

KINGSTON ASH RECOVERY PROJECT

WEEKLY REPORT

December 14-20, 2009

Aerial Image of Kingston Ash Slide August 14, 2009



0 500 1,000 1,500 2,000
Feet

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

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HIGHLIGHTS

- Cumulatively, just over 2,179,000 cubic yards of ash have been removed from the river and east of Dike 2.
- We have loaded and transported 122 unit trains to date for a total of 1,125,600 tons.
- There were no recordable incidents for the week.
- Placed a river water automated sampler in the Emory River to help with sampling during high flow events.
- TVA reported out at the Roane County Long Term Recovery Committee meeting on December 16th.
- *Report to Our Roane County Neighbors, December 2009* was distributed.
- Conducted site tours and interviews with local/state media outlets showing Site progress after one year.
- The updated site-wide Kingston Emergency Action Plan was issued.

SAFETY

Program Summary

- 33 site specific HSE orientations conducted for the week, 1102 to date (update and correction from previous report).
- 10 Safety Observation Reports submitted for the week; 530 to date; 430 of which have been closed.

Incidents

- Recordable Incidents:
 - None
- Non Recordable Incidents:
 - None
- Property Damage Only:
 - None

Emergency Action Plan (EAP)

- The site-wide Kingston EAP was approved for use. Met with the head of the Roane County Emergency Management system to finalize training and deployment plans.

INFRASTRUCTURE/ASH MANAGEMENT

- Although work continued on stacking ash east of Dike 2, because of the wet nature of the ash, very little was removed to more permanent storage locations west of Dike 2.
- Improvements were made to the east-west haul road to enhance stability of the road as directed by Stantec.
- HAZWOPER and access controls continued.
- The Offsite Utilities Restoration and Enhancements Contract was awarded to Mayes Construction on Tuesday, December 16, 2009 and the construction Kick-off Meeting is scheduled for Monday, December 21st. The contract is to restore over 60,100 linear feet of water, effluent, and gas lines destroyed by the KIF Ash Spill. The contractor will mobilize on January 4, 2010 and is scheduled to be complete by June 15, 2010.

ASH DREDGING & PROCESSING

- Severson dredged roughly 58,620 cy this week for a total of 1,621,000 cy removed from the river.
- A main ash pond bathymetric survey was completed on Monday, December 14th, and Sunday, December 20th, showing a free water volume of over 87,000,000 gallons.
- Required construction on the lateral expansion area was completed during the week and approval on the construction was received from Stantec on December 18th. The ash pond dredge began pumping to the area over the weekend.
- Filter press mobilization is underway. Most of the equipment was placed this week and electrical connections began.
- Assembly of the Severson clamshell crane was completed and operations began. However, the crane experienced mechanical difficulties and had to be repaired.
- Severson conducted a lime application test using an excavator on the sluice trench ash. The lime dried the ash

with minimal dust production.

- Jacobs' personnel visited the Genesis storage facility to evaluate the equipment and to plan out what support was needed to construct the facility. The equipment is in good shape and is being mobilized to the site.
- A sampling plan to fill in data gaps with respect to ash volumes outside the main channel is nearing completion. Proof of process tests on the river is ongoing to refine the collection method.

ASH DISPOSITION

- Loaded and transported 7 unit trains this week.
- Heavy rains at the landfill in Uniontown caused them to shut down one day.
- Have loaded and transported 122 unit trains to date for a total of approximately 1,125,600 tons.
- Continued inspection and maintenance of the rail in the Kingston rail yard.
- Continued putting polymers in rail cars prior to shipping to Alabama.
- Continued work on the overall operations of the ball field/processing area. Implementing plan to provide better drainage in the ballfield.
- Queen City Railroad Construction started removal of deteriorated ties from KIF Yard Track #16 and installation of two switches in the south yard area for the KIF Rail Yard Modifications.

CENOSPHERE RECOVERY

- River levels began returning to normal winter pool levels by the end of the week. The river system is in good shape with regards to debris and cenospheres. Cenospheres remain light and controlled in booms. Debris varies from light to heavy with the heavy debris concentrated in coves along the Emory River. Debris in the Clinch and Tennessee Rivers remain moderate to light.
- The barge-mounted excavator was utilized in the Emory River to remove debris caught in the booms.
- Crews continue to monitor the river for accumulations of ash, debris, and cenospheres.
- Large amounts of cenospheres continued to collect in the ash pond and the Dike 2 sediment basins as a result of dredging activities. Crews worked to keep the weir areas clean.

SKIMMER WALL

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

DIKE REINFORCEMENT

- Dike C buttress work continued. The work focused on construction of the "haul road" along the riprap bottom of the buttress. Plans to begin working on the slope were delayed until Monday because of the forecasted rain.
- Approximately 640 feet of haul road has been completed.
- Rains on Friday slowed progress.
- MACTEC continued to provide quality control on delivered buttress material. Material gradation results which fall outside the specifications are being documented as Non-Conformance Report (NCR) and Stantec is determining if material may be used. Stantec is developing a broader range for the specification which should reduce the number of NCRs. A majority of the out of spec material is only a percentage out and does not impact the design.
- 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, December 14th, and Friday, December 18th. On Saturday, December 19th, the automated sampler located in the Emory River at ERM 0.5 was activated to collect samples associated with a >1.0" local 24-hour rainfall and Emory River flow at Oakdale >5,000 cubic feet per second (cfs).
- Surface water analytical results are compared to the Tennessee Drinking Water Standards (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 10/02/09 and 11/30/2009. 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. 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 are collected whenever the 24-hour rainfall exceeds 0.5" measured at the on-site meteorological station.

Sediment Sampling

- Vibecore sampling continues from ERM 0.0 to ERM 1.0 to characterize ash and potential legacy sediments.

Air Sampling

- The majority of air monitoring results, including fixed-station and real-time monitoring results continue below ambient air quality criteria. Several real-time readings were above the 150 ug/m³ PM10 level, but all were associated with local active fires and smoke.
- 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. Daily results for 12/3-12/10 were well below the action limit of 26 ug/m³.

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. Efforts continue regarding the migration of TVA air data into EPA's (AQS).

Biota Sampling

- Mammal trapping continues in collaboration with the University of Tennessee.
- Benthic invertebrate sampling will continue over the next several weeks.

Non-Routine Sampling

- TVA field staff assisted a crew from Duke University performing surface water and sediment sampling on Monday, December 14th and Tuesday, December 15th.

FINAL REMEDIATION

- A plan (conceptual scope and schedule) was prepared for the initial phases of work that would provide for smooth transition from Time-Critical to Non-Time-Critical actions. The plan includes options that are consistent across all alternatives under consideration, such as a processing area in the north embayment, conveyance beneath Swan Pond Road, working platform within the Dredge Cell, and engineering investigations and pilot tests in preparation for closure of the Dredge Cell.
- Review comments were received from regulatory agencies on the draft EE/CA for the Embayment/Dredge Cell. Responses to comments, including revised cost analysis, are being prepared.
- Data Quality Objectives are being prepared for the river system Sampling and Analysis Plan, in preparation for additional investigation to support the river system EE/CA.

DREDGE CELL

- Due to wet weather, only 8,745 cy of ash were placed in the test embankment this week.

COMMUNICATIONS

Communications

- Conducted site tours and interviews with local/state media outlets showing progress at the site after one year.
- Posted to website: Air Quality Information Updated, Weekly Report Added, new comparison video from December

23, 2008 and December 16, 2009 and site updates.

- Continued to handle daily calls from the news media.

Outreach

- Attended Roane County Long Term Recovery Committee meeting December 16 to provide updates on site cleanup.
- Distributed Dredge Report to site workers.
- Distributed Report to Our Roane County Neighbors, December 2009 edition.
- Maintained Administrative Record.
- Continued to handle calls and visit from residents.
- Continued to gather comments on various administrative records.

Government/Valley Relations

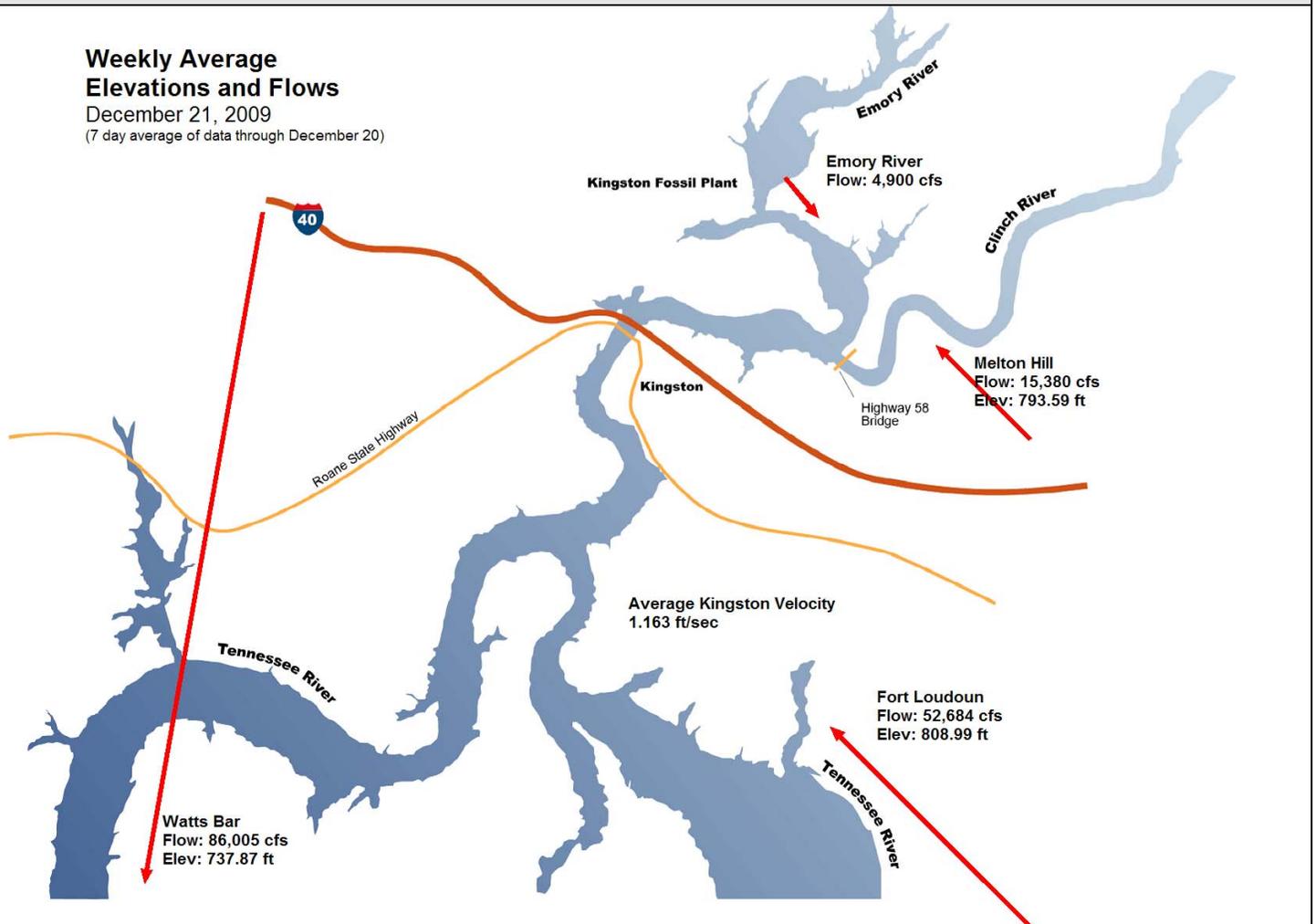
- Hosted elected stakeholders for a one-year mark briefing and tour.
- Attended and presented at the Roane County Long Term Recovery Committee.

RIVER OPERATIONS

Weekly Average Elevations and Flows

December 21, 2009

(7 day average of data through December 20)

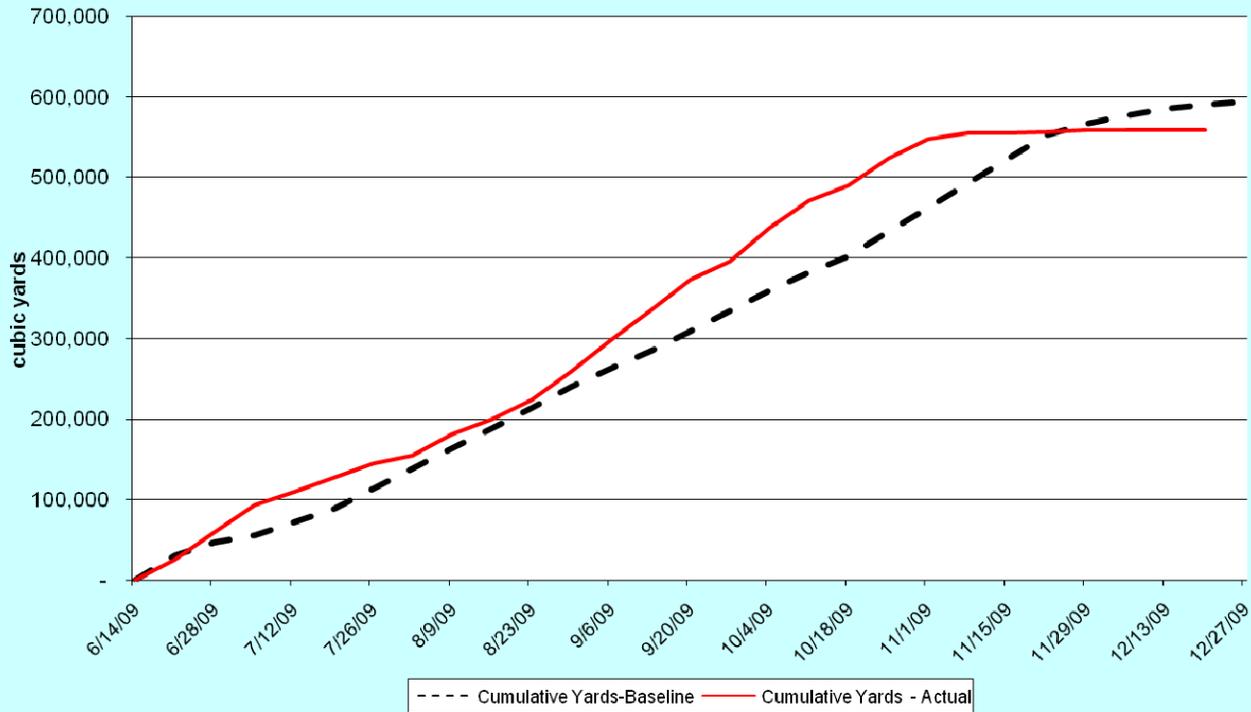


MEETINGS/CONFERENCE CALLS		
Date	Time	Subject
12/21	0730	Environmental Meeting (ICP Conference Room)
12/21	0900	Dike C Buttress Intake Channel (ICP Conference Room)
12/21	1000	Aquatic Resources Studies (Team Room)
12/21	1100	Communications/EPA (Team Room)
12/21	1400	Bid Kickoff (ICP Conference Room)
12/22	0815	Dredge Cell Test Meeting (ICP Conference Room)
12/22	1330	Dredge Team Meeting (Team Room)
12/23	0800	Time Critical Weekly Meeting (ICP Conference Room)
12/23	0930	Data Management Meeting (ICP Conference Room)
12/23	1330	Test America Weekly Call (Conference Call)
Daily	0730	Site Safety Orientation (Team Room)
Daily	1600	Planning Meeting (ICP Conference Room)
Daily	1630	Ash Disposal Daily Recap (Team Room)

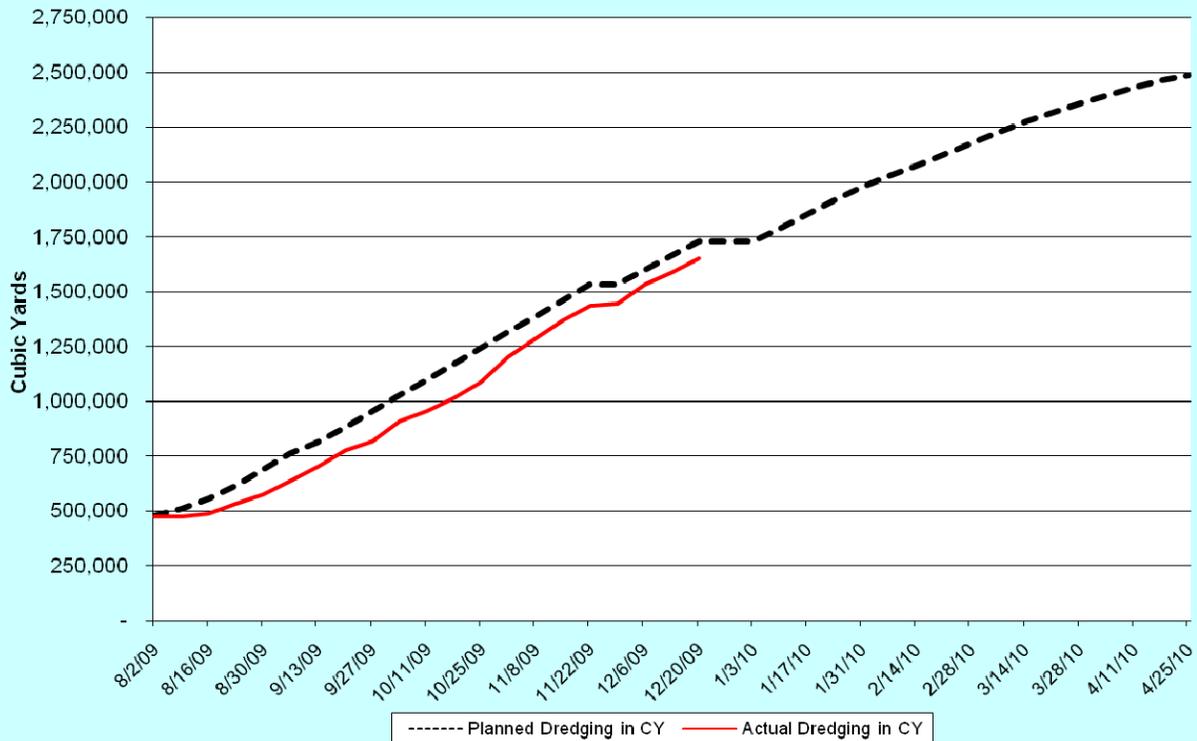
Kingston Recovery Project		Date:	December 14-20, 2009		Field Report
Safety			Weekly Total	Cumulative Total	
First Aid Incidents			0	27	
Recordable Incidents			0	8	
Lost Time Incidents			0	2	
Cenosphere/Debris Removal			Weekly Total	Cumulative Total	
Outreach		Light Debris Removal – Land (bags)	0	18,867	
Divisions A, B,C,D Cleanup		Division Shoreline Cleanup (bags)	1,199	88,474	
Total		Tons of Light Debris	0	959.57	
Cenosphere Slurry		Gallons	231,000	10,615,000	
Environmental					
Org	Matrix	Samples*	Analyses*	Results*	
TVA	Air - Real-Time	--	--	146,603	
TVA	Air – Fixed	1,254	--	1,392	
TVA	Surface/Utility Water	2,476	21,806	109,754	
TVA	Ground Water (spring and well)	43	498	1,852	
TVA	Ash	78	104	1,689	
TVA	Soil/Sediment	57	111	1,423	
TVA	Biota	597	1,506	14,704	
	*Week ending 12/19/2009	Note: the Surface Water results numbers are less than last week due to an error in counting a group of samples twice last week. The Sediment numbers are also significantly less due to an error in the tabulation of the results in this group.			
Ash Dredging & Excavation				Weekly Total	Cumulative Total
River	Estimated Cubic Yards thru December 20, 2009 (see Note)			58,620	1,621,000
Ash Excavation (east of Dike 2)	Estimated Cubic Yards **Modified to an in-place volume			0	558,079**
Ash Excavation (other)	Estimated Cubic Yards **Modified to an in-place volume			0	73,000**
Ash Disposal	Estimated Tons			73,900	1,125,600

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.

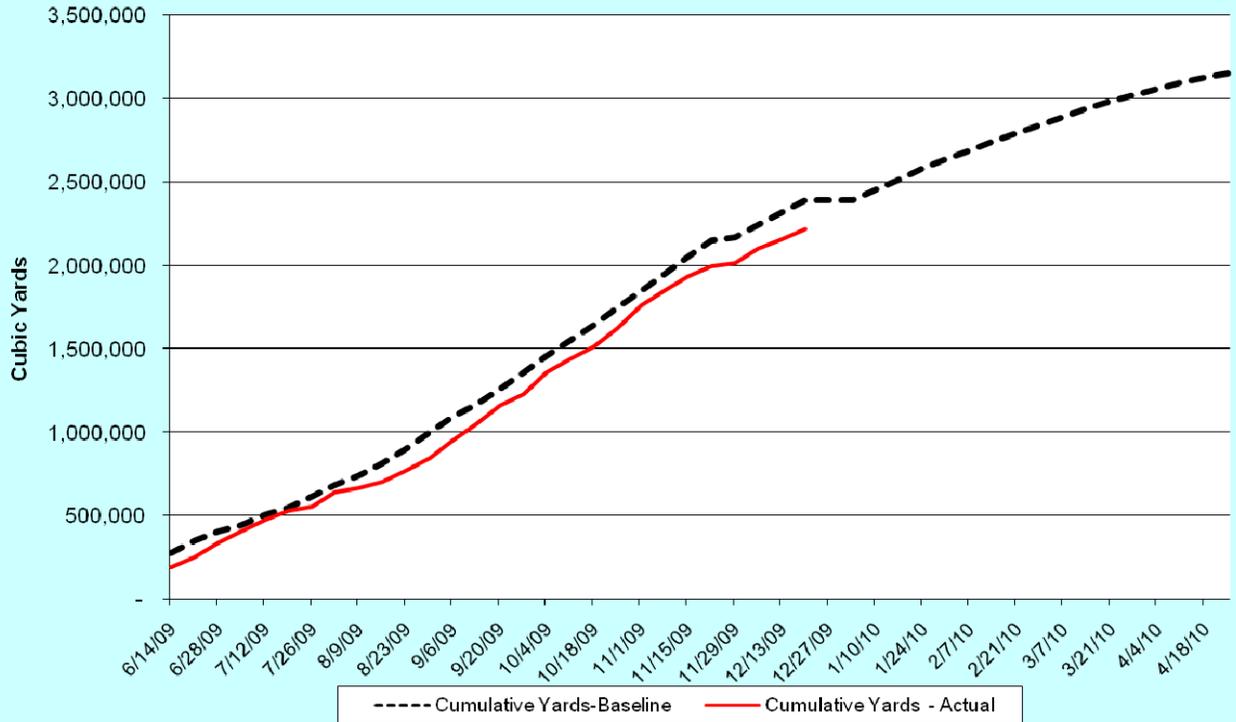
Ash Removal East of Dike 2 - Weekly as of December 20th



River Dredging - Weekly as of December 20th



Time Critical Ash Removal - Weekly
as of December 20th



Ash Loading to Trains - Weekly
as of December 20th

