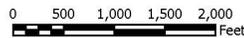


# KINGSTON ASH RECOVERY PROJECT WEEKLY REPORT November 9-15, 2009

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

November 9-15, 2009

### HIGHLIGHTS

- Cumulatively, just over 1,922,559 cubic yards of ash have been removed from the river and east of Dike 2.
- Have loaded and transported 97 unit trains to date for a total of approximately 866,050 tons.
- Approval to begin the final phase of the east embayment cleanup was received.
- Held Availability Session with EPA and TDEC for Roane County community.
- Met with the Community Advisory Group to negotiate the Technical Assistance Plan and agreement.

### SAFETY

#### Program Summary

- 14 site specific HSE orientations conducted for the week, 851 to date.
- 11 Safety Observation Reports submitted for the week; 502 to date; 436 of which have been closed.

#### Incidents

- November 9 – A MACTEC craft employee sustained a strained shoulder while handling bags of polymer. Employee was placed on restricted duty. OSHA recordable - no lost time.
- November 10 – A Severson van got stuck in the ballfield. While pulling the van free with a forklift, the van came unstuck and backed into the back of the forklift denting the right rear door of the van.

### INFRASTRUCTURE/ASH MANAGEMENT

- No ash was moved east of Dike 2 to storage or disposal due to questions on continued use of wet storage areas. However, ash was stacked east of Dike 2 to allow water to drain.
- Maintenance of the settling basins and dirty water ditches continued.
- Drying and maintenance of the west storage area continued.
- HAZWOPER and dust controls continued.
- Approval to begin the final phase of the east embayment cleanup was received. The first step will be to build a cutoff berm at the north end of the embayment and to begin to remove the fish. A haul road will also be constructed.
- Continued construction of the Peninsula Ash Temporary Storage Area with the installation of the roads, HAZWOPER perimeter fencing, and liner in the settlement pond. The storage area should be completed within one week.
- Continued to provide answers to potential contract bidders for the Offsite Utilities Restoration Contract to repair and install over 59,000 linear feet of utility pipe along Swan Pond, Swan Pond Circle, and Hassler Mill Roads. Bids are due November 20<sup>th</sup> and an award is projected before December 11<sup>th</sup>. Also working with Norfolk Southern to reach an agreement on right-of-way issues for the ten times the utilities cross under the railroad. TVA Environmental continues the EA/NEPA Review with a projected completion date of December 1, 2009.

### ASH DREDGING & PROCESSING

- Severson started incorporating suggested best management practices in the Rim ditch – Sluice Trench system. Bathymetric surveys of the Ash Ponds continued to indicate that an additional means to remove fine ash from the Ash Pond must be implemented as soon as possible.
- Through November 8<sup>th</sup>, the Severson hydraulic dredged volume is estimated at 892,393 cubic yards and the total dredged from the river is at 1,368,080 cubic yards. Note: Total dredged from the river has been adjusted to include all of Trans Ash and TVA reported hydraulic and mechanical dredging to date.
- Dredging from the river was performed Monday through Saturday on a two shift basis.
- The Little Rock demobilization plan was submitted and removal is scheduled for this coming week.
- Daily TSS samples of the Rim Ditch effluent, Sluice Trench Effluent, Ash Pond effluent and Stilling Pond were also collected by Jacobs and Hard Hat personnel and processed on site during the week.
- Ash Pond bathymetric survey was completed on Sunday, November 15<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 89%

of the NPDES free water volume requirement.

- Continued to work with Stantec on the analysis and work plan to support placement of dredged material from the ash settlement pond cleanout into the lateral expansion as a temporary storage area. The area will be evaluated in three stages – the first to be completed on November 17<sup>th</sup>. The first stage will allow direct sluicing a limited amount of dredged material (approximately 30,000 cy) without a lot of infrastructure. The second and third stages will require significant dike improvements prior to additional material being placed within the lateral expansion. After approval by Stantec, EPA, and TDEC, the work will require a minimum of three weeks to complete.
- TVA HED conducted the preliminary underwater dive on Thursday, November 12<sup>th</sup>, to locate and determine the physical condition of the trackhoe in the Emory River that was displaced by the December 22, 2008 spill. The information obtained will be used to complete the salvage/removal work plan. The current plan is to mobilize the salvage barges, crane and other equipment at Muscle Shoals on November 30<sup>th</sup> and arrival at KIF on December 2<sup>nd</sup> to start the actual removal of the trackhoe from the Emory River.

## ASH DISPOSITION

- Loaded and transported 6 unit trains this week. Impacted by rain one day and not able to load.
- Have loaded and transported 97 unit trains to date for a total of approximately 866,050 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.
- Worked with Geosyntec and AECOM to get a review/approval of the KIF Ballfield Revised Storage/Loading Plan to build base areas and raise the storage height to 30 feet. Expect approval from Geosyntec's Engineer of Record on Monday, November 16<sup>th</sup>. AECOM will follow up with their review.
- Working to finalize the KIF rail yard modifications to support ash loading operations and minimize disruptions to the Swan Pond Road crossings. A railroad design/construction kick-off meeting will be conducted, Monday, November 16<sup>th</sup>.

## CENOSPHERE RECOVERY

- Continued to work the Emory and Clinch Rivers removing cenospheres.
- Continued to work on site maintaining the weir areas.
- Outreach calls remained minimal.

## SKIMMER WALL

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

## DIKE REINFORCEMENT

- Continued with design efforts on Section D. Final drawings should be available next week.
- Obtained material samples from quarries for conformation analysis. Materials can be ordered next week.
- Continued to monitor the dike for seeps.

## ROUTINE MONITORING

### Surface Water Sampling

- Routine surface water fixed station monitoring occurred on Monday, November 9, and Friday, November 13. Samples for nutrient analyses were also collected on Monday, November 9. Results are summarized for the period 09/04/09 through 10/30/09, as follows. The detectable arsenic concentrations in the Tennessee River were well below the Tennessee Drinking Water Standard (TDWS) and Fish and Aquatic Life Criteria (F&AL). (Note: All references to TDWS and F&AL standards are for comparison purposes only.) Selenium was not detected in any samples. On the Clinch River, all detected concentrations of arsenic were less than the TDWS and F&AL Criterion. Detected concentrations of selenium in Clinch River surface water samples were well below the TDWS and F&AL. Lead was detected at 0.0101 mg/L in one sample collected from CRM 4.0 on 09/11/09. This isolated result was above the TDWS; however, all subsequent detects have been below the TDWS. 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. On Monday, November 9, and Wednesday, November 11, 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 1,755 plume monitoring surface water analyses have been received from the analytical laboratories for sample dates 03/19/09 – 10/31/09. Results are summarized for the period 09/01/09 through the period 10/31/09, as

follows. Arsenic was detected in all samples. Twenty-nine of 44 results were greater than the TDWS. Six of 35 detected beryllium concentrations exceeded the TDWS. Nineteen of 40 detected lead concentrations exceeded the TDWS. One of 40 detected nickel concentrations exceeded the TDWS. Three of 24 detected thallium concentrations exceeded 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. For the period 09/01/09 through 10/29/09, results are summarized as follows. Forty-seven of 51 detected arsenic concentrations exceeded the TDWS. Twelve of 40 detected antimony concentrations exceeded the TDWS. Five of 45 detected lead concentrations exceeded the TDWS. Selenium was detected in all samples. One detected selenium result exceeded the TDWS and twenty-seven of 48 dissolved results exceeded the F&AL.

#### **Sediment Sampling**

- The TVA vibracore rig completed ash characterization along Dike C in preparation for the Dike C reinforcement project. The data are being compiled in spreadsheets and in graphical form to depict the results.
- Another vibracore sampling plan is being developed to characterize the extent of ash in the lower Emory River.

#### **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.
- EPA Region 4 will be at KIF November 16-18 to perform an audit of the air monitoring program.

#### **Data Management**

- A few minor software issues associated with the switch from reporting limit (RL) to method detection limit (MDL) reporting are being resolved. Electronic data deliverables are flowing into the Equis database.
- TVA project staff had a follow up meeting with Oak Ridge National Laboratory (ORNL) Environmental Sciences Division staff supporting the ongoing fish health studies. The meeting focused on database compatibility and approaches to configure ORNL data for electronic transfer into TVA's 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. Discussions continue regarding the migration of TVA air data into EPA's Air Quality System (AQS).

#### **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**

- Work continued on addressing TVA comments on the EE/CA for the dredge cell and embayment. At the request of TDEC, closure of the lateral expansion area is being incorporated into the document.

### **DREDGE CELL**

- Because of the rains on Tuesday, efforts on hauling to the test were conducted on Monday, Friday, and Saturday. Wednesday and Thursday were used to dry out the surface of the test.

### **COMMUNICATIONS**

#### **Communications**

- Posted to TVA's Kingston Webpage: Air Quality Information Updated, Updated Information on Scrubber Start-Up, Weekly Report Added, Updated Information for Local Residents Added, Water Quality Information Updated, Joint Availability Session Reminder
- Alerted media to boiler layup.
- Continued to handle daily calls from the news media.

#### **Outreach**

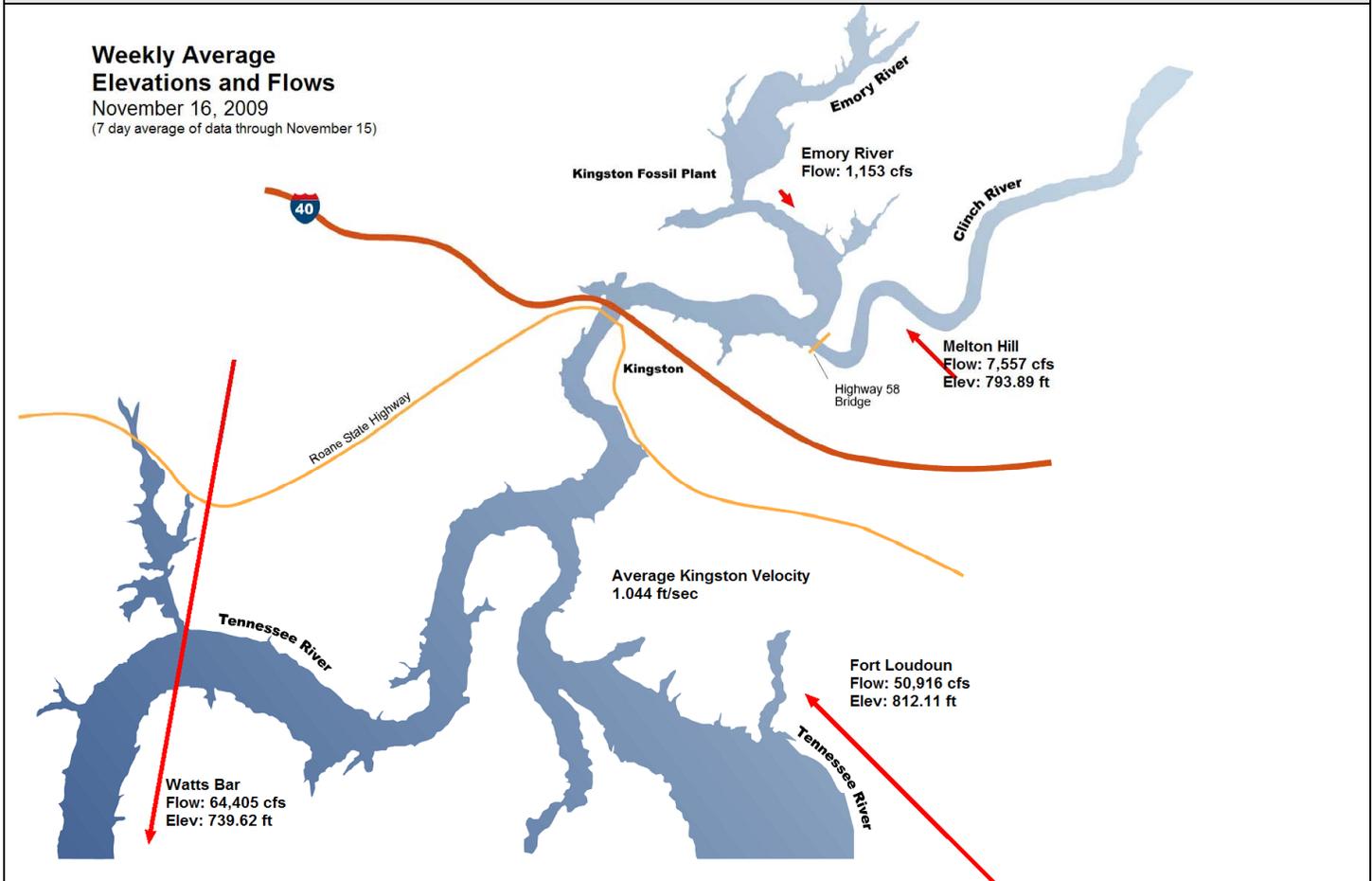
- Held Availability Session with EPA and TDEC for Roane County community
- Met with CAG members re: TAP funding.
- Sent letters announcing extension of public comment period for Draft CIP and EE/CA Work Plan
- Sent information to CAG regarding boiler layup.

- 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**

- Sent information to elected officials regarding boiler layup.
- Various meetings with local public officials.

**RIVER OPERATIONS**

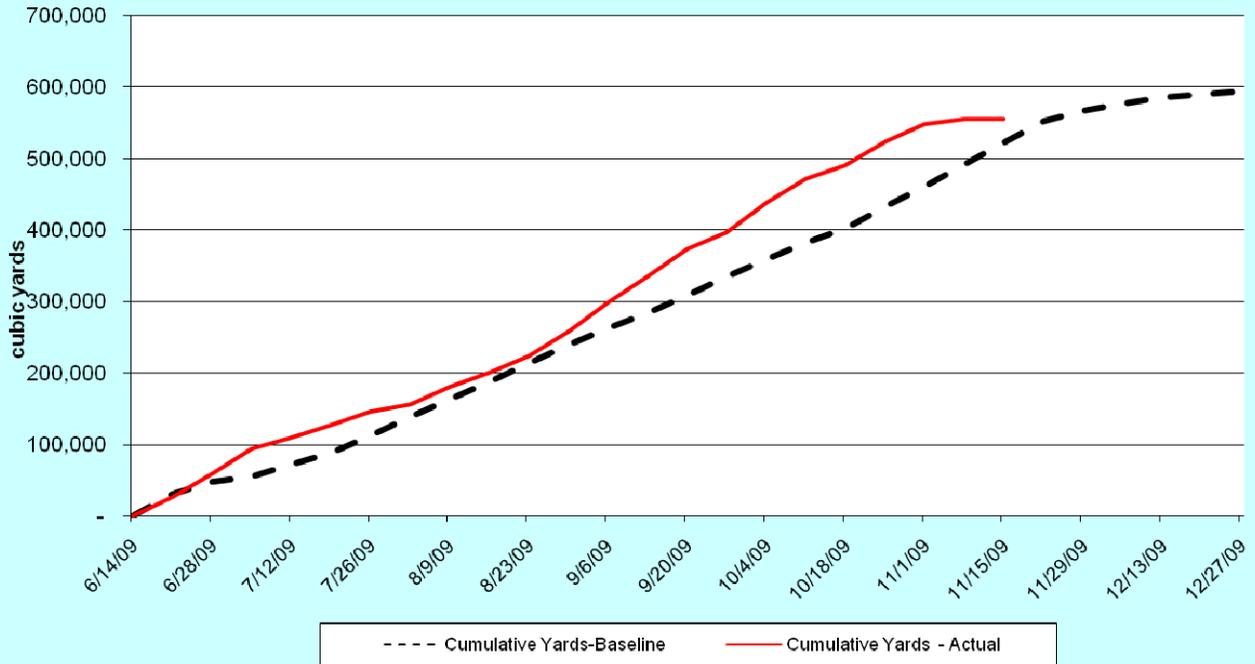


<b>MEETINGS/CONFERENCE CALLS</b>		
<b>Date</b>	<b>Time</b>	<b>Subject</b>
11/16	0730	Environmental Meeting (ICP Conference Room)
11/16	0900	Dike C Buttress Intake Channel (ICP Conference Room)
11/16	1000	Aquatic Resources Studies (Team Room)
11/16	1300	Webpage – Ash Analytical Data Meeting (Team Room)
11/16	1400	Railroad Design Construction Coordination Meeting (ICP Conference Room)
11/16	1500	Air Program Audit Entrance (Team Room)
11/17	0800	LTD Interactive Planning Session (ICP Conference Room)
11/17	0930	IAP Session (Team Room)
11/17	1000	Project Review Meeting (ICP Conference Room)
11/17	1100	KIF Engineering Responsibilities (Team Room)
11/17	1300	Dredge Team Meeting (Team Room)
11/17	1400	Dike C Planning Meeting (ICP Conference Room)
11/18	0800	Time Critical Weekly Meeting (ICP Conference Room)
11/18	0930	Data Management Meeting (ICP Conference Room)
11/18	0930	IG Auditors (Team Room)
11/18	1100	MRC Environmental & Safety (ICP Conference Room)
11/18	1330	Test America Weekly Call (Conference Call)
11/18	1400	Utilization of Brown Bear Aerator (Team Room)
11/19	0730	Environmental Meeting (ICP Conference Room)
11/19	0800	Change Control Meeting (ICP Conference Room)
11/19	0900	KIF SOP Meeting (Team Room)
11/19	1000	Pace Telecon (Conference Call)
11/19	1130	HSE Staff Meeting (ICP Conference Room)
11/19	1300	Jacobs OPR (ICP Conference Room)
11/19	1300	Dike C construction Planning Meeting (ICP Conference Room)
11/20	0900	Jacobs Senior Managers Meeting (ICP Conference Room)
Daily	0730	Site Safety Orientation (Team Room)
Daily	1600	Planning Meeting (ICP Conference Room)
Daily	1630	Ash Disposal Daily Recap (Team Room)

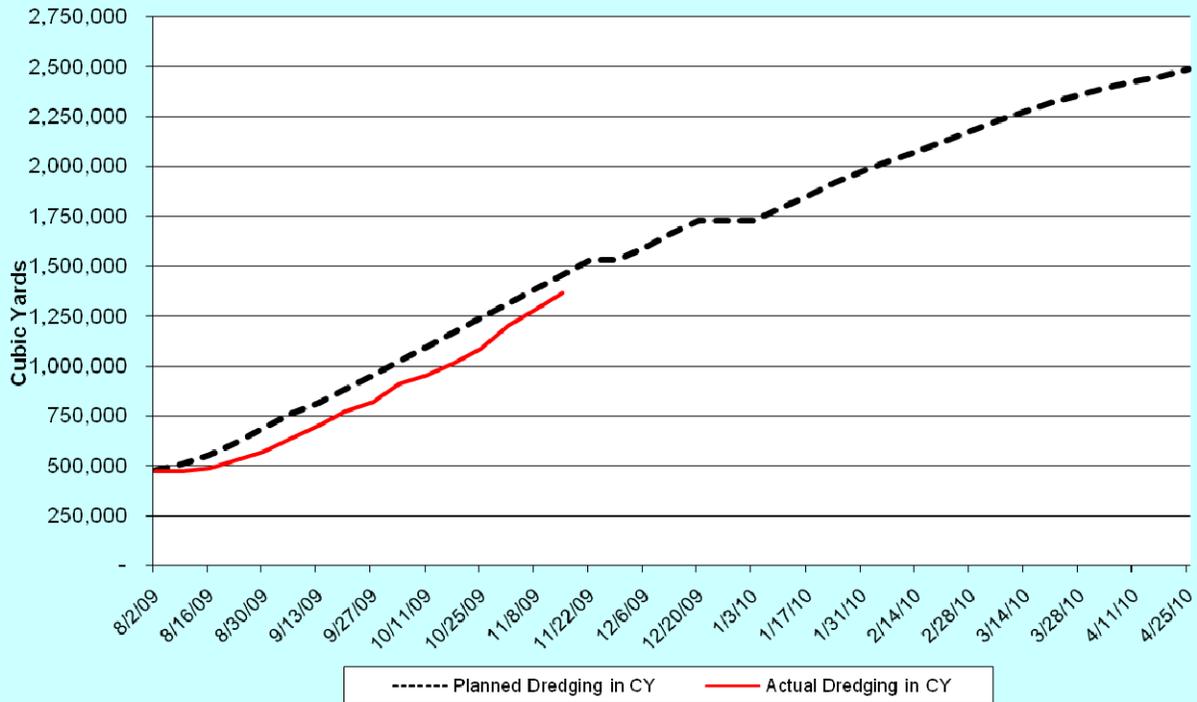
Kingston Recovery Project		Date: November 9-15, 2009	Field Report	
<b>Safety</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
First Aid Incidents			0	25
Recordable Incidents			1	8
Lost Time Incidents			0	2
<b>Cenosphere/Debris Removal</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
Outreach	Light Debris Removal – Land (bags)		0	18,867
Divisions A, B,C,D Cleanup	Division Shoreline Cleanup (bags)		901	85,607
Total	Tons of Light Debris		0	959.57
Cenosphere Slurry	Gallons		357,000	9,632,500
<b>Environmental</b>				
<b>Org</b>	<b>Matrix</b>		<b>Total # Analysis Performed Through 11/13/09</b>	
TVA	Air - Real-Time		132,152	
TVA	Air – Fixed		1,121	
TVA	Surface/Utility Water		19,356	
TVA	Ground Water (spring and well)		525	
TVA	Ash		104	
TVA	Soil/Sediment		91	
TVA	Biota		7,071	
<b>Ash Dredging &amp; Excavation</b>			<b>Weekly Total</b>	<b>Cumulative Total</b>
River	Estimated Cubic Yards thru November 15, 2009 (see Note)		80,127	1,368,080
Ash Excavation (east of Dike 2)	Estimated Cubic Yards **Modified to an in-place volume		0	554,479**
Ash Excavation (other)	Estimated Cubic Yards **Modified to an in-place volume		0	73,000**
Ash Disposal	Estimated Tons		56,600	866,050

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.

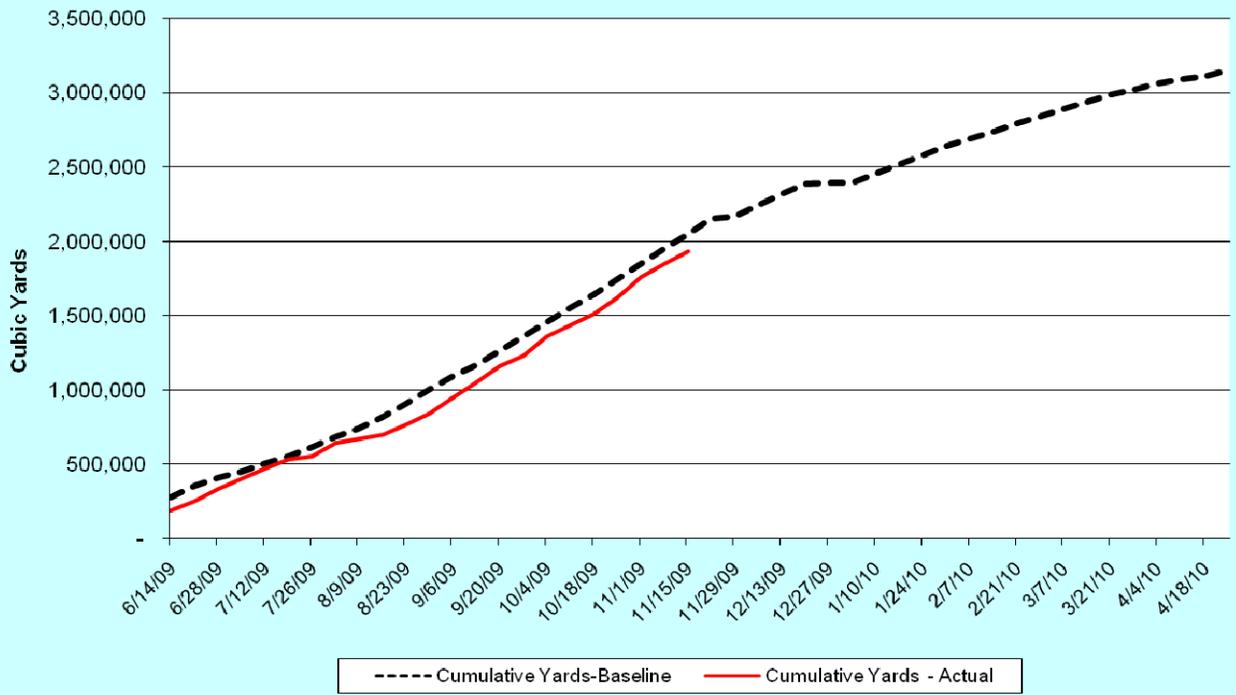
### Ash Removal East of Dike 2 - Weekly as of November 15th



### River Dredging - Weekly as of November 15th



Time Critical Ash Removal - Weekly  
as of November 15th



Ash Loading to Trains - Weekly  
as of November 15th

