

# KINGSTON ASH RECOVERY PROJECT MONTHLY REPORT August 2011

**Aerial Image of Kingston Ash Slide (08/01/2011)**



Date of imagery: 08/01/2011

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Tennessee Valley Authority  
Geographic Information & Engineering

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Issue (Date/Time)  
09/13/2011 2:56:41 PM

# KINGSTON ASH RECOVERY PROJECT

## MONTHLY REPORT

### August 2011

#### **SAFETY**

- Eight (8) site-specific HSE orientations were conducted during August – 1,960 to date. Thirty-three (33) site-specific refresher courses were conducted during the month of August - 356 to date.
- One hundred and twenty-seven (127) Safety Observation Reports were submitted during August – 2,348 to date; 2,347 are closed.
- The last recordable incident occurred on December 22, 2010 and became a recordable on December 28, 2010.
- On August 3, 2011, a First Aid occurred when a GeoCon laborer suffered a laceration when disconnecting transfer pipes. The individual was straddling the HDPE pipe and was struggling with breaking the connection free. When it released, the end of the pipe struck the individual in the mouth. The laborer was treated at the First Aid clinic.
- On August 22, 2011, a First Aid occurred when a GUBMK staff augmented Heavy Equipment Operator had exited his dozer to remove a section of wire rope from his path. As he pulled on the cable to free it from the ash, it recoiled and struck him in the forearm. The operator was treated at the First Aid clinic.
- On August 26, 2011, a First Aid occurred when a GeoCon laborer walking in the batch plant stepped on an HDPE slurry line and fell striking his elbow on the gravel surface. The laborer was treated at the First Aid clinic.
- Sixty-five (65) industrial hygiene personal air monitor samples were collected over 13 days and 14 Similar Exposure Groups (SEGs) during the month of August; awaiting lab results.

#### **INFRASTRUCTURE / ASH MANAGEMENT**

- Efforts for site maintenance, dust control, and HAZWOPER control continued.
- Continued recovering cenospheres from the onsite ponds.
- Started preparations for relocation of MAP to Berkshire Road area.

#### **ASH SLURRY & POND TSS CONTROL**

- TVA Civil Projects dragline operated during the month of August and recovered 24,096 cubic yards of fly ash from the Sluice Trench.
- TSS sampling was performed throughout the ash slurry system. The total suspended solids (TSS) of the Sluice Trench discharge averaged 1,811.3 mg/L, the Main Ash Pond effluent TSS averaged 19.1 and the Stilling Pond effluent averaged 16.6 for the month.
- The plant effluent, Sluice Trench effluent, and Ash Pond effluent polymer addition rates were adjusted as necessary during the month.
- An independent review of the 90% design package was completed during the month and work on the 100% was nearing completion at the end of the month.
- Data from the August 3 bathymetric survey was interpreted and new volumes calculated for each pond.

#### **ASH PROCESSING / BALLFIELD PREPARATION**

- The removal of the IASA Phase 1 portion of the Ballfield from the CERCLA exclusion zone was approved on August 17.
- Geosyntec performed moisture testing and compaction verification throughout the month and is reporting weekly.
- Piezometer connections were completed but retrieving of data logger data is pending IT certification. Slope inclinometer data was monitored on August 19 and results were reported normal; data will be used for new baseline.
- Civil Projects performed moisture reduction processing of ash removed from the Sluice Trench to ready ash for placement in the Interim Ash Storage Area.
- Civil Projects performed plant ash placement throughout the month. The total ash stacked in the IASA from truck count was 25,127 cubic yards in August. End of month total stored in the Interim Ash Storage Area from truck count is estimated at 38,448 cubic yards.
- Dust control management plan was developed by Geosyntec and approved by TVA. Initial work performed under the dust control management plan was hydro-seeding of the perimeter berms.
- TVA surveyed the Ballfield on August 24, 2011 and calculated the volume of placed material at 47,373 cubic yards.
- The number of KIF Plant units on line averaged 6.6 for the month; 5 units were operating at month's end.

## DIKE REINFORCEMENT

- Completed the Skimmer Wall peninsula area.
- Completed removal of the causeway.
- Civil Projects continued construction of the buttress in the Intake Channel.
- Approximately 5,115 feet (96%) of the buttress has been completed.
- Began writing initial sections of the OSC Report Addendum.
- Civil Projects (CP) worked on completing punch list items.
- Siphons will operate until the diffusers are installed in early September.
- Continued welding first sections of the new diffuser pipes.

## ROUTINE MONITORING

### Surface Water Sampling

- There were rainfall events greater than 0.5" that triggered storm flow sampling in Swan Pond Embayment for the month of August.
- The Surface Water Plan was revised per negotiations with EPA/TDEC to eliminate storm flow sampling in the Emory and Clinch Rivers and remove the floating monitors from the rivers. Storm flow sampling will continue in Swan Pond Embayment when triggered by rainfall events >0.5 inches.
- Continued routine weekly surface water sampling at the Stilling Pond and Swan Pond Embayment.
- Continued daily pH and dissolved oxygen monitoring in the Dirty Water Ditch and the Settling Basin through August 15, 2011. The readings were collected twice a day and included run off ditches that empty into the Dirty Water Ditch.
- Continued daily TSS monitoring at the Sluice Trench, Ash Pond, and Stilling Pond
- Automated monitoring stations (Hydrolabs) replaced the twice daily monitoring with online continuous monitoring of pH at three locations in the ditch system on August 15, 2011.

### Air Sampling

- All air monitoring results for the month of August from the PM2.5 and PM10 TVA air samplers were below the current Ambient Air Monitoring Plan (AAMP) action levels with the exception of one exceedance noted on August 5, 2011. The ambient air PM2.5 24-hour average from the continuous ambient air monitor at PS09 located south of the site exceeded the KRP AAMP action limit. The investigation indicated that activities at the site did not contribute to the PM2.5 level at the site perimeter.
- The Air Monitoring Plan is undergoing revisions to reflect a significant reduction in scope of the required air sampling per agreements reached with TDEC and EPA.

### Data Management

- The ash deposit, submerged sediment, and seasonally exposed sediment data sets were combined into a single technical memorandum due to the overlap of sampling locations. The technical memorandum is drafted and expected to be ready for submittal by September 19, 2011.

### Biota Sampling

- None to report.

### River System EE/CA Sampling and Analysis

- Continued weekly bulk replenishment water sampling in support of the bioassay testing for the Emory River throughout August.

### Non-Routine Sampling

- Continued concurrence sampling in the North Embayment as sections are deemed ready by operational sampling.
- Continued geoprobe sampling in the North Embayment in support of the excavation operations.
- Started Perimeter Wall Spoils Study sampling at the Relic. A total of nine boreholes are planned including three each from the Relic, the Lateral Expansion, and the West Storage Area.
- Continued sample collection and on-site moisture testing in support of Dredge Cell and Ballfield Operations.

## DREDGE CELL

- Continued PWS construction of Segment 1 and managing spoils in the north Dredge Cell (see sketch).
- Established and began sun drying beds for ash and spoils moisture conditioning on top of the central Dredge Cell and Relic Area.
- Stantec transmitted the 90% Design Package for the Dredge Cell closure to TVA for review and comment.
- Stacking in central Dredge Cell was completed; began stacking in the Lateral Expansion.
- EPA / TDEC approved the removal design package for Segment 1 Perimeter Containment.
- Revised the plan for management of spoils from Segment 1 PWS.
- Developed draft plans for Borrow Area Haul Roads and for Segment 1 PWS buttress construction.

## LATERAL EXPANSION

- Finished placing ash in the southern part of the Lateral Expansion as part of the subgrade preparation.
- Began stacking ash in northern part of the Lateral Expansion, expanding the area for stacking based on proof-rolling the subgrade.
- Transmitted the 90% Design Package for the Ash Pond Overflow Structure to the regulators for their review.

## NORTH EMBAYMENT

- Continued excavation of ash and ash processing for stacking
- Performed operational and confirmation sampling and reported results to field foreman as areas where cleaning was complete or requiring additional cleaning. Weekly sampling status reports were developed and issued.
- Approval was received for Completion Concurrence KIF-11-003 which covered all of the remaining area north of the water control berm and west of the clean water ditch.

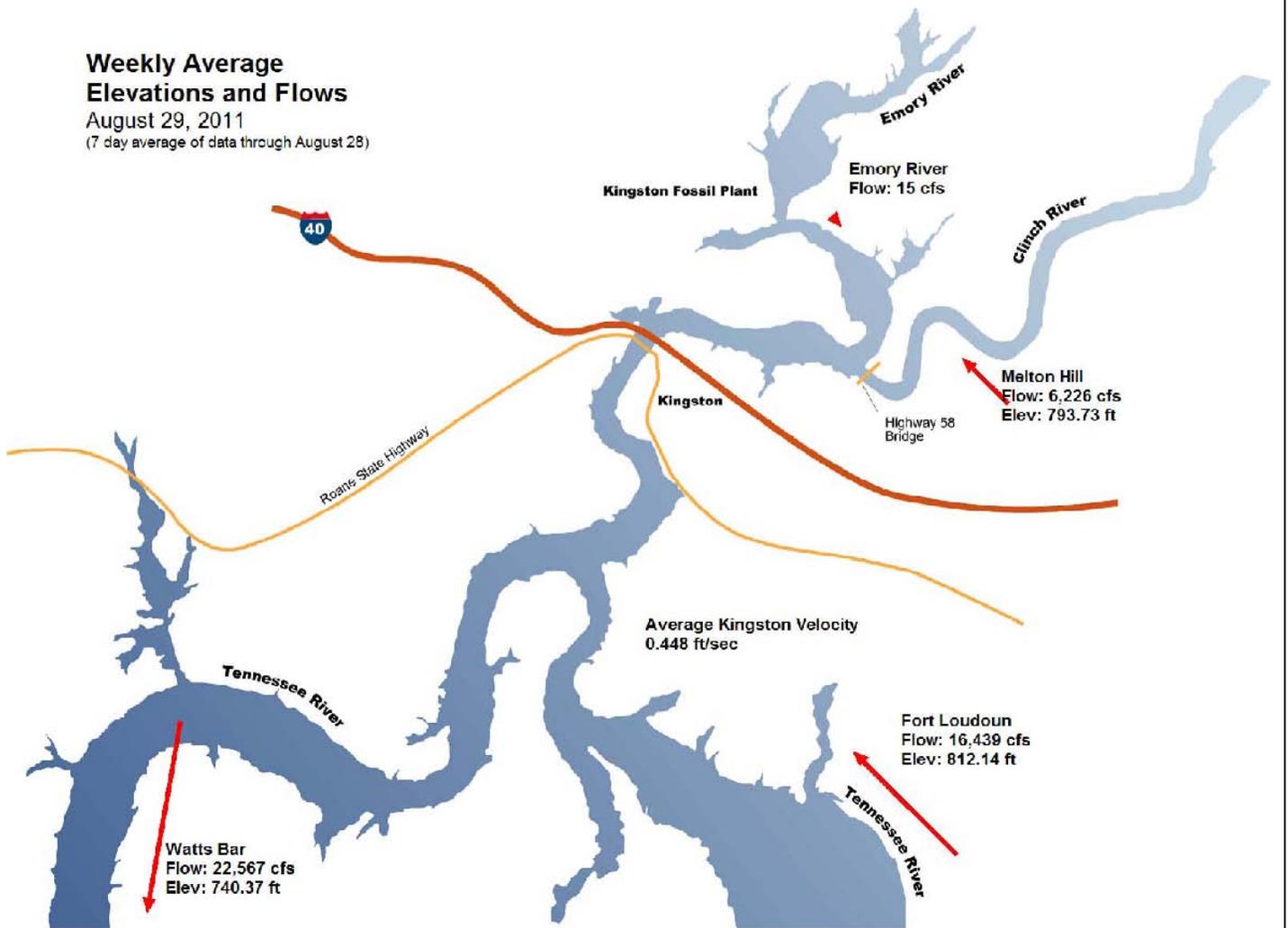
## COMMUNICATIONS

- Added Weekly Dike C Reports and Weekly Area Resident Updates to Kingston Ash Recovery website.
- Sent weekly updates to the CAG, public officials and members of the public who have signed up to receive weekly emails.
- Updated Administrative Record with work plans and relevant documents.
- Continued to respond to calls and visits from residents.
- Distributed *Inside the Cell* newsletter to site and plant employees.
- Updated site bulletin boards.
- Held a public meeting on August 2 to discuss conceptual recreation designs for some of the property purchased by TVA after the spill.
- Spoke to the Kingston Rotary Club on August 23 and the Roane Alliance on August 25 to discuss the conceptual recreation designs for some of the property purchased by TVA after the spill.

# RIVER OPERATIONS

## Weekly Average Elevations and Flows

August 29, 2011  
(7 day average of data through August 28)

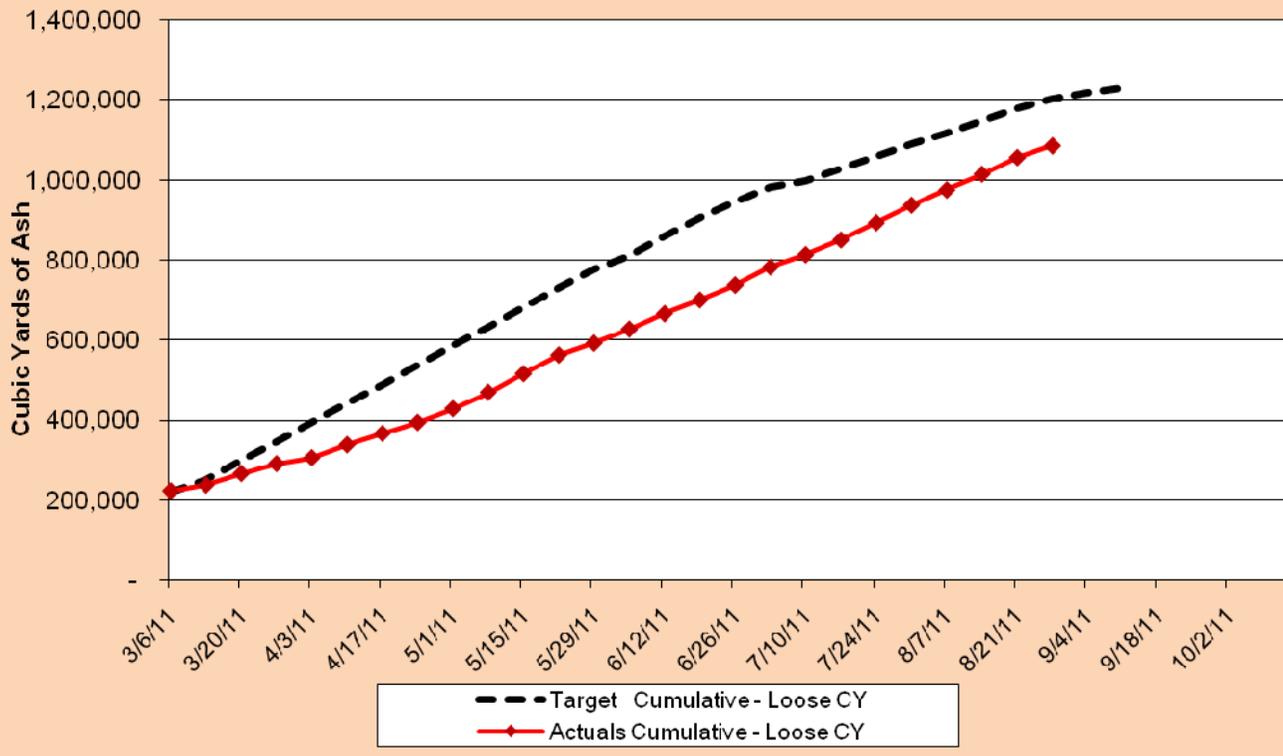


Kingston Ash Recovery Project		August 2011		Field Report	
Safety		Monthly Total	FY – Cumulative Total		
Near Misses		0	2		
First Aid Incidents		3	14		
Recordable Incidents		0	2		
Recordable Lost Time Incidents		0	0		
Environmental	Matrix	Samples	Analyses	Results	
Organization - TVA	Air – Real Time (Final)	--	--	267,188	
Organization - TVA	Air – Fixed	5,516	--	8,024	
Organization - TVA	Surface / Utility Water	5,475	46,940	231,766	
Organization - TVA	Groundwater (spring & well)	215	2,174	10,855	
Organization - TVA	Ash	754	1,307	9,793	
Organization - TVA	Soil / Sediment	897	1,825	11,819	
Organization - TVA	Biota	3,197	8,764	103,030	

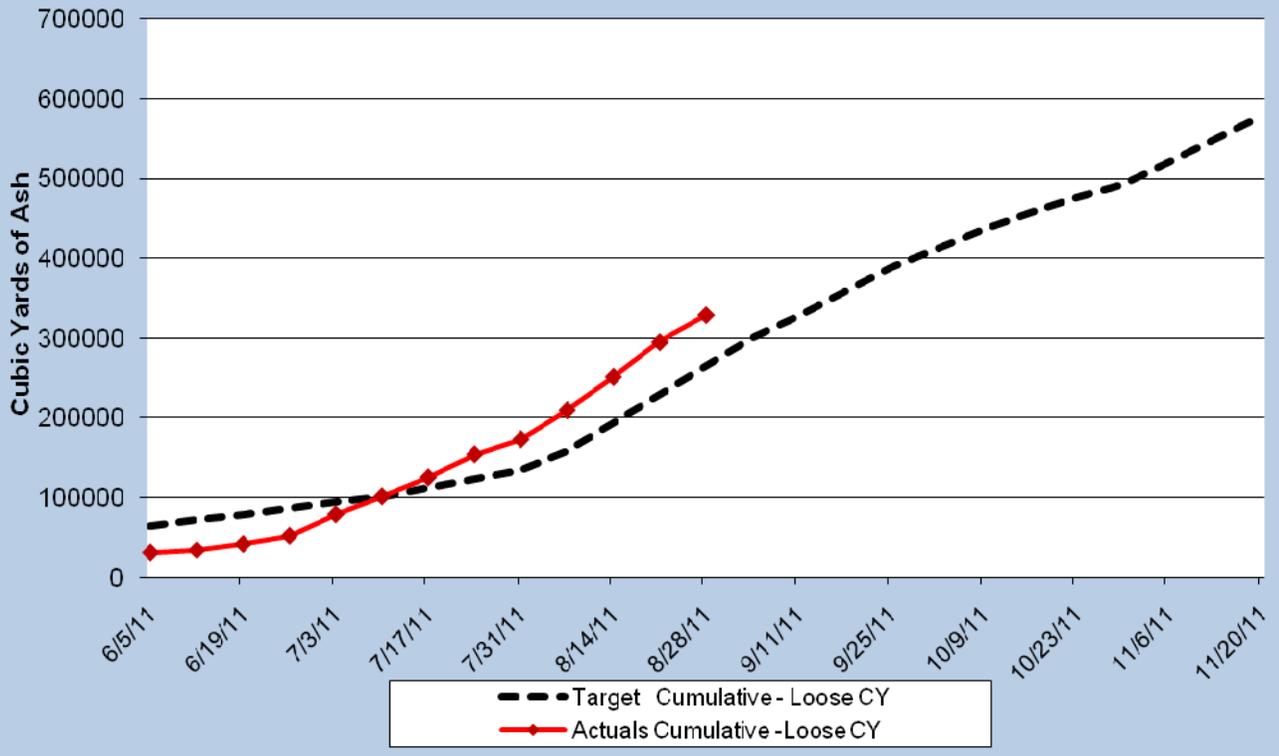
Work Description	Period Work Performed (CYIP)	PTD Work Performed (CYIP)
<b>Ash Removal / Excavation</b>		
Total Removed from Middle Embayment	14,516	311,578
Total Removed from North Embayment	118,212	773,119
Total Removed from Settling Basins / Dike 2	1,134	7,884
<b>Excavated Total</b>	<b>133,862</b>	<b>1,092,581</b>
Work Description	Period Work Performed (CCY)	PTD Work Performed (CCY)
<b>Placement</b>		
Total Placed in Dredge Cell	14,802	788,574
Total Placed in Lateral Expansion	121,422	290,101
Total Placed in Ash Pond	4,072	4,072
<b>Placed Total</b>	<b>140,297</b>	<b>1,082,748</b>

For period ending August 31, 2011

Ash Excavation from North Embayment - Weekly  
as of August 28



Ash Stacking in Lateral Expansion - Weekly  
as of August 28



### Perimeter Wall Stabilization Segment 1A - Weekly as of August 28

