

# KINGSTON ASH RECOVERY PROJECT

## WEEKLY REPORT

January 25 - 31, 2010

Aerial Image of Emory River Area - 12/01/2009



Date of Photography  
12/01/2009  
Water Surface Elevation  
735.86  
Water Surface Elevation is the  
Watts Bar Headwater Elevation  
Tennessee Valley Authority  
E3T - Environmental Resources  
Geographic Information & Engineering

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## WEEKLY REPORT

January 25-31, 2010

### HIGHLIGHTS

- Cumulatively, just over 2,530,900 cubic yards of ash have been removed from the river and east of Dike 2.
- To date, 147 trains have been loaded and 146 have transported approximately 1,355,240 tons of ash.
- Along with EPA and TDEC, met with the Roane County Community Advisory Group about air sampling data.
- Held public meeting at Roane County High School.
- Participated in Roane County High School teleconference with four high school classes from across the state.
- Delivered information to CAG and Swan Pond Road residents regarding the KIF Plant unit being put into operation.
- Briefed TVA Senior Management on accelerated dredge plan to achieve completion of time-critical activities by May 1, 2010.

### SAFETY

#### Program Summary

- Thirty-five site specific HSE orientations conducted for the week, 1,288 to date.
- Thirteen Safety Observation Reports submitted for the week: 615 to date; 528 of which have been closed.  
(Note: numbers corrected from last week's report per SOR database figures)

#### Incidents

- Excavator over-turned in the ball-field. Minor injuries to equipment operator were initially reported as a first aid. The day after the event, the employee went to his personal physician and was given a tetanus shot for a minor hand laceration. There were no restrictions placed on the employee by his doctor.
- A dredge crew member was climbing stairs on the 20" Sandpiper and slipped causing a strain to his lower leg. He was taken to an occupational clinic in Oak Ridge for evaluation and treatment as needed. The individual was given a prescription for pain medication which classifies this case as recordable.
- Environmental Release – (note this was left out of last week's report and is being included in this report)  
On January 24 2010 at 1530, less than 1 quart of diesel fuel was identified on the water in a dugout ash cove east of and adjacent to the T2 dike. The exact source of the release cannot be determined but it is believed to have originated from a land-based activity in the vicinity of the cove.

#### Other

Submitted Revision 04 of the Site Wide Safety and Health Plan for internal TVA review and submission to the EPA for regulatory review.

### INFRASTRUCTURE/ASH MANAGEMENT

- Continued with dust suppression activities, road maintenance, and HAZWOPER controls.
- Material was pulled from the west storage area to bring to the trains for loading.
- Offsite utility construction started laying first sections of piping for Kingston Utility 10" line and continued clearing and grubbing work along I-40.

### ASH DREDGING & PROCESSING

- Approximately 70,688 cy of ash were removed from the river including considerable ash located in the ash berm near the area east of Dike 2. The new 16-inch dredge was put in the water and operated. The 14-inch dredge continued to be assembled.
- A new dredge was ordered to support the schedule improvements for the next phase of dredging.
- Efforts continued on removing settled ash from the rim ditch, sluice trench, and ash pond. All four dredges were operated to assess the hydraulic impact on the dewatering system. The system can handle the increased flow.
- Effluent from the ash pond dredges were sent to the lateral expansion area and the filter presses. Surveys in the ash pond indicate that the free water volume in the pond has stabilized with the alternate dewatering systems.
- At the end of the week, 11 filter presses were operational. The cake consistency and cycle time were within committed levels and the presses are operating as designed.

- Ballfield operations were hampered by the rain this week and much effort was spent on restoring roads. Ash was moved to accommodate the new rail spur that will be constructed.

## ASH DISPOSITION

- Loaded 3 and transported 2 unit trains this week.
- Loaded 147 and transported 146 unit trains for a total of approximately 1,355,240 tons.
- Heavy rains on Sunday, January 24<sup>th</sup>, shut down the loading operations in Kingston for three days. Snow Friday afternoon and Saturday shut down the site for both Saturday and Sunday, January 30<sup>th</sup> and 31<sup>st</sup>.
- Continued inspection and maintenance of the rail in the rail yard.
- Continued putting polymer in rail cars prior to shipping to Alabama.
- Continuing work on the overall operations of the ballfield/processing area. Implementing plan to provide better drainage in the ballfield.
- Rail modifications in KIF yard area were completed and inspected by Norfolk Southern. Construction of Tracks #1 and #3 started with subgrade work.

## CENOSPHERE RECOVERY

- Heavy rains on Sunday night increased flows to over 33,000 cubic feet per second (CFS) on the Emory River.
- Cenospheres and debris were washed out of the Emory River and a majority of it collected along TVA property in the Clinch River. Crews used booms to trap this material along the shoreline.
- Additional pockets of material floating downriver were contained with booms.
- Crews focused on cenosphere and debris collection in the Emory River and along the shoreline in the Kingston Park area.
- Crews continue to monitor the river for accumulations ash, debris and cenospheres.
- Large amounts of cenospheres continued to collect in the Ash Pond as a result of dredging activities. Crews worked to keep the weir areas clean.
- Activities were shut down early on Friday and plans to work the weekend were cancelled because of the weather.

## SKIMMER WALL

- Work on the skimmer wall has been suspended until early spring.

## DIKE REINFORCEMENT

- Dike C buttress work continued. Approximately 760 feet of haul road and 320 feet of slope have been completed.
- Roger's Group was unable to provide sand from the Harriman County quarry on Wednesday. Roger's Group was able to provide sand on Thursday from their Rhea County quarry. Quality control testing shows that material from Rhea County has fewer fines than Harriman and this should help keep our running average below 5%.
- Civil Projects added a second crew to help increase production.
- No new panels were opened on Friday or Saturday because of the weather.
- Continued to monitor the dikes at Kingston on a daily basis.

## ROUTINE MONITORING

### Surface Water Sampling

- A Sunday/Monday January 24<sup>th</sup> and 25<sup>th</sup> storm event triggered elevated flow on the Emory River. The automated sampler at ERM 0.5 was activated just before noon on January 24<sup>th</sup> to collect four discrete samples over a twenty-four hour period. Elevated flow conditions and debris in the river were determined to pose a hazard for deployment of fixed station sampling crews on January 25<sup>th</sup>. A grab sample was collected from a dock at the Kingston Water Treatment Plant. Surface water fixed station monitoring resumed on Friday, January 29<sup>th</sup>.
- Surface water analytical results are compared to the Tennessee Drinking Water Standard (TDWS) and the Ambient Water Quality Criteria for Fish and Aquatic Life (F&AL) to establish a reference point for evaluating the potential significance of the data. Although the most impacted section of the Emory River has been closed to public use, the Emory, Clinch, and Tennessee Rivers are classified for use for Recreation and as a source for Domestic Water Supplies. However, closure of the most impacted reach of the Emory River during the ash recovery operation must be considered in these comparisons.
- Noteworthy results are reported below for Fixed River Location samples collected between 12/04/09 and 01/11/2010. Comparisons to the F&AL are performed for dissolved concentrations only.
  - On the Tennessee River, the detectable arsenic concentrations were well below the TDWS. Selenium was not detected in any samples.

- On the Clinch River, all detected concentrations of arsenic and selenium were less than the TDWS and F&AL.
- On the Emory River, all arsenic and selenium detects in surface water samples were less than the TDWS and F&AL.
- Daily monitoring of dredge plumes continued. Due to adverse weather conditions, plume monitoring was not performed on Saturday, January 30<sup>th</sup>; plume monitoring resumed on Sunday, January 31<sup>st</sup>, with the extended dredging operation. 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.
- Plumes in the vicinity of dredging operations contain large amounts of suspended ash that settle out quickly and are not representative of overall water quality in the Emory River. Comparing Plume results to those from Fixed Station Locations provides an indication of the effectiveness of silt curtains and other Best Management Practices (BMPs) employed by the project
- Swan Pond Embayment surface water sampling continues routinely twice per week at two locations along the Swan Pond Embayment drainage ditches. Additional samples were collected on Sunday January 24, triggered by local rainfall >0.5".

#### **Sediment Sampling**

- Two TVA environmental vibecore sampling crews have joined the dredging project crew to expedite characterization of remaining ash in the river to optimize dredging. Areas designated for high priority characterization were completed last week. Data are being incorporated into the grid system.

#### **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. PM2.5 measurements for the past week were well below the action level of 26 micrograms per cubic meter.

#### **Data Management**

- Electronic data deliverables are flowing into the Equis database.
- Data validation continues for electronic data packages received from the laboratories.
- Migration of data from the TVA Equis to the EPA SCRIBE database is ongoing.

#### **Biota Sampling**

- Nothing to report this period.

#### **Non-Routine Sampling**

- Approximately 30 drums were sampled this week for used oil and other operational waste disposition.
- The monthly TCLP, radiological, and paint filter samples were collected from railcars loaded for shipment.

### **FINAL REMEDIATION**

- Completed draft SAP for distribution to TVA for review on February 1, 2010.
- Completed draft Action Memo for Embayment/Dredge Cell for internal Jacobs review. Currently making revisions for distribution to TVA for review during week of February 1<sup>st</sup>.
- Prepared draft contingency planning for non-time-critical removal if Action Memo approval is delayed beyond May 15<sup>th</sup>.

### **DREDGE CELL**

- No ash was placed in the test embankment this week due to excessive rains and a wet storage area.

### **COMMUNICATIONS**

#### **Communications**

- Posted to website: Weekly Report, Air Monitoring Update and EE/CA documents, and EE/CA Comment Period Extension information.
- Along with EPA and TDEC, met with the Roane County Community Advisory Group about air sampling data.
- Held public meeting at Roane County High School – multiple media representatives in attendance.
- Participated in Roane County High School teleconference with four high school classes from across the state – covered by Knoxville News Sentinel and WBIR TV.

- Prepared newspaper advertisements to publicize the public comment period extension for EE/CA.
- Posted site and safety information to bulletin boards located at Exclusion Zone boot-wash stations.
- Worked on Dredge Report for site and plant employees.
- Made final revisions on Community Involvement Plan Responsiveness Summary and sent to EPA; began revising CIP based on comments.
- Continued to handle daily calls from the news media

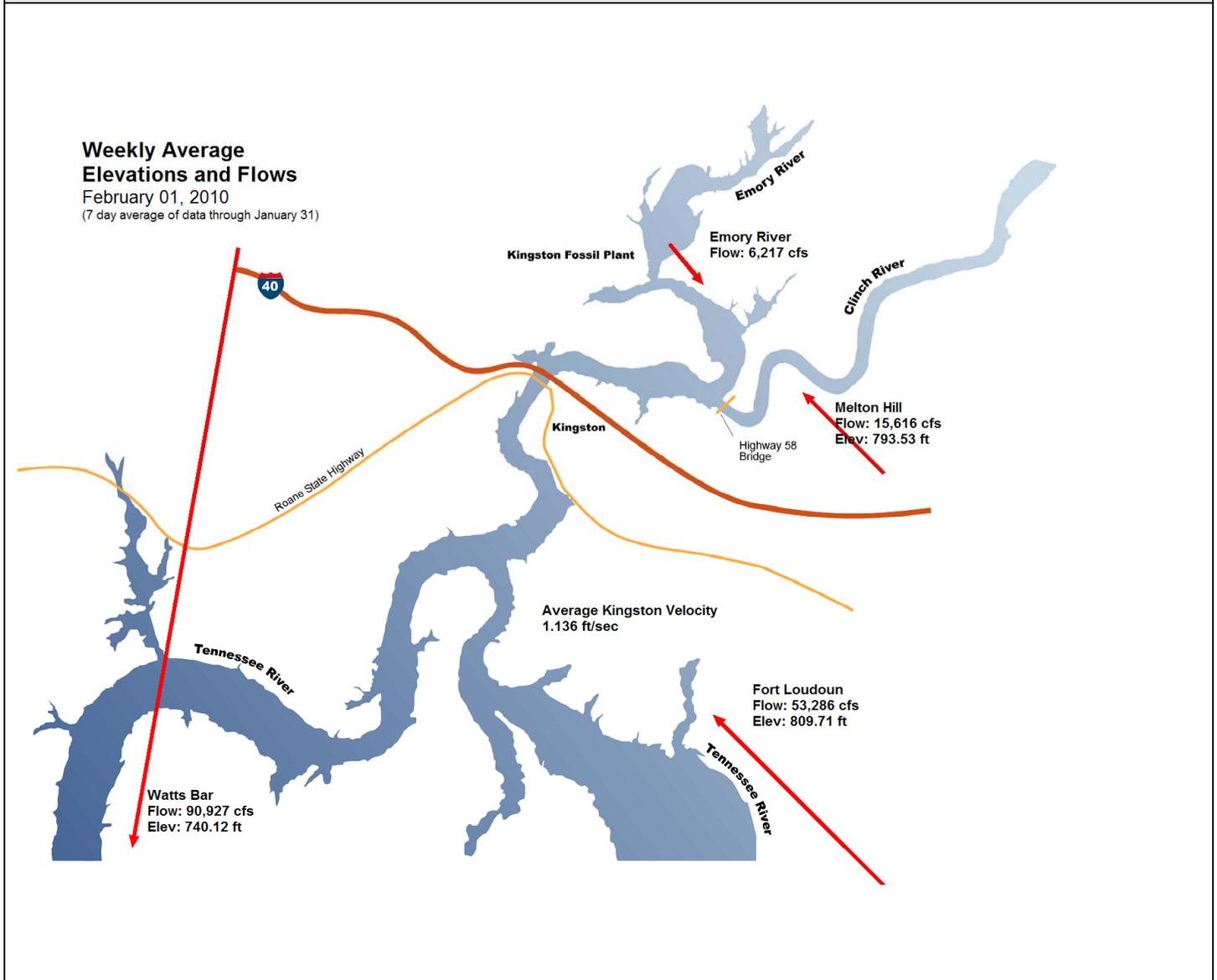
### Outreach

- Hosted public meeting at Roane County High School.
- Sent site updates to members of the CAG including information on the KIF Plant being put into operation over the weekend.
- Delivered information to Swan Pond Road residents regarding the KIF Plant being put into operation.
- Maintained Administrative Record.
- Continued to handle calls and visits from residents.
- Continued to gather comments on various administrative records.

### Government/Valley Relations

- Sent site updates to local elected officials including information on the KIF Plant being put into operation over the weekend.
- Conducted a meeting with the Roane County Economic Development Foundation.

## RIVER OPERATIONS

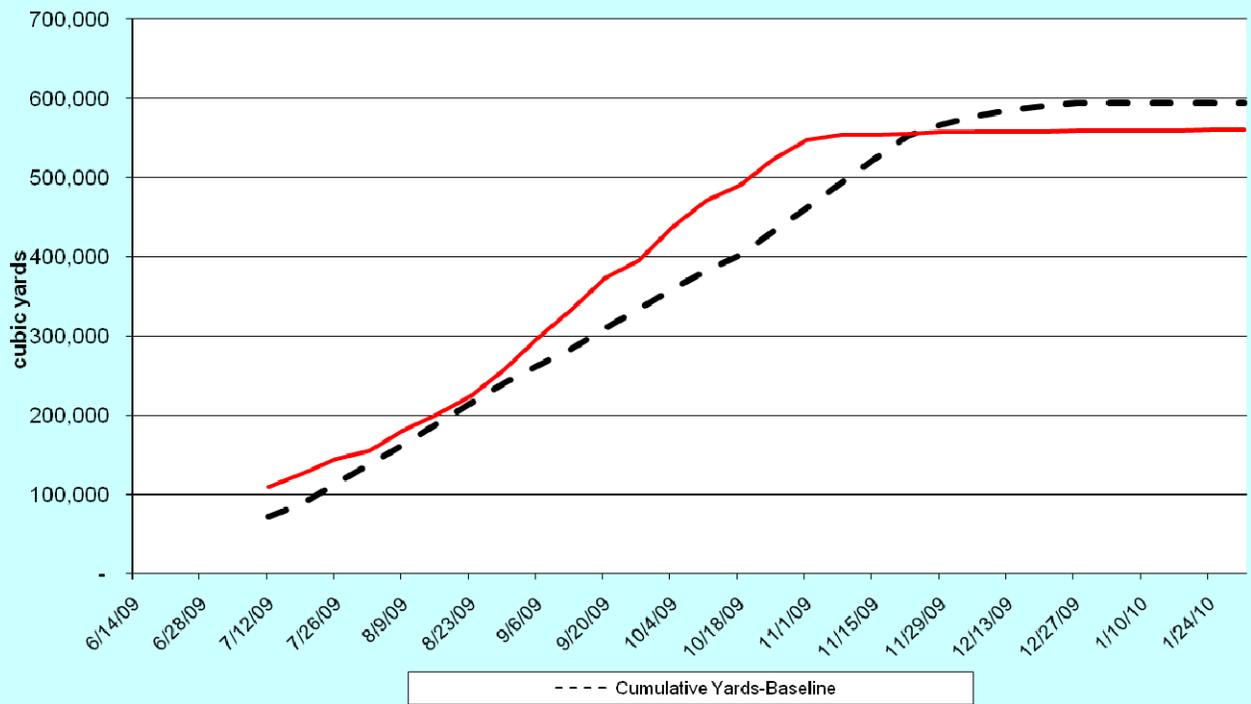


<b>MEETINGS/CONFERENCE CALLS</b>		
<b>Date</b>	<b>Time</b>	<b>Subject</b>
02/01	0730	Environmental Meeting (ICP Conference Room)
02/01	0900	Dike C Buttress Intake Channel (ICP Conference Room)
02/01	1000	Aquatic Resources Studies (Team Room)
02/01	1000	Management Assessment Meeting (Trailer 1 Meeting Room)
02/01	1200	Vibecore Status Review Meeting (Old ICP Conference Room )
02/01	1200	MACTEC Safety Meeting (Trailer 1 Meeting Room)
02/01	1300	Planning Group Meeting (ICP Conference Room)
02/02	0915	BCP Meeting (ICP Conference Room)
02/02	1000	Project Review Weekly Meeting (ICP Conference Room)
02/02	1000	TVA Weekly Communication Meeting (Team Room)
02/02	1200	PMP Working Session (Team Room)
02/02	1330	Dredge Team Meeting (ICP Conference Room)
02/02	1400	Dike D Meeting (Old ICP Conference Room)
02/03	0800	Time Critical Weekly Meeting (ICP Conference Room)
02/03	0900	Data Management Meeting (ICP Conference Room)
02/03	1000	Management Assessment Meeting (Trailer 1 Meeting Room)
02/03	1100	MRC Environmental & Safety Meeting (ICP Conference Room)
02/03	1330	Test America Weekly Call (Conference Call)
02/03	1400	Cost Containment Value Plus Meeting (ICP Conference Room)
02/04	0730	Environmental Meeting (ICP Conference Room)
02/04	0900	QAPP Training (ICP Conference Room)
02/04	1000	Management Assessment (Trailer 1 Meeting Room)
02/04	1400	Risk Analysis (Team Room)
02/04	1000	Pace Telecon (Conference Call)
02/04	1130	HSE Staff Meeting (ICP Conference Room)
02/04	1400	SOP Meeting (Old Team Room)
02/05	0900	Jacobs Senior Managers Meeting (ICP Conference Room)
02/05	1000	Management Assessment Meeting (Trailer 1 Meeting Room)
Daily	0730	Site Safety Orientation (Old ICP Conference Room)
Daily	1600	Planning Meeting (ICP Conference Room)
Daily	1630	Ash Disposal Daily Recap (Team Room)

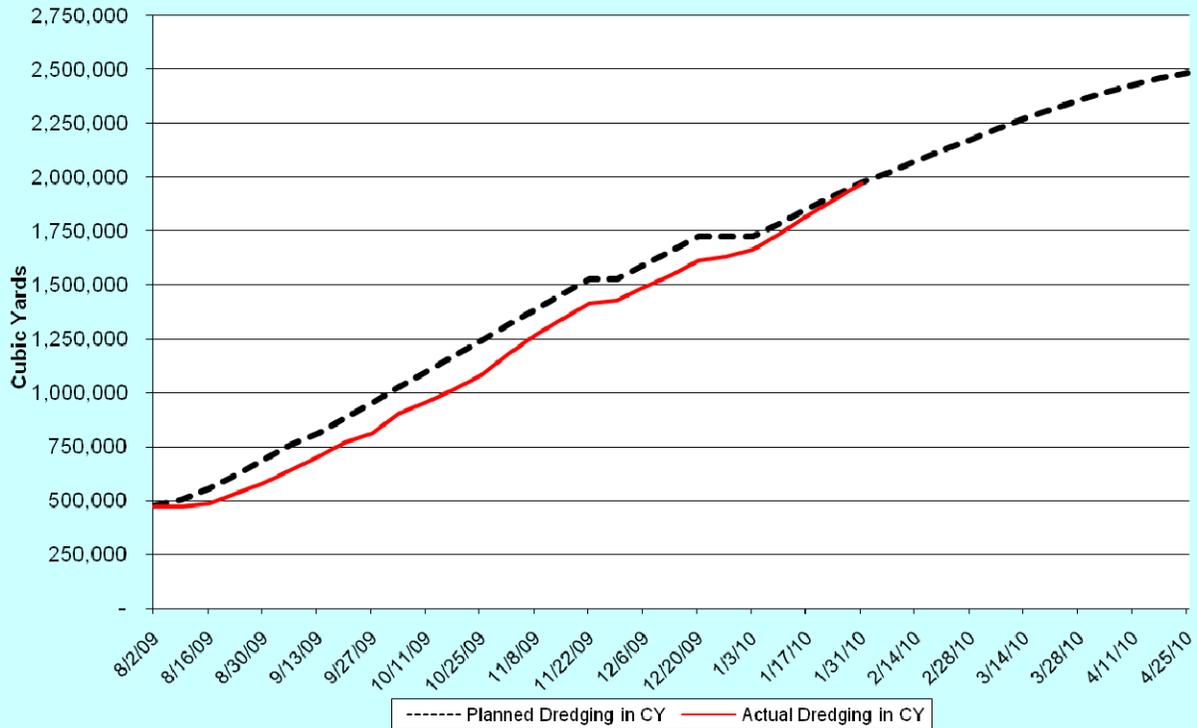
Kingston Recovery Project		Date: January 25-31, 2010		Field Report	
<b>Safety</b>				<b>Weekly Total</b>	<b>Cumulative Total</b>
First Aid Incidents				0	28
Recordable Incidents				1	12
Lost Time Incidents				0	3
<b>Cenosphere/Debris Removal</b>				<b>Weekly Total</b>	<b>Cumulative Total</b>
Outreach		Light Debris Removal – Land (bags)		0	18,867
Divisions A, B,C,D Cleanup		Division Shoreline Cleanup (bags)		609	91,168
Total		Tons of Light Debris		0	959.57
Cenosphere Slurry		Gallons		180,000	11,490,000
<b>Environmental</b>					
<b>Org</b>	<b>Matrix</b>	<b>Samples*</b>	<b>Analyses*</b>	<b>Results*</b>	
TVA	Air - Real-Time	--	--	167,986	
TVA	Air – Fixed	1,512	--	1,904	
TVA	Surface/Utility Water	3,269	26,062	127,629	
TVA	Ground Water (spring and well)	60	721	2,682	
TVA	Ash	78	104	1,689	
TVA	Soil/Sediment	64	137	1,029	
TVA	Biota	618	1,531	15,251	
*Week ending 1/29/10					
<b>Ash Dredging &amp; Excavation</b>				<b>Weekly Total</b>	<b>Cumulative Total</b>
River	Estimated Cubic Yards thru January 31, 2010 (see Note)			70,688	1,970,885
Ash Excavation (east of Dike 2)	Estimated Cubic Yards **Modified to an in-place volume			0	560,029**
Ash Excavation (other)	Estimated Cubic Yards **Modified to an in-place volume			0	73,000**
Ash Disposal	Estimated Tons			24,140	1,355,240

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.

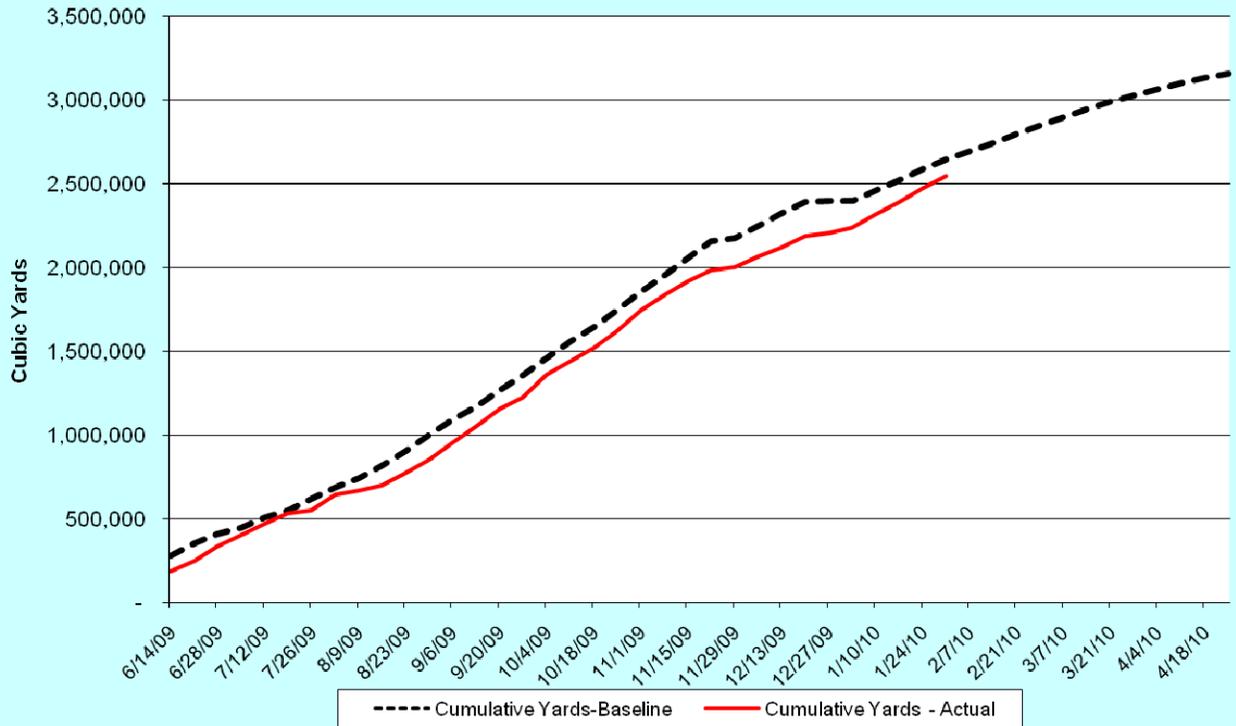
Ash Removal East of Dike 2 - Weekly  
as of January 31st



River Dredging - Weekly  
as of January 31st



**Time Critical Ash Removal - Weekly  
as of January 31st**



**Ash Loading to Trains - Weekly  
as of January 31st**

