10/09	1000	Communications – Train Stalls Meeting (ICP Conference Room)
Daily	0730	Site Safety Orientation (Team Room)
Daily	1600	Planning Meeting (ICP Conference Room)

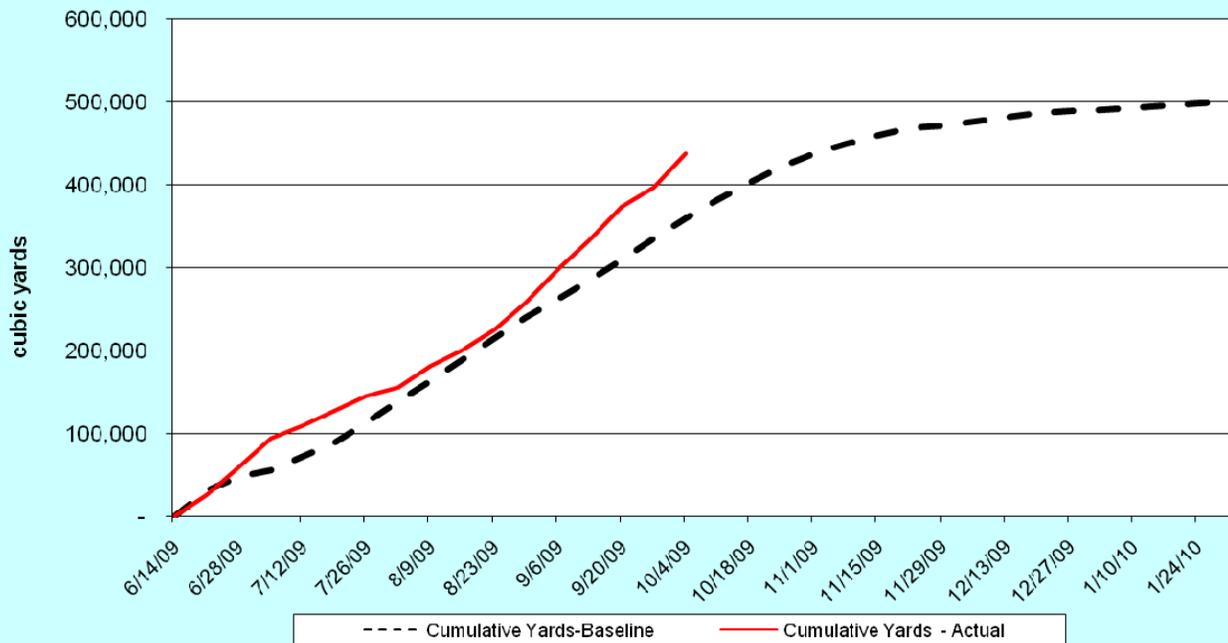
Kingston Recovery Project		Date: September 28 – October 4, 2009	Field Report	
<b>Safety</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
First Aid Incidents			1	21
Recordable Incidents			0	7
Lost Time Incidents			0	2
<b>Cenosphere/Debris Removal</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
Outreach		Light Debris Removal – Land (bags)	0	18,867
Divisions A, B,C,D Cleanup		Division Shoreline Cleanup (bags)	965	81,335
Total		Tons of Light Debris	0	959.57
Cenosphere Slurry		Gallons	208,500	8,014,000
<b>Environmental</b>				
<b>Org</b>	<b>Matrix</b>		<b>Total # Analysis Performed Through 10/01/09</b>	
TVA	Air - Real-Time		111,358	
TVA	Air – Fixed		698	
TVA	Surface/Utility Water		16,228	
TVA	Ground Water (spring and well)		247	
TVA	Ash		711	
TVA	Soil/Sediment		85	
TVA	Biota		670	
<b>Ash Dredging &amp; Excavation</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
River	Estimated Cubic Yards thru October 2, 2009 (see Note)		73,303	893,383
Ash Excavation (east of Dike 2)	Estimated Cubic Yards **Modified to an in-place volume		42,100	439,428
Ash Excavation (other)	Estimated Cubic Yards **Modified to an in-place volume		0	73,000**
Ash Disposal	Estimated Tons		41,400	631,460

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

Time Critical Ash Removal - Weekly  
as of October 4th



Ash Removal East of Dike 2 - Weekly  
as of October 4th



### River Dredging - Weekly as of Sept . 27th

