

**Tennessee Valley Authority  
Regulatory Submittal for Kingston Fossil Plant**

**Documents submitted:  
Community Involvement Plan**

**Date Submitted:  
08/26/2010**

**Submitted to whom  
Craig Zeller**

**Concurrence**

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Tennessee Valley Authority, 1134 Swan Pond Road Trailer Park, Harriman, Tennessee 37748

August 26, 2010

Mr. Craig Zeller  
U.S. Environmental Protection Agency  
Region 4  
61 Forsyth Street Southwest  
Atlanta, Georgia 30303

Dear Mr. Zeller:

Please find enclosed the Community Involvement Plan which fulfills the requirements of Section XXXVII, paragraph 96, of the Administrative Order and Agreement on Consent. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. H. McCracken', written over a horizontal line.

Stephen H. McCracken  
General Manager  
Kingston Ash Recovery Project

Enclosure

**TVA COMMUNITY INVOLVEMENT PLAN  
FOR THE  
KINGSTON ASH RECOVERY PROJECT**

**Prepared by:**



**Tennessee Valley Authority**

Originally issued  
October 19, 2009

Updated  
**August 26, 2010**

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## ACRONYMS AND ABBREVIATIONS

AOC	Administrative Order and Agreement on Consent
CAG	Community Advisory Group
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CIP	Community Involvement Plan
EE/CA	Environmental Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
ERRB	Emergency Response and Removal Branch
FGD	fuel gas desulphurization
JIC	Joint Information Center
LFA	Lead Federal Agency
MOC	Memorandum of Concurrence
NAAQS	National Ambient Air Quality Standards
RSWP	Remedial Site Work Plan
SAP	Sampling and Analysis Plan
SO <sub>2</sub>	sulfur dioxide
START	Superfund Technical Assessment and Response Team
TAP	Technical Assistance Plan
TCASN	Tennessee Coal Ash Survivors Network
TDEC	Tennessee Department of Environment and Conservation
TDH	Tennessee Department of Health
TVA	Tennessee Valley Authority
USC	United States Code

## **1.0 INTRODUCTION**

Tennessee Valley Authority (TVA) developed this Community Involvement Plan (CIP) to facilitate two-way communication between the community surrounding the Kingston Fossil Plant and TVA and encourage community involvement in site activities. This plan was first issued October, 19, 2009, and covered community involvement and communication activities for the time critical phase of the recovery. It was issued for public comment at that time. The public comment period was extended, and ended on December 20, 2009. The plan has since been updated to include community involvement and communication activities for the non-time critical phase of the work. TVA will utilize the community involvement and communication activities outlined in this plan to ensure that residents are continuously informed and provided opportunities to be involved.

This CIP addresses the TVA Kingston Fossil Plant's relationship to the community (Section 2.0), provides a background of the community (Section 3.0), presents TVA's Community Involvement Program (Section 4.0), and provides a listing of resources available (Appendices). TVA drew upon several information sources to develop this plan, including community interviews and site files. Kingston Ash Recovery Project's Public Interface Group will oversee the implementation of the community involvement activities outlined in this plan.

### **1.1 REGULATORY OVERVIEW**

On January 12, 2009, the Tennessee Department of Environment and Conservation (TDEC) issued a Commissioner's Order requiring action be taken as necessary to respond to a dike failure at TVA Kingston Fossil Plant that allowed an estimated 5.4 million cubic yards of fly ash to spill from two of three onsite dewatering cells. On March 2, 2009, TVA submitted to TDEC a Corrective Action Plan for assessment and monitoring of the site, protection of water supplies, management of the coal ash, and protection of site workers and the public.

On May 11, 2009, the U.S. Environmental Protection Agency (EPA) and TVA signed an Administrative Order and Agreement on Consent (AOC) that continued the collaborative work between EPA, TDEC, and TVA, using EPA's expertise under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Under the AOC, TVA retains its status as lead federal agency for the Kingston Ash Recovery Project. The following regulatory agencies provide oversight:

- EPA, Region IV is the lead regulatory agency and provides federal oversight for the Kingston Ash Recovery Project.
- TDEC provides state oversight for the Kingston Ash Recovery Project.

Application of CERCLA at the site ensures that response actions necessary to protect public health and the environment are carried out at the Kingston Ash Recovery Project and provides a structured approach to community involvement in the cleanup, including this CIP. Applicable regulations are presented in Appendix L.



## **2.0 CAPSULE SITE DESCRIPTION**

Kingston Fossil Plant, located on 800 acres in Harriman, Roane County, Tennessee, produces electricity through nine generating units by burning coal in a boiler to heat water, producing steam. Under extremely high pressure, the steam flows into a turbine that spins a generator to make electricity.

The plant draws cold water from the Emory River into condensers to cool the steam after it has passed through the turbine. The condenser transforms steam back into purified water that is used again. The cooling water from the Emory River, now warm from the exchange of heat in the condensers, is released back into the Clinch River.

The plant generates 10 billion kilowatt-hours of electric power each year, enough to supply the needs of more than 700,000 homes in the Tennessee Valley. The plant consumes approximately 14,000 tons of coal per day when operating at full capacity with all nine boilers.

### **2.1 SITE HISTORY**

TVA created Watts Bar Reservoir in 1942 as part of its mission to conduct flood control, provide for navigation and harness the river for energy production. The Kingston Fossil Plant is located on the Emory River portion of Watts Bar Reservoir close to the confluence of the Clinch and Tennessee Rivers near Kingston, Tennessee.

Kingston Fossil Plant is one of TVA's larger fossil plants. The facility was conceived and built to supply nearby Oak Ridge atomic energy installations with a steady supply of electricity. Plant construction began in 1951 and was completed in 1955. At the time of its completion, it was the largest coal-fired power plant in the world, and it remained so for over a decade.

Kingston Fossil Plant constructed two 1,000-foot stacks in the 1970s to replace the original nine towers, which are still standing but are no longer in use at the plant. TVA has installed selective catalytic reduction controls on all nine boiler units at the plant to reduce nitrogen oxide emissions. TVA has built a sulfur dioxide scrubber and a new stack at the plant. Commissioning of the scrubber began on June 14, 2010. During this time TVA will be testing units and verifying the scrubber operates properly at varying levels of power production. Commissioning is estimated to be finished in the fall of 2010. Once complete, all units will be available for full operation, but are expected to be removed from service and remain off unless needed for system reliability. Scrubbers, or flue gas desulphurization (FGD) equipment, use wet limestone slurry that reacts with the sulfur dioxide (SO<sub>2</sub>) and removes it from plant gases. Installation of FGD equipment across TVA will reduce system-wide SO<sub>2</sub> emissions by 85 percent to meet requirements under the 1990 Clean Air Act amendments.

Ash is a product of burning pulverized coal in electric generation plants. Kingston Fossil Plant produces approximately 1,000 tons of fly ash per day when operating at full capacity. Fly ash is a fine powdery material that is removed from the plant's exhaust gases by electrostatic precipitators. Bottom ash, collected from the bottom of the boiler, is heavier and has a coarser residue than fly ash. Prior to the spill, collected bottom ash and fly ash (see Appendix M for Material Data Safety Sheets) were sluiced in a water-based slurry to a wet ash pond for settling. The ash was then dredged from the settling pond and stacked in the dredge cells next to the pond. The three Kingston Fossil Plant dredge cells covered about 84

acres and stored about 9.4 million cubic yards of both fly and bottom ash in mid-December 2008.

The initial 85-acre ash disposal area was completed in 1954, and a larger 275-acre final storage area was completed in 1958. TVA made modifications and additions to increase the original storage capacity of the ash ponds throughout the 1970s. In 1985, Dike C (Appendix P), which contained the ash pond, was raised for the third and final time. In 1995, TVA designed and began construction of a vertical dredge cell expansion program that was permitted by TDEC in 2000. This allowed the dredge cells to hold more ash.

On December 22, 2008, there was an ash spill at Kingston Fossil Plant that released roughly 5.4 million cubic yards of fly ash and bottom ash from 60 acres of the 84-acre dredge cell complex (Appendix Q). The spilled material covered about 300 acres ([http://www.epaosc.org/site/polrep\\_profile.aspx?site\\_id=4642&counter=9750](http://www.epaosc.org/site/polrep_profile.aspx?site_id=4642&counter=9750)) of the Emory River portion of Watts Bar Reservoir, including most of Swan Pond, West, North, and East Embayments, and reservoir shorelands. Most of this property is owned by the United States and managed by TVA. No injuries occurred, but about 40 residences and waterfront properties were directly affected by ash deposits or water surge.

## **2.2 SITE LOCATION**

Kingston Fossil Plant is located in the eastern portion of the county on a peninsula between the Clinch and Emory Rivers. The plant lies between the cities of Harriman and Kingston near the unincorporated community of Midtown. While it bears Kingston's name, it actually lies in the city of Harriman (Appendix T).

Roane County, Tennessee covers a land area of 360 square miles according to the U.S. Census Bureau. It includes all of the incorporated cities of Kingston, Harriman, and Rockwood, and portions of Oak Ridge and Oliver Springs. There are five high schools in Roane County. The closest, Roane County High School, is 2.9 miles from Kingston Fossil Plant (all mileages are approximate and based on <http://maps.google.com> driving distance as of February 3, 2010). Further, there are four middle schools in the county. The closest, Cherokee Middle School, is 5.2 miles away. There are eight elementary schools in Roane County. The closest, Midtown Elementary School in Harriman, is 3.5 miles away. Bowers Elementary School, also located in Harriman, is 3.8 miles away. Many of these schools have associated playgrounds. There are also numerous daycare facilities in Roane County. The closest, Kiddie Corner Too, located in Kingston, is 3.6 miles away. Roane County is also home to Roane State Community College, a member college in the Tennessee Board of Regents System. Located in Harriman, it is 6.9 miles from the plant.

There are also public parks scattered throughout the county. In Kingston, the City Park is about 2.6 miles from Kingston Fossil Plant on Watts Bar Reservoir. In Harriman, Roane County park is located 5.2 miles from the plant. Caney Creek RV Resort & Marina is 5.2 miles away. In Rockwood, the Mike "Brillo" Miller Sports Complex is 12 miles away. Arrowhead Park is 20.4 miles away in Oliver Springs. Mount Roosevelt State Park is 15.8 miles away.

Roane County is served by one community hospital, Roane Medical Center (affiliated with Covenant Health) in Harriman, 3.8 miles from the plant. There is a rehabilitation center, The Bridge, located in Rockwood 8.0 miles away.

There are additional health care facilities throughout the county. Renaissance Terrace Care & Rehabilitation Center is in Harriman, 6.9 miles away. Harriman Care & Rehabilitation Center is 8.0 miles from the plant and Foothills Care, Inc. in Kingston is 3.6 miles away.

Additionally, the county is served by three assisted living centers for senior citizens. Wellington Place of Kingston is 3.8 miles away. Jamestown Assisted Living, also in Kingston, is 5.4 miles away. A third assisted living facility, Victorian Square, is 11.1 miles away in Rockwood.

There is a water treatment plant 4.4 miles away in Kingston and another 14.3 miles away in Rockwood. The Cumberland County Utility District is 11.8 miles away in Harriman.

## **2.3 SITE INSPECTIONS AND CLEANUP ACTIVITIES**

### **2.3.1 EPA's Early Site Response**

On December 22, 2008, in response to National Regulatory Commission report #893129, a Federal On-Scene Coordinator and EPA's Superfund Technical Assessment and Response Team (START) contractor responded to a catastrophic dike failure at TVA Kingston Fossil Plant. The incident was reported to have occurred around 1:00 a.m. As a result of the dike failure, an estimated 5.4 million cubic yards of fly ash spilled from two of three onsite dewatering cells. The overland impact was estimated at approximately 300 acres. The ash spill disrupted power, ruptured a natural gas line, rendered three homes uninhabitable, and caused the evacuation of a nearby residential area. Swan Pond Road, Swan Pond Circle, and portions of the rail line serving Kingston Fossil Plant were covered with ash.

TVA responded immediately by setting up a hotline for residents to report concerns or problems at (865) 717-4006; providing housing, meals, transportation and other support to affected residents; beginning public outreach; and purchasing homes. TVA began removing ash from affected roadways and railways, started dust control efforts, stabilized the ash cells, built structures to keep the ash from migrating, and began removing cenospheres (floating ash residue) from the river. TVA revamped the area at Kingston Fossil Plant formerly used as recreational ball fields into a temporary storage facility for ash dredged from the Emory River.

EPA also responded immediately to the spill, mobilizing an On-Scene Coordinator to the site that same day to help coordinate the emergency response.

The following activities were conducted:

- TVA conducted water quality sampling on Monday, December 22, 2008, and the report was reviewed by Unified Command.
- EPA initiated a sampling program on December 23, 2008, that included an area approximately one mile upstream of the release area on the Emory River progressing downstream approximately six miles and terminating at the City of Kingston's main water intake. EPA also collected fly ash samples at the point of release along the Emory. Samples were submitted to an EPA-approved laboratory for analysis of total and dissolved metals and total suspended solids.

- From December 28 to December 30, 2008, EPA re-sampled the Clinch, Tennessee, and Emory Rivers. Two out of 16 samples taken on the water had measurements in excess of the Tennessee Water Quality Criteria for Domestic Supply.
- On December 31, 2008, a hotline for health effects information was established by the Tennessee Department of Health, in consultation with the Agency for Toxic Substances and Disease Registry at (800) 404-3006.
- On December 31, 2008, TVA operations continued and included clearing ash from the impacted roadway and railroad spur, construction of a weir system to control water flow into the plant's river water intake and help reduce the potential risk of fly ash migration into the Emory and Clinch Rivers during rain events, removal of general debris from fly ash-impacted areas, and replacement of damaged water lines.
- On January 2, 2009, sampling data from December 23, 2008 was posted online.
- As of January 4, 2009, the TDEC had collected approximately 40 residential well samples. Under an agreement with TDEC, TVA funded all analytical costs associated with sampling residential wells. TDEC also sampled the water intake and the finished water from the Kingston and Rockwood water treatment plants.
- On January 4 and January 6, 2009, EPA used portable handheld particulate air monitoring equipment to provide real-time air monitoring for particulates on and off site near the ash removal operations.
- On January 8, 2009, EPA began demobilizing all non-essential Emergency Response and Removal Branch (ERRB) personnel and START contractors from the site.
- On January 10, 2009, EPA ERRB issued a Memorandum of Concurrence (MOC) to TVA in regard to TVA's Sampling and Analysis Plan (SAP) outline. The MOC recommended TVA proceed with development of the SAP in close collaboration with TDEC.
- EPA submitted a Transfer of Lead Federal Agency (LFA) Authority Memorandum to TVA, effective January 11, 2009, transitioning the LFA role from EPA to TVA.
- On January 11, 2009, all remaining EPA ERRB personnel, contractors, and equipment were demobilized from the site.
- On January 12, 2009, TDEC issued a Commissioner's Order requiring action be taken as necessary to respond to the emergency.

### **2.3.2 River Response**

TVA built a temporary dike (Dike 2) at the mouth of the Swan Pond embayment and the Emory River to minimize the amount of ash migrating from the embayment into the Emory River (Appendix R).

On March 19, 2009, TVA began dredging operations. The Emory River Dredging Plan provided the methods and objectives for dredging operations in the Emory River to be accomplished in the following phases:

- Phase 1 dredging, completed in early 2010, cleared and restored flow capacity to the Emory River channel and minimized future flood risk and further migration of ash.

- Phase 2 dredging, completed in August 2010, included removing the remaining ash in the river channel to the estimated pre-spill river bottom. Most of Phase 2 was completed by May 29, 2010, allowing for the reopening of the Emory River main channel to the public. This phase also included removal of Weir 1 and dredging to assist in safe removal of debris associated with the collapse of the skimmer wall.

Hydraulic dredges were the primary equipment used in the dredging process. Mechanical clamshells were also used to remove debris and ash from the water. Both types of equipment were operated in a way that minimized water turbidity, or cloudiness. Continuous water quality monitoring and routine water sampling and analyses were conducted throughout the dredging process.

Both dredged ash and ash from the plant, when operational, are being dewatered and processed onsite to minimize the amount of ash entering the ash pond. The ash is dewatered in the ash recovery area and then moved to a temporary storage area onsite for further drying.

TVA has implemented best-management practices for the return water from the ash processing area. Return water flow from the dredged material is directed to the ash sluice channel that flows to the ash pond and then into the stilling pond. This is similar to normal ash sluicing operations.

### **2.3.3 Continuing Site Response**

On May 11, 2009, EPA and TVA signed an AOC that continued the collaborative work between EPA, TDEC, and TVA using EPA's expertise under CERCLA. On May 22, 2009, a plan was submitted to and approved by EPA to construct two additional rail spurs to facilitate loading of ash and transporting it offsite without interfering with normal plant operations. The two new spurs also facilitate the loading of ash from the Ash Storage Area. On June 13, 2009, TVA began moving ash from the area between Dike 2 and the river to the ash recovery area for ultimate disposal. Dredging continued as TVA and EPA explored options for offsite disposal of all ash. On June 29, 2009, an offsite disposal plan was submitted to EPA and on July 2, 2009, it was approved by EPA. On July 2, 2009, TVA began transporting ash by rail to the Arrowhead Landfill in Perry County, Alabama, following EPA's formal approval of the disposal site. Selection of the Arrowhead Landfill as a permanent disposal location followed a rigorous Request for Proposal evaluation. In January 2010, new rail construction and extensive modifications in the TVA rail yard and Ash Processing Area, significantly reduced train blockages of Swan Pond Road.

TVA built a series of ditches to control storm water runoff and flooding in the embayments caused by natural water springs. Clean water ditches were constructed to keep water away from ash and direct it to the Emory River. Dirty water ditches were constructed through ash to direct water to settling basins. Ash settles out of the dirty water in the settling basins. The water is then discharged into the clean water ditch and, subsequently, the Emory River.

On May 18, 2010 the EPA, with consultation from TDEC, approved TVA's Action Memorandum and selection of EE/CA Alternative 3b. The Action Memorandum describes the selected non-time critical removal action and can be found at [http://www.tva.gov/kingston/admin\\_record/pdf/NTC/NTC5.pdf](http://www.tva.gov/kingston/admin_record/pdf/NTC/NTC5.pdf).

Phase 2 dredging was completed August 2010, and included mechanical dredging of the East Embayment and the removal of ash in the river channel to the estimated pre-spill river bottom. The majority of Phase 2 dredging was complete by May 29, 2010, allowing for the reopening of the Emory River main channel to the public. EPA, in consultation with TDEC and the Tennessee Department of Health (TDH), announced that any coal ash remaining in the river presents minimal health risks to recreational users.

In addition to removing and disposing of ash from the river, TVA has been managing cenosphere cleanup. Cenospheres are a sand-like material created in coal-fired boilers when molten silica solidifies around bubbles of flue gas to form spheres. Cenospheres float and are typically collected by skimming the surface of the water. The collected cenospheres are then transported by truck to a holding area in the vicinity of the Kingston Fossil Plant ash ponds.

TVA continues the proactive dust suppression activities which began in January 2009. The first activity was the spreading of straw, mulch, and seeds of various grasses on the ash. Next, there was an application of Flexterra<sup>®</sup> — a dust suppression agent composed primarily of wood fibers. Water is sprayed on the onsite haul roads, portions of public roads used by construction equipment, and stone being unloaded from trucks. Wheel-wash stations were installed at the site, and trucking contractors were instructed to drive at acceptable speeds. TVA continues to monitor ash at the site and will add dust control measures as needed.

#### **2.3.4 Sampling and Monitoring**

TVA began testing air quality close to Kingston Fossil Plant shortly after the ash spill on December 28, 2008. Air testing will continue through the completion of the cleanup. Monitoring at the Kingston ash spill site continues to confirm that the national ambient air quality standards for inhalable particulate (PM10) and respirable particulate (PM2.5) are being met. TVA air monitoring results are available at <http://www.tva.gov/kingston/air/index.htm>.

EPA and TDEC began water quality testing within hours of the event. Both municipal drinking water and water sampled from private groundwater wells meet state standards for drinking water. Links to EPA and TDEC results can be found at <http://www.tva.gov/kingston/water/index.htm>. For more information regarding national drinking water standards, visit <http://www.epa.gov/safewater/contaminants/index.html#mcls>. Long-term groundwater monitoring is planned for non-time critical phase of the recovery and results will be added to the Kingston Recovery website at [www.tva.gov/kingston](http://www.tva.gov/kingston).

TVA has analyzed ash samples and made results available at <http://www.tva.gov/kingston/solids/index.htm>. Data shows the average concentrations of metals in the ash are below the limits for classification as a hazardous waste. The coal ash released at Kingston Fossil Plant is not regulated as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act Section 3001 (b)(3)(A)(i), 42 U.S.C. §6921(b)(3)(A)(i).

TVA requested that an interagency group consisting of the U.S. Department of Energy, EPA, TDEC, and the U.S. Army Corps of Engineers evaluate if legacy contaminants would be disturbed by dredging or sampling activities. The group collected core samples of sediments at locations in the Clinch and Emory Rivers. Those samples were analyzed for 23 metals, polychlorinated biphenyls (PCBs), and chlordane. In March 2009, the interagency group

concluded that, in general, there was no evidence that past contamination of sediments would have any impact on TVA's dredging of ash from the Emory River. However, additional sampling in February 2010, determined the area below Emory River Mile 1.8 could have been affected by backflow from the Clinch River. Future decisions concerning this comingled material will be evaluated under the non-time critical removal action in consideration with the interagency group.

During time-critical removal activities, TVA and TDEC have monitored 10 routine surface water sampling locations to confirm public drinking water supplies are not being impacted by the spill. Samples are taken routinely four times each week. Other than high rainfall events or high river flow events, very few observations above detection limits have been noted. Visit <http://www.tva.gov/kingston/water/index.htm> for more information. A new surface water monitoring plan will be issued for non-time critical removal activities. Once approved, the plan will be placed in the Administrative Record, Information Repositories, and on the recovery website.

TVA is currently conducting long-term surveys to study bioaccumulation of metals in various organisms, including fish, birds, turtles, amphibians, and bottom-dwelling organisms like mayfly larvae. Studies will evaluate if contaminants are impacting the local wildlife and food-chain long-term and evaluate any impact on overall animal health and reproduction. For more information on bioaccumulation studies visit <http://www.tva.gov/kingston/presentations>.

### 3.0 COMMUNITY BACKGROUND

The following subsections provide a general profile, history, and analysis of community concerns for the Kingston Ash Recovery Project site.

#### 3.1 COMMUNITY PROFILE

Roane County was formed by the state of Tennessee in 1801 from parts of Knox County and Native American lands. The county seat is Kingston. The Roane County Commission is the legislative body for the county. Roane County's executive officer is the County Executive.

The population of Roane County, according to the U.S. Census Bureau, was 53,430 in 2008. Among Tennessee's 95 counties, it ranks 26th in population. The median household income for Roane County is \$41,897, which ranks 23rd in the state. Per capita personal income is \$29,074, which ranks 20th in Tennessee.

According to the U.S. Census Bureau, the ethnicity of Roane County's population is as follows:

**Table 3-1 – Roane County Ethnic Breakdown**

Ethnicity	Percent of Population
White	95.2
African-American or Black American	2.8
American Indian and Alaska Native	0.2
Asian	0.5
Native Hawaiian and Other Pacific Islander	N/A
Hispanic or Latino origins	1.2
Persons reporting two or more races	0.9

**Note:** Data current as of 2008.

The Census Bureau reports that 51.4 percent of Roane County residents are female, 17.5 percent are 65 years or older, 20.4 percent are 18 years of age or younger, and 5.0 percent are 5 years of age or younger.

The incorporated cities of Harriman, Kingston, and Rockwood are each governed by a Mayor, Vice Mayor, and City Council. Midtown is an unincorporated municipality. The cities of Oak Ridge and Oliver Springs are partially located in Roane County and partially located in other counties. In 2008, Kingston's population was 5,607 and Harriman's population was 6,658. Harriman has more than 100 structures listed on the National Historic Register.

Watts Bar Reservoir is one of the major attractions in the Roane County area. The reservoir is the basin for waters flowing from the Clinch, Emory, and Tennessee Rivers and numerous smaller creeks. The reservoir is located west of Knoxville in the valley between the Great Smoky Mountains and the Cumberland Plateau. Many retirees relocate to Roane County to live year-round and others own second homes in this community.



## **3.2 COMMUNITY INVOLVEMENT DECEMBER 2008 - JULY 2010**

### **3.2.1 Outreach**

TVA's community involvement effort began within hours of the ash spill as TVA community outreach personnel assisted the evacuation response. The initial focus was to ensure the safety and housing of affected residents for the immediate future and meet their other needs as a result of the spill. TVA set up a hotline, purchased meal cards and bottled water, and reserved 30 hotel rooms for residents the first day of the spill. In days following, TVA moved 24 families to interim housing.

TVA established an Outreach Team of TVA employees and retirees within three days of the spill. Their purpose was to relay pertinent information to the community and convey the community's concerns back to TVA so they could be addressed. Team members also delivered bottled water to residents from December 22, 2008, through January 2009 and took air filters to concerned residents from January through March 2009.

On January 6, 2009, TVA opened the TVA Community Outreach Center at 509 North Kentucky Street in downtown Kingston. There, community members could file claims, ask questions, or share concerns, or report problems. TVA has assisted more than 1,650 families who have contacted Outreach personnel with questions or concerns, and TVA has recorded more than 500 individual claims. The Community Outreach Center is currently staffed by Outreach Team Members and open from 2-6 p.m. weekdays. TVA also introduced an information phone line community members could call for the latest information and a toll-free number for residents to file their claims with Crawford & Company, a third party insurance adjustment firm hired by TVA to handle claims (see Appendix N for contact information). The information phone line was discontinued as call volume dissipated and the TVA Outreach Center became the primary contact for community members.

Some early TVA Outreach functions included issuing access passes to those with homes on Swan Pond Road, Swan Pond Circle Road, and Lakeshore Drive as TVA Police monitored and patrolled the areas; removing marine vehicles from damaged docks in the impacted Emory River area and renting slips for recreational storage in unaffected nearby areas; installing new mailboxes for some residents south of the Kingston Fossil Plant so they would not have to cross the street to obtain their mail (a safety precaution due to an increase in truck traffic); and delivering Tennessee Department of Health information to marinas and campgrounds on reservoirs near the affected area.

The Outreach Team has delivered community handouts and set up electronic message boards to inform residents about temporary road closings, train crossings, and public meetings. The message boards are used to relay safety messages and other relevant information to residents.

TVA Realty Services worked with the Outreach team to coordinate the potential purchase of approximately 180 properties in the affected area. TVA's guidelines for property purchase were based on whether the property was impacted from the spill or the recovery efforts. TVA is maintaining and TVA Police are patrolling these properties. To help maintain purchased properties and decrease travel spending, TVA and contractor management and professional staff who are on temporary assignment to the ash spill response are residing in some of the homes.

TVA contracted with Oak Ridge Associated Universities, a consortium of over 100 universities, to perform independent health screenings for Roane County residents who believed their health had been affected by the ash spill (see Appendix N for contact information). Individual confidential health assessments were conducted by physicians from Vanderbilt University Medical Center. TVA also contracted with Ridgeview Resources for Living in Harriman to provide mental health services to residents (see Appendix N for contact information).

### **3.2.2 Public Meetings/Availability Sessions**

TVA conducted several types of meetings in an effort to keep the local community informed about recovery efforts. Many meetings with homeowners and business groups were conducted in the impacted area and these will continue as needed or requested. TVA held open house events, availability sessions, and public meetings to answer questions about environmental concerns and project progress. Public meetings will be scheduled to relay new information as the recovery project moves forward and as public interest warrants.

Roane County formed the Long Term Recovery Committee comprised of local elected officials and residents. TVA officials attend these meetings to present project updates and respond to questions and concerns from committee members and the community.

EPA helped the community form the Roane County Community Advisory Group (CAG), which is commissioned to assist community members learn about the Kingston Ash Recovery Project and participate in the decision-making process. Kingston Ash Recovery Project site officials attend CAG meetings when invited to share information about project progress for the purpose of relaying that information to the community.

### **3.2.3 Public Officials**

Since December 22, 2008, TVA officials have kept local, state, and federal officials informed of the spill's impacts on citizens, and provided updates on activities undertaken to recover the site and community. TVA regularly updates public officials on site progress. Many local, state, and federal officials have toured the site and have been briefed on site activities (Appendix Y). In addition, TVA officials have testified about the spill before the Tennessee General Assembly and the U.S. Congress (see Appendix O for links to transcripts).

TVA officials have attended meetings of the city councils of Kingston and Harriman and the Roane County Commission to answer questions about the spill and the response. Contact information for elected officials can be found in Appendices B, C, and D.

On September 14, 2009, TVA and the elected leaders of Roane County and its communities announced the establishment of the Roane County Economic Development Foundation. Through the foundation, Roane County and its communities will receive more than \$40 million in economic development funds for locally identified projects as part of TVA's response to the Kingston ash spill. The foundation's board consists of four TVA representatives and four elected leaders. Projects approved for funding by the board included Roane County Schools, sewer improvements in Kingston, paving of an industrial park road in Rockwood, support for the Princess Foundation for Arts Education and Conference Center in Harriman, and other locally identified projects.

### **3.2.4 Communications**

Communicating recovery project progress and information to the people of Roane County is critical to TVA's community involvement and recovery efforts. TVA has worked with local and national media in an effort to provide accurate information to the public. TVA communications staff members were on scene within hours of the spill to begin responding to media inquiries and share information with the public as it became available. The Unified Command response staff set up a Joint Information Center (JIC) in Kingston to provide a location for press briefings and other meetings between site leadership and the media. TVA, EPA, Roane County, and TDEC all coordinated media activities through the JIC. Communication efforts included 13 news releases, numerous media tours and five press briefings during the first 30 days and daily fact sheets for the first two weeks. Updates were placed in the local newspaper, The Roane County News. Key TVA managers have given interviews to numerous media outlets. TVA continues to prepare fact sheets and provide press briefings for major events and notable project benchmarks, such as the beginning of dredging and release of the Root Cause Analysis of the spill.

TVA has mailed letters directly to local residents about various topics, including flood survey information, status reports on property claims, TVA President and Chief Executive Officer Tom Kilgore's testimony to congressional committees, and the reopening of the Emory River on May 29, 2010. In June and December 2009, TVA mailed to all Roane County residents the "Report to Our Roane County Neighbors," providing a comprehensive update on the recovery project.

The home page of TVA's website ([www.tva.gov](http://www.tva.gov)) was devoted to the spill for weeks after the initial event and provided frequent updates, frequently asked questions, and links to related websites posted by EPA, TDEC, and others. A portion of TVA's website continues to be dedicated to the Kingston Ash Recovery Project at <http://www.tva.com/kingston>. The website is updated regularly with environmental information, sampling results, and the latest news regarding the recovery project. Website visitors also can sign up to receive regular email updates. All information about the Kingston Ash Recovery Project includes the web address so readers will know where to find more information.

### **3.3 KEY COMMUNITY CONCERNS**

TVA conducted more than 50 personal interviews from May through June 2009. TVA communications and outreach personnel selected and invited nearby residents and activists, civic leaders, and elected officials who expressed interest in the issue to participate. Most interviews were conducted one-on-one or in family groups, and most were conducted in person. Some elected officials were interviewed by phone.

The interview process, including questions asked in the interviews, was based on the EPA Superfund Community Involvement Toolkit. The interviews were dynamic and open-ended, and though interviewers were provided with suggested questions (found in Appendix J) to facilitate the process, the focus was on listening to the concerns that interviewees freely offered and not just soliciting answers to pre-determined questions. Interviewees were assured of anonymity in their participation and responses.

The interviews allowed TVA to gather information on residents' concerns with the recovery project and determine the types of information residents want to receive and how TVA can best provide that information. Following the interviews, TVA analyzed the information

provided by the interviewees, as well as information gathered during other interactions with the public since December 22, 2008, and designed this CIP for the Kingston Ash Recovery Project.

The following sections list the project-related concerns and issues expressed in these community interviews.

### **3.3.1 Health**

A majority of interviewees expressed concern about health effects, mainly the possibility of future medical conditions and other long-term effects on themselves and their children. Some interviewees expressed concern that children might be more susceptible to health effects than adults. For example, one interviewee asked, "Is there any hazard to our health? Is it a good place for our children to grow up?" Another told us, "People are worried about cancer and lung disease." Typically this concern was voiced in a general fashion by interviewees, but fears of cancer and lung disease as a result of the ash spill were mentioned by a few. Some whose property had been purchased by TVA expressed concern that their settlements included a general waiver that would extend to any future medical claims.

Some interviewees stated they had no worries about health effects. One local resident said, "I've been raised around coal and ash. It has given us work. I've never had no health problems." Some interviewees mentioned pre-existing medical conditions and the negative impact the ash spill has had on those. Some also made comments about health issues that seemed to arise after the ash spill. One parent stated, "We are worried for our child's sake. She has asthma; didn't have that before." Asthma, respiratory issues, the taste of metal, bloody noses, and sore throats were symptoms specifically mentioned by some interviewees.

Some of those interviewed expressed concern about potential health effects on pets and other animals in the area. A specific concern is pets playing in the ash then tracking it into residents' homes.

Environmental issues such as drinking water contamination, air quality, arsenic levels, and river water contamination were stated as health concerns. When asked about issues or concerns they might have, one resident responded, "Dust from the ash, health, arsenic, mercury, and recreational use of the river. Can we be in the water? Can we use the [river] channel?" Often interviewees wanted to know if the river water is safe for swimming and recreational use.

### **3.3.2 Property/Real Estate**

Interviewees expressed concerns with TVA's property purchasing program; specific issues mentioned were with inconsistencies in purchasing decisions, purchase offer amounts, problems with the appraisal process, the purchase property area determined by TVA, and the amount of time it took to buy some individuals' properties. One activist said, "It's perceived by the public that 'if you are lucky TVA will choose to buy your property.'" Another resident said, "TVA does appraisals, two concurrently, but only lets you see the one they say is the highest. TVA ordered a third appraisal on our property due to a discrepancy." Some public officials and residents have asked that a property policy be made public. "Why was one house bought and not the one next door?" asked one resident/activist. "Was it because they worked for TVA? People want to know the reasoning."

Interviewees also expressed concerns about the temporary housing policy. Interim housing residents were concerned about returning home amid fears it may not yet be safe.

A few interviewees expressed concern about how TVA would manage and maintain the properties they have purchased. A typical question was, “Will TVA maintain the purchased properties?” Another interviewee stated that TVA has performed well in this regard through “patrolling the neighborhood. Keeping yards and homes purchased kept up.”

Interviewees expressed concerns, both personal and civic, regarding diminished values or lowered property values due to the ash spill. One local resident said, “I do not have any personal physical damage to my property. I do have diminished value, however. I do not want to sell. I received a letter from TVA stating that my diminished value claim was denied.” Another interviewee said, “I think there is a general concern in my neighborhood about property values...” This is tied to concerns regarding potential economic effects on the community and the fear that tourists and prospective buyers might be less willing to move to the area. “Tourism is the heartbeat of Roane County and we’re seeing some effects,” said one interviewee regarding Roane County’s ability to draw visitors. Another reiterated that concern, “...this is a beautiful place. Will this affect the integrity of our town? Will it affect tourism and people coming in to visit our community?” Interviewees were also concerned that property tax revenue would fall short as a result of lower property values.

Interviewees expressed interest in how TVA will re-sell properties it has purchased. Residents and property owners asked that TVA not auction all purchased properties at once when it is ready to sell them. Some residents and real estate agents expressed a desire that the properties’ reintroduction to the market be spread out to avoid over-saturation.

### **3.3.3 Environmental**

The community has expressed concerns about short- and long- term air quality and water quality. Some interviewees stated that thoughts of ash dust and particulates becoming airborne have community members wondering if it is safe to spend time outside without incurring respiratory damage. Fears of river water contamination led to questions about the safety of swimming and boating in the river. Several interviewees asked, “Is the water safe for recreation use and swimming?” Some residents expressed worries about drinking contaminated water and fear that heavy metals from ash could leach into well water or migrate downstream into water treatment plants. “People want to know their drinking water is safe,” said one health professional. The community is interested in TVA’s plans to control potential effects of flooding and ash migration if another heavy rain event occurs.

While few community members mentioned environmental concerns regarding wildlife and natural resources during the interview process, these have since been identified as key community issues (the EE/CA Report and decision documents that follow will detail the actions TVA and EPA will be taking to protect and restore fish and other natural resources).

### **3.3.4 Communications**

There were differences of opinion among interviewees regarding TVA’s communication efforts. Some interviewees stated that TVA was lying, providing misinformation, providing inconsistent information, or not communicating enough. Many interviewees felt that they were not getting enough information as frequently as they would like. Concerns often were related to communication efforts early in the recovery project or the property purchase policy.

One local couple feels TVA's information was "different day to day. Not consistent. People seem to be satisfied TVA is doing their job as far as cleanup. There is fault with the communication system." Another said, "TVA needs to be more straightforward, truthful, and have more accurate information." Some interviewees suggested sending routine informational emails or letters and providing one point of contact for the community.

Other interviewees expressed satisfaction with TVA communication activities. "The initial attempt to get information out was great. You really, really tried hard to be up front and you took a lot of heat for it," said one resident. Some interviewees said that all the information of importance has been made available, that TVA should continue to execute its current communication activities, and that TVA has been very responsive. Others said, "I think I am getting all the information I want to know," and "The information being published is adequate." Some interviewees said they were particularly satisfied with TVA's disclosure of environmental sampling results. Others said they felt positively about the open houses held by TVA. "Continue to publish results. I feel it is wise to continue to do that," said one local health professional.

### **3.3.5 Removal and Disposal of Ash in the Emory River**

Interviewees expressed concerns regarding the disposal of ash located in the main Emory River channel. A number of those interviewed wanted to know where the ash would be transported, by what means, how long it will take to complete the cleanup, and how much it will cost.

### **3.3.6 Ash Disposal and Land Use**

Several interviewees stated an interest in future plans for the area west of the Emory River and Dike 2, including the coves near Lakeshore Drive and Berkshire Lane and requested to be made aware as information becomes available. "I want to be informed and would like to know the future plans for the coves and other parts of the recovery," stated one interviewee. Some interviewees suggested TVA return the area to its pre-spill state, cap the ash, and build a community park or a softball complex.

### **3.3.7 Kingston Fossil Plant's Future Ash Disposal**

One resident posed the question, "What is going to happen with future storage of ash from burning coal?" Some interviewees questioned how TVA will handle ash produced at the Kingston Fossil Plant in the future. Some also expressed concern about how it will be stored, where will it be stored, and how will it be transported if it is not stored onsite.

### **3.3.8 Economic Effects/Tourism**

There is significant concern regarding the ash spill's effects on the local economy. Much of Roane County's economy is based on tourism and drawing potential new residents to the area to enjoy its unique landscape and the recreational use of its waterways. "I was one of the first to say this would kill our tourism development. We need to make sure we are not making this sound worse than it really is," stated one business leader. Some interviewees expressed fears that negative national publicity about the ash spill could cause visitors and new home seekers to assume the worst and not visit the area, resulting in compounded effects on the rest of the county's economy.

Others noted a positive effect on the economy because of the influx of workers for the recovery project and the involvement of many local contractors. One local business owner stated, "I'm looking for ways to do as much business as possible with TVA, contractors, etc. With the proximity of my business and my ability to handle the work, I have benefited, and I would like to do more." Several interviewees emphasized the importance of using local contractors and workers in the remedial efforts.

### **3.3.9 Impact of Response**

The recovery project has increased truck traffic and rail traffic in the Kingston Fossil Plant area. Interviewees expressed concerns about road safety and potential increases in gravel dust from the work site. "People wonder if they are going to be run over by dump trucks," stated one resident. Residents and public officials expressed concern that the new rail spur and ash shipments by train will mean an increase in traffic delays and present potential safety issues at railroad crossings, especially if residents attempt to beat trains as they approach. Residents have also expressed a concern that ash might leave the site on workers' clothing and vehicles whose wheels and undercarriage have not been washed properly.

### **3.3.10 Cenospheres**

The ash spill released a type of fly ash called cenospheres into the Emory, Clinch, and Tennessee rivers. Cenospheres are very small hollow glass spheres that are created in coal-fired boilers when molten silica solidifies around bubbles of flue gas. The gas bubbles cause cenospheres to be so lightweight they float and appear as a brown froth on the water that collects in bays and around obstructions. While cenosphere activity is significantly less than during initial months of the recovery project, concern remains. Heavy rains in early May 2009 reminded the community and TVA that cenosphere recovery is an ongoing battle. Interviewees said they are concerned about their safety while using waterways and about the visual effect cenospheres have on the area. One civic leader stated, "Do we let our grandchildren swim in the water now? Is it safe? When the wind is blowing from the north, we see white material (cenospheres) on the water."

### **3.3.11 Cleanup Cost**

Interviewees expressed concern about the ultimate cost of the recovery project and whether those costs will be passed along to TVA end-use consumers. "Many people feel, 'Why should we cover the cost of the cleanup?'" said one civic leader.

## **3.4 SUMMARY OF COMMUNICATION NEEDS**

TVA asked interviewees about the most effective way to disseminate information. Interviewees most often preferred to be communicated with through email or postal mail from TVA. Interviewees also expressed interest in public meetings, one-on-one conversation with a TVA representative, and the TVA website. Among interviewees, the most popular media outlets for receiving information are the Knoxville News-Sentinel, the Roane County News, and the local news programs of the major broadcast networks, especially WBIR, the Knoxville NBC affiliate. Interviewees want the opportunity to communicate with TVA representatives and offer comments and opinions on the project and its impact on the community. Many felt the frequency and detail of communication by TVA was inadequate and could be improved. Several interviewees recommended weekly, bi-weekly, or monthly

updates from TVA. Interviewees said they are most interested in being kept abreast of information on general project progress, the long-term plans of the cove areas where ash is located west of Dike 2, the root cause of the dredge cell failure, the time frame for completion of the response project, and environmental, health, and recreational information.



## 4.0 TVA'S COMMUNITY INVOLVEMENT PROGRAM

The goal of TVA's community involvement program is to promote open communication among citizens, TVA, EPA and other agencies, and provide opportunities to the community for meaningful and active involvement in the cleanup process. TVA will implement the community involvement activities below. This plan is based on the results of the community interviews described previously in the CIP.

The following is a roadmap to the community involvement activities planned for the site. Some of these activities are tied to milestones in the cleanup process; some will happen throughout the process. As TVA works more closely with the community, more activities may be added as needed.

### 4.1 COMMUNICATIONS TOOLS

Interviews with the community showed that Roane County residents receive their information in a wide variety of ways. No single communication method is guaranteed to reach everyone who is interested in the recovery effort, so TVA must use a variety of methods – from the Internet to conventional media to face-to-face meetings – to interact with the public. The following tools have been and will be used to interact with the community and expand understanding about the site. Some tools are a required part of the CERCLA information and decision-making process; others have been chosen by TVA to improve communications regarding the Kingston Ash Recovery Project.

#### 4.1.1 Required Activities

##### Administrative Record and Information Repository

- **Objective:** Give the public access to all reports, documents, and resources that will be used by the site team in making decisions and recommendations regarding the site cleanup.
- **Description:** A set of documents which form the basis for selection of a response action under Section 113(j) of CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986. TVA has established and maintains Administrative Records at the TVA Community Outreach and Learning Center and at the Kingston Public Library. The Administrative Record is available on disk at the Harriman Public Library and online at [http://www.tva.com/kingston/admin\\_record/index.htm](http://www.tva.com/kingston/admin_record/index.htm). See Appendix I for addresses and hours.
- **Timing:** The Administrative Record and Information Repository were established in May 2009, and will remain open until the cleanup is completed and the final Decision Documents are signed. TVA will add new documents as they become available.

##### Public Comment Periods

- **Objective:** Give community members the chance to review and comment on TVA documents, especially work plans and the Environmental Evaluation/Cost Analysis (EE/CA). This provides the community with meaningful involvement in the process and gives TVA valuable information for use in making decisions.
- **Method:** Announcements of public comment periods will appear in local newspapers and TVA fact sheets and will be emailed to those who have asked to be notified electronically of such announcements. The announcements will include details on

duration, how to make comments, where to submit comments, etc. TVA will solicit comments on the following draft documents: this CIP, the Action Memorandum for the time-critical removal, work plans for time-critical removal, any amendments to the time-critical removal Action Memorandum or work plans, the EE/CA, the Action Memorandum for the non-time critical removal, and other documents that may be added.

- **Timing:** Comment periods will be announced as documents and plans are released. Comment periods will last a minimum of 30 days.

### Responsiveness Summaries

- **Objective:** To summarize comments received during the public comment periods, to document how TVA has considered those comments during the decision-making process, and provide responses to major comments.
- **Method:** TVA will prepare a responsiveness summary for each public comment period. The responsiveness summary will include an overview of the document(s) being reviewed and a summary of comments received and TVA's responses.
- **Timing:** For the time-critical removal actions, the responsiveness summary for all public comment periods will be made available before the completion of the removal actions. For non-time critical removal actions, the responsiveness summaries will be made available within 30 days of the close of the public comment periods. For any remedial actions, responsiveness summaries will be made available within 30 days of the close of the public comment periods.

### Technical Assistance Plan (TAP) Funding and Support

- **Objective:** To provide funding for a community group to hire technical advisors who can help them interpret technical information about the site.
- **Method:** Within 30 days of receipt of a request from EPA, TVA shall provide EPA with a TAP for providing and administering \$50,000 of TVA funds to be used by a qualified community group to hire independent technical advisors to provide technical assistance during the non-time critical removal stage and any subsequent stage. Additional information may be obtained from Stephanie Yvette Brown, EPA Region 4, Community Involvement Coordinator, by email at brown.stephaniey@epa.gov, or from TVA's TAP Coordinator, Katie Kline, by email at kpbell@tva.gov.
- **Timing:** The CAG was awarded the TAP on November 23, 2009 by TVA upon the recommendation of the EPA.

### Public Meetings

- **Objective:** To continue to update the community on site developments and to hear and address community questions, concerns, ideas, and comments.
- **Method:** In addition to open houses held in January and March 2009, TVA has held quarterly public meetings since June 2009 to brief the public on activities at the site and allow members of the community to interact with Kingston Ash Recovery Project management and personnel regarding the ash spill. TVA will continue to host quarterly public meetings where TVA, EPA, and TDEC can present progress to date and plans for future work while public interest warrants them. The meetings will include opportunities for the public to address recovery project personnel and ask questions, preferably in a one-on-one or small group setting. Meetings held during public comment periods will include the opportunity to present formal comments to

TVA. TVA will place display advertisements in the front section of local newspapers (not in classified ads), display information on message boards near the Kingston Ash Recovery Project Site, post information on the TVA Recovery website, and send out information by email to announce upcoming public meetings.

- **Timing:** TVA will hold public meetings quarterly, at project milestones, and in response to public requests.

#### Public Notices

- **Objective:** Officially announce to the public the availability of site documents and the start of public comment periods.
- **Method:** TVA will place display advertisements in the front section of local newspapers (not in the classifieds) announcing the availability of work plans, decision documents and other important site documents, and the beginning of public comment periods. TVA will also email those who have asked to be notified electronically of such announcements. The ads generally run in the local newspaper and a weekly advertising paper published by the same company for three consecutive days.
- **Timing:** As important documents become available and at the beginning of public comment periods.

#### **4.1.2 Additional Community Involvement Activities**

##### TVA Community Outreach Center

- **Objective:** Continue to serve as a center for information, assistance and education about TVA and the Kingston Ash Recovery Project.
- **Method:** The TVA Community Outreach Center, located at 509 N. Kentucky Street, Kingston, Tennessee, opened two weeks after the spill occurred. It has been a center for information and help for people affected by the spill, particularly those negotiating the sale of their property to TVA, making health or property claims, requesting help with cenosphere and debris removal, or wishing to consult the Administrative Record. The TVA Community Outreach Center has transitioned to the TVA Outreach and Learning Center, which continues to keep people informed about site progress along with other TVA initiatives. The TVA Outreach and Learning Center will continue to provide a location for the Administrative Record, as well as a reading area for those documents; a place to ask questions and relay messages about the site; a place to get general information about TVA and the environment; displays about the Kingston Ash Recovery Project; and other environmental, energy, and economic development issues.
- **Timing:** The TVA Community Outreach Center opened on January 6, 2009. The TVA Outreach and Learning Center will remain open for an indefinite period of time. It is currently open from 2-6 p.m. Monday-Friday. Hours may be adjusted as needed. The phone number is (865) 632-1700.

##### TVA Outreach

- **Objective:** Help area residents deal with real estate matters relating to the spill, respond to the needs of area residents, and bring concerns and requests back to TVA.
- **Method:** TVA formed an outreach team comprised of current employees and retirees who convey information to the public; listen to concerns and work to provide answers;

handle issues dealing with real estate transfers relating to the Kingston Fossil Plant ash spill; and handle other matters, such as debris removal, traffic impacts, other property and health claims, etc.

- **Timing:** The team's size has decreased as real estate transfers have been completed, but it will continue to assist in communicating with the public and staffing the TVA Outreach and Learning Center.

#### Community Advisory Group (CAG)

- **Objective:** As recipient of the TAP from TVA upon EPA's recommendation, the CAG is commissioned to help community members learn about the Kingston Ash Recovery Project and fully participate in the decision-making process.
- **Method:** The CAG is made up of community members and is designed to serve as a focal point for the exchange of information among the local community and TVA, TDEC, EPA, and other pertinent agencies involved in the remediation. TVA, as requested, provided support to the group as it developed bylaws, invited members, developed meeting schedules, and determined the activities of the group. TVA will continue to support and provide information to the CAG as requested. TVA is currently meeting with the CAG monthly and is providing weekly email updates about site activities.
- **Timing:** The Roane County Community Advisory Group was formed in August 2009 and awarded the TAP on November 23, 2009, by TVA upon the request of EPA. EPA and TVA will make information available to members of this CAG throughout the cleanup process.

#### Fact Sheets and Newsletters

- **Objective:** Continue to provide the public with current, accurate, easy-to-understand information about the Kingston Ash Recovery Project.
- **Method:** Fact sheets or newsletters will be mailed (or emailed when desired) to all Roane County residents and other interested parties and made available at the TVA Outreach and Learning Center, the Information Repository at the Kingston Public Library, and other locations.
- **Timing:** TVA will prepare and distribute newsletters throughout the cleanup process.

#### Emails

- **Objective:** Make site information available to residents and other interested parties in a timely manner.
- **Method:** TVA will send email updates to interested parties. TVA will gather email addresses of local residents and interested parties from the TVA website, sign-in sheets from public meetings, etc. TVA will email weekly updates, newsletters, fact sheets, public notices, and alerts regarding local traffic impacts and other time-sensitive matters to those who have asked to be notified electronically of such announcements.
- **Timing:** Weekly email updates; as newsletters, fact sheets, and public notices are produced; and as response work causes traffic or other impacts.

## Kingston Speakers' Bureau and Public Speaking Engagements

- **Objective:** Continue to inform community members about the Kingston Ash Recovery Project progress.
- **Method:** TVA will identify opportunities for TVA staff, contractor subject matter experts and staff from other regulatory agencies to speak with area groups in formal and informal settings. Groups will include local and county government bodies, schools, and civic/community organizations. Examples of forums for public speaking engagements include: Rotary Club (Roane and Knox counties), Kiwanis Club (Roane and Knox counties), Chambers of Commerce (Knox County, City of Oak Ridge), schools, Roane Alliance, Oak Ridge Economic Partnership, and Roane County Economic Development Authority. Speaking opportunities are identified by TVA Communications or Valley Relations staff, personal requests and suggestions from community members.
- **Timing:** Throughout the response process and beyond.

## Availability Sessions

- **Objective:** Provide the public with monthly opportunities to learn about the site and ask questions of TVA, EPA, TDEC and other site personnel in a comfortable and informal setting.
- **Method:** From November 2009 through June 2010, TVA held monthly availability sessions (other than months of public meetings) at the TVA Outreach Center. TVA will host informal sessions when public interest warrants, where recovery project personnel are available to speak to the public on a one-on-one basis. TVA may use visual aids such as maps, posters or charts, examples of site equipment, handouts, etc. to share information about the site. TVA will place display advertisements in the front section of local newspapers (not in classified ads) and display information on message boards near the Kingston Ash Recovery Project Site to announce upcoming Availability Sessions.
- **Timing:** Availability Sessions will be conducted as public interest warrants at a location best suited for the purpose.

## Community Handouts

- **Objective:** Continue to provide neighbors of the Kingston Fossil Plant with safety messages and other information regarding traffic impacts, road closures, new railways, Kingston Fossil Plant activity, and other topics.
- **Method:** TVA will continue to distribute information (including contact information) door-to-door to local Kingston Fossil Plant community members that are likely to be affected.
- **Timing:** As needed, whenever response work causes traffic or other impacts, at least 24 hours in advance, to the extent possible.

## Road Signs

- **Objective:** Continue to alert residents, site workers, and visitors to new traffic impacts and other news, such as public meetings.
- **Method:** TVA will continue to use temporary road signs and electronic message boards to tell the public about changes to the site including traffic impacts. The

electronic message boards also can be used to announce events such as public meetings.

- **Timing:** When response work causes traffic or other impacts and when there are special events to announce.

#### Media Relations

- **Objective:** Continue to educate and inform the public about the site and project activities.
- **Method:** TVA will continue to work actively with local, regional, and national news media to ensure that news outlets have access to accurate information about the Kingston Ash Recovery Project and the cleanup process. In addition to responding to requests for interviews and information, TVA will issue news releases, publish site update columns in the local newspaper (Roane County News), hold news conferences, and give media tours.
- **Timing:** TVA publishes a monthly news column (began as bi-weekly), responds to media requests as received, and plans press releases, conferences, and tours as site activities warrant.

#### Website and New Media

- **Objective:** Continue to provide timely and accurate information about the site to all interested parties, from local residents to regional activists to national regulators.
- **Method:** TVA's Kingston Ash Recovery Project website is an example of TVA's commitment to transparency on this project. The website is accessible from TVA's home page or directly at [www.tva.gov/kingston](http://www.tva.gov/kingston). It contains background information and news about the ash spill and cleanup, as well as all water, air, solid, and biological testing results. It also provides a way for residents to send their questions and concerns to TVA.
- **Timing:** The webpage was established in the early days of the cleanup and was recently redesigned to be more user-friendly. It will be maintained at least until the cleanup is completed and the last Decision Document is signed.

Table 4-1 summarizes the timing of the use of each of the communications tools above.

**Table 4-1 – Timing or Use of Communications Tools**

Tool	Time Frame
Establish Administrative Record and Information Repository	Completed (updated as new documents are made available)
Public Comment Periods	As needed and required
Responsiveness Summaries	Following public comment periods
Technical Assistance Plan (TAP) Funding and Support	30 days after request from EPA; Awarded to the Roane County CAG on November 23, 2009
Public Meetings	Quarterly or as needed
Public Notices	As documents become available and as public comment periods are scheduled
TVA Community Outreach and Learning Center	Ongoing
TVA Outreach Team	Ongoing
Attend the Roane County CAG Meetings	Ongoing and as requested
Fact Sheets & Newsletters	As needed
Speaker's bureau for community speaking engagements	Ongoing and as needed or requested
Availability Sessions	Regularly and as needed
Community Handouts for local residents	Ongoing and as needed
Road signs in the affected area	Ongoing and as needed
Media Relations	Ongoing
Website and new media	Ongoing
Email Updates	Ongoing and as needed

## 4.2 SCHEDULE

On May 11, 2009, EPA and TVA signed an Administrative Order and Agreement on Consent (AOC) that divides cleanup work at the Kingston Ash Recovery Project site into three parts: 1) time-critical removal actions, 2) non-time critical removal actions, and 3) remedial actions. The time-critical removal actions focus on the safe containment and removal of most of the coal ash in the Emory River and the area east of Dike 2 (Appendix U). The non-time critical removal actions will remove remaining ash from the Emory River, as practical, remove coal ash from the embayment and tributaries west of Dike 2, as practical, and remove coal ash material from surface soils, and dispose of all coal ash recovered. Remedial actions will include a comprehensive site assessment to determine if any further actions are needed to remove any residual contamination or to ensure that ash has been properly disposed of. See below for a chart of the activities in each part of the site cleanup, as described in the AOC.

**Time-critical removal actions:**

1. Prevent the coal ash release from negatively impacting public health and the environment.
2. Contain and remove coal ash from the Emory River and the area east of Dike 2 as appropriate to restore flow and minimize further downstream migration of the ash material.
3. Ensure that coal ash recovered during these efforts is properly managed pending ultimate disposal decisions or properly disposed to the extent required by limited storage capacity.

**Non-time critical removal actions:**

1. Remove any remaining coal ash from the Emory River and the area east of Dike 2, as well as the coal ash from embayment and tributaries west of Dike 2, to the maximum extent practicable, as determined by EPA in consultation with TDEC and TVA, pending further site assessment.
2. Remove the coal ash from impacted surface soils to the maximum extent practicable, as determined by EPA in consultation with TDEC and TVA, pending further site assessment.
3. Restore area waters impacted by the coal ash release in accordance with the required jurisdictional assessment.
4. Ensure proper disposal of all coal ash material recovered during these efforts.

**Remedial actions:**

1. Perform a comprehensive site assessment to determine what actions may be necessary to address any residual contamination remaining after previous cleanup activities.
2. Implement any such actions.
3. Ensure the proper disposal of all ash material recovered during these efforts.

Each of these three parts has different requirements for community involvement under CERCLA regulations and the AOC signed by EPA and TVA.

**4.2.1 Time-Critical Removal Actions**

A time-critical removal action is defined as a short-term cleanup in which, based on an evaluation of the site, it is determined that less than six months is available before site activities must be initiated. During time-critical actions, an action memorandum is produced which authorizes and outlines the cleanup.

TVA established an Administrative Record and an Information Repository for the Kingston Ash Recovery Project. Documents describing work to be done at the site, starting with the action memorandum, were placed in the Administrative Record and Information Repository. Each time EPA approved a major work plan, or there was an amendment to the action memorandum or a work plan, TVA held a public comment period of 30 days and placed display advertisements in the front section of the local newspaper announcing this public comment period. The ads generally ran in the local newspaper and a weekly advertising paper published by the same company for three consecutive days.



Work began before completion of the public comment period. TVA prepared a written summary of responses to all significant comments received during those public comment periods and submitted them to EPA for review and comment. TVA's final responsiveness summaries were included in the Administrative Record and placed in the Information Repositories.

#### **4.2.2 Non-Time Critical Removal Actions**

Non-time critical removal actions are performed at CERCLA sites when it is determined that, based on a site evaluation, a removal action is appropriate and a planning period of at least six months is available. Non-time critical removal actions can address risks and move sites quickly through the CERCLA process.

#### **4.2.3 Engineering Evaluation/Cost Analysis (EE/CA) Report**

The EE/CA Report was prepared in accordance with EPA's *Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA*. Upon EPA's approval, TVA added it to the Administrative Record, placed it in the Information Repositories, and published notice of the availability of the EE/CA, along with a description, in local newspapers.

The EE/CA Report describes the objectives of the non-time critical removal action in the Swan Pond Embayment and dredge cell areas and compares three alternatives for restoring the environment impacted by the spilled fly ash. Furthermore, the EE/CA Report:

- Characterizes the site
- Identifies the goals of the removal action
- Identifies removal actions which might meet those goals
- Analyzes them according to effectiveness, implementability, and cost
- Compares them

TVA's communication efforts for the EE/CA Report and public comment period included:

- **Public Notices:** TVA placed public notices in the Roane County News and The Shopper announcing the EE/CA Report's release and inclusion in the Administrative Record (Appendix I), the EE/CA Report Public Comment Period, the January 26, 2010, Joint Public Meeting held to specifically discuss the EE/CA Report, and the subsequent February, March, and April 2010 Availability Sessions. TVA also placed a column in the March 19, 2010, edition of Roane County News encouraging public comment.
- **Public Comment Period:** The EE/CA Report public comment period began January 19, 2010. Initially scheduled for 30 days, the public comment period was extended to 75 days based upon requests from several public interest groups and expired on April 5, 2010. On May 18, 2010 -- EPA and TDEC approved the Action Memorandum submitted by TVA. The Action Memorandum incorporates EE/CA Report public comments as appropriate and describes the selected removal actions. TVA responded to all official comments on the EE/CA Report in its Responsiveness Summary, which has been added to the Administrative Record and placed in the Information Repositories.

- **Fact Sheet:** TVA prepared an EE/CA Report Request for Public Comment and Fact Sheet that provides a brief overview of the EE/CA Report. It was distributed by mail, email, the Project website, and local businesses and can be viewed in Appendix X or at [http://www.tva.gov/kingston/eeca/eeca\\_factsheet2.pdf](http://www.tva.gov/kingston/eeca/eeca_factsheet2.pdf)
- **Public Meeting:** TVA held a Joint Public Meeting on January 26, 2010, at Roane County High School specifically to discuss the EE/CA Report.
- **Availability Sessions:** TVA held Joint Availability Sessions on February 8, March 8, and April 13, 2010, to provide opportunities for the public to discuss the general cleanup and the EE/CA Report.
- **CAG Meetings:** TVA and EPA attended CAG meetings upon invitation to discuss the Kingston Ash Recovery Project and the EE/CA Report.
- **LTRC Meetings:** TVA and EPA attended LTRC meetings upon invitation to discuss the Kingston Ash Recovery Project and the EE/CA Report.
- **Website:** The EE/CA Report and EE/CA Request for Public Comment/Fact Sheet were posted on the Kingston Ash Recovery Project website for public review.
- **Public Speaking Engagements:** TVA and EPA management gave EE/CA Report presentations to local civic and educational groups. See Appendix Y for a detailed list of Kingston Ash Recovery Project public speaking engagements.

#### 4.2.4 Action Memorandum

On May 18, 2010 the EPA, with consultation from TDEC, approved TVA's Action Memorandum and selection of EE/CA Alternative 3b. The Action Memorandum describes the selected removal action and responds to public comments on the EE/CA Report. The Action Memorandum has been added to the Administrative Record and placed in the Information Repositories. A 30-day public comment period began May 19, 2010 and TVA will prepare a written response to all official comments.

Within 60 days of EPA's approval of the Action Memorandum, TVA will submit a Non-Time Critical Removal Work Plan for the selected removal actions to EPA. The Non-Time Critical Removal Work Plan, when approved, will be added to the Administrative Record, placed in the Information Repositories, and be subject to a 30-day public comment period. This public comment period will not delay the start of selected non-time critical removal actions. TVA will prepare a written response to significant comments received during the public comment period, and that response will be included in the Administrative Record and placed in the Information Repositories.

TVA's communication efforts for the Action Memorandum, work plan, and public comment period includes but will not be limited to:

- **Public Notices:** TVA published public notices in the Roane County News and The Shopper announcing the release of the Action Memorandum and its inclusion in the Administrative Record; the Action Memorandum Public Comment Period beginning May 19, 2010; and the May 20, 2010 Joint Public Meeting and June, 8, 2010, Availability Session to discuss the Action Memorandum.

- **Public Comment Period:** The 30-day Action Memorandum public comment period began May 19, 2010 and ended June 17, 2010. In accordance with the EPA's Administrative Order, the public comment period did not delay the initiation of the selected non-time critical actions. TVA's response to all official comments on the Action Memorandum will be included in the Administrative Record and placed in the Information Repositories.
  - **Fact Sheet:** EPA prepared an Action Memorandum Fact Sheet that provides a brief overview of the Action Memorandum. It can be viewed in Appendix Z. It was distributed by postal mail, email, and the EPA project website ([www.epakingstontva.com](http://www.epakingstontva.com)).
  - **Public Meeting:** TVA held a Joint Public Meeting on Thursday May 20, 2010 at Roane County High School to discuss the Action Memorandum.
  - **Availability Sessions:** TVA held a Joint Availability Session on June 8, 2010, to provide the public with opportunities to discuss general cleanup, the Action Memorandum, and the Non-Time Critical Work Plan.
  - **CAG Meetings:** TVA and EPA will attend CAG meetings upon invitation to discuss the Kingston Ash Recovery Project and the Action Memorandum.
  - **LTRC Meetings:** TVA and EPA will attend LTRC meetings upon invitation to discuss the Kingston Ash Recovery Project and the Action Memorandum.
- Website:** The Action Memorandum and Public Comment Period public notice were posted on the Kingston Ash Recovery Project website for public review.
- **Public Speaking Engagements:** TVA and EPA management will give Action Memorandum presentations to local civic and educational groups when invited.

#### 4.2.5 Remedial Actions

When non-time critical work has been completed, TVA will submit to EPA a Remedial Site Work Plan (RSWP). The RSWP will address the longer-term strategic site objectives for determining if more work is needed to address any residual contamination. TVA will then perform an assessment of the site and submit to EPA a report of that assessment. If that assessment indicates that further site cleanup is needed, TVA will revise the RSWP and include a plan and schedule for completing that work. At that time, this CIP will be revised to reflect the changing nature of the site and the changing needs of the community. Key components of the removal and remedial actions are discussed below.

#### 4.3 TIMELINES

Because the different kinds of work being done at the Kingston Ash Recovery Project site will overlap, two timelines are presented for site community involvement activities (Appendix V) – one tied to time-critical removal actions, and one tied to non-time critical removal actions. If remedial actions are called for in the RSWP, those actions will be described in a Revised CIP.

**APPENDIX A  
EPA REGIONAL CONTACTS**

Leo Francendese  
On-Scene Coordinator  
U.S. Environmental Protection Agency, Region IV  
61 Forsyth St., SW  
Atlanta, Georgia 30303  
(404) 562-8772  
francendese.leo@epa.gov

Craig Zeller  
Remedial Project Manager  
U.S. Environmental Protection Agency, Region IV  
61 Forsyth St., SW  
Atlanta, Georgia 30303  
(404) 562-8827  
zeller.craig@epa.gov

Stephanie Y. Brown  
Community Involvement Coordinator  
U.S. Environmental Protection Agency, Region IV  
61 Forsyth St., SW  
Atlanta, Georgia 30303  
(404) 562-8450  
brown.stephaniey@epa.gov

**APPENDIX B  
LOCAL OFFICIALS**

The Honorable Mike Farmer, through  
August 31, 2010  
The Honorable Ron Woody, beginning  
September 1, 2010  
Roane County Executive  
P.O. Box 643  
Kingston, Tennessee 37763  
(865) 376-5578  
roanecounty@roanegov.org

The Honorable Troy Beets  
Mayor of Kingston  
125 West Cumberland St.  
Kingston, Tennessee 37763  
(865) 376-5748  
troybeets@bellsouth.net

The Honorable Chris Mason  
Mayor of Harriman  
300 Roane St.  
P.O. Drawer 433  
Harriman, Tennessee 37748  
(865) 882-2123  
mayormason@comcast.net

The Honorable James Watts  
Mayor of Rockwood  
110 N. Chamberlain Ave.  
Rockwood, TN 37854  
(865) 354-0175  
mayor@rockwoodtn.org

## APPENDIX C STATE OFFICIALS

### **State Elected Officials**

The Honorable Phil Bredesen  
Governor of Tennessee  
Tennessee State Capitol  
400 Charlotte Avenue  
Nashville, Tennessee 37243  
(615) 741-2001  
Phil.Bredesen@tn.gov

The Honorable Ken Yager  
Tennessee State Senator  
3 Legislative Plaza  
Nashville, Tennessee 37243  
(615) 741-1449  
sen.ken.yager@capitol.tn.gov

The Honorable Dennis Ferguson  
Tennessee State Representative  
17 Legislative Plaza  
Nashville, Tennessee 37243  
(615) 741-7658  
rep.dennis.ferguson@capitol.tn.gov

### **State Agencies**

Tennessee Department of Environment and Conservation  
Commissioner Jim Fyke  
401 Church Street, L&C Annex, 1st Floor  
Nashville, Tennessee 37243  
(888) 891-8332  
ask.TDEC@tn.gov

TDEC Representative on Site:  
Barbara Scott  
(865) 696-9614  
barbara.scott@tn.gov

### **Tennessee Wildlife Resources Agency**

Ed Carter, Executive Director  
Ellington Agricultural Center  
P.O. Box 41489  
Nashville, TN 37204  
(800) 624-7406  
Ed.Carter@state.tn.gov

**Tennessee Department of Health**

Commissioner Susan R. Cooper, MSN, RN

425 5<sup>th</sup> Ave. North

Nashville, TN

(800) 404-3006

TN.Health@tn.gov

**APPENDIX D  
FEDERAL ELECTED OFFICIALS**

**The Honorable Lamar Alexander**

United States Senate  
455 Dirksen Senate Office Building  
Washington, DC 20510  
(202) 224-4944  
<http://alexander.senate.gov/public>

Knoxville Office  
Howard H. Baker, Jr. U.S. Courthouse  
800 Market St., Suite 112  
Knoxville, Tennessee 37902  
(865) 545-4253

**The Honorable Bob Corker**

United State Senate  
185 Dirksen Senate Office Building  
Washington, DC 20510  
(202) 224-3344  
<http://corker.senate.gov/public>

Knoxville Office  
800 Market St., Suite 121  
Knoxville, Tennessee 37902  
(865) 637-4180

**The Honorable Lincoln Davis**

Tennessee Fourth District  
U.S. House of Representatives  
410 Cannon House Office Building  
Washington, DC 20515  
(202) 225-6831  
[www.house.gov/lincolndavis](http://www.house.gov/lincolndavis)

Rockwood Office  
1064 North Gateway Ave.  
Rockwood, Tennessee 37854  
(865) 354-3323



**APPENDIX E**  
**ENVIRONMENTAL AND ACTIVE CITIZENS' GROUPS**

**Emory River Community Action Commission**  
(formerly Swan Pond Community Action Commission)  
[www.swanpondcommunity.com](http://www.swanpondcommunity.com)

**Long Term Recovery Committee**  
Contact: Roane County Executive Mike Farmer, through August 31, 2010  
Roane County Executive Ron Woody, beginning September 1, 2010  
Roane County Courthouse  
200 E. Race St.  
Kingston, Tennessee 37763  
(865) 376-5578

**Roane County Community Advisory Group**  
Brenda Timm, Chair  
P.O. Box 67  
Kingston, Tennessee 37763  
(865) 576-7501  
[www.roanecag.org](http://www.roanecag.org)

**Tennessee Clean Water Network**  
Renee Hoyos, Executive Director  
123A S. Gay St.  
Knoxville, Tennessee 37902  
(865) 522-7007  
[www.tcwn.org](http://www.tcwn.org)

**Tennessee Coal Ash Survivors Network (TCASN)**  
[www.tennesseecoalashsurvivorsnetwork.com](http://www.tennesseecoalashsurvivorsnetwork.com)

**United Mountain Defense**  
P.O. Box 20363  
Knoxville, Tennessee 37920  
(865) 689-2778 or (865) 257-4029  
[www.unitedmountaindefense.org](http://www.unitedmountaindefense.org)

**APPENDIX F  
POTENTIALLY RESPONSIBLE PARTY**

Tennessee Valley Authority  
Tom Kilgore  
President and CEO  
400 W. Summit Hill Drive  
WT 7B-K  
Knoxville, Tennessee 37902-1499  
(865) 632-2366  
tvainfo@tva.com

Steve McCracken  
TVA Kingston Ash Recovery Project General Manager  
1134 Swan Pond Road  
Harriman, Tennessee 37748  
(865) 717-1649  
shmccracken@tva.gov

Katie Kline  
TVA Kingston Ash Recovery General Manager, Kingston Support Services  
1134 Swan Pond Road  
Harriman, Tennessee 37748  
(865) 717-1668  
kpbell@tva.gov

Kathryn Nash  
TVA Kingston Ash Recovery Project Operations Manager  
1134 Swan Pond Road  
Harriman, Tennessee 37748  
(865) 717-6516  
kncopela@tva.gov

Dennis Yankee  
TVA Kingston Ash Recovery Project Environmental Manager  
1134 Swan Pond Road  
Harriman, Tennessee 37748  
(865) 717-1643  
dhyankee@tva.gov

## APPENDIX G MEDIA CONTACTS

### Newspapers

#### Roane County News

Terri Likens  
Editor  
204 Franklin St.  
Kingston, Tennessee 37763-2625  
(865) 376-3481 x320  
tlikens@roanecounty.com

Damon Lawrence  
Reporter  
(865) 376-3481  
dlawrence@roanecounty.com

#### The Knoxville News-Sentinel

Ed Marcum  
Business Reporter  
2332 News Sentinel Dr.  
Knoxville, Tennessee 37921-5766  
(865) 342-6267  
marcum@knoxvillebiz.com

Scott Barker  
Staff Writer  
(865) 342-6309  
barkers@knews.com

#### Oak Ridger

Darrell Richardson  
Editor/Publisher  
785 Oak Ridge Turnpike  
Oak Ridge, Tennessee 37830  
(865) 482-1021  
publisher@oakridger.com

#### Oak Ridge Observer

Stan Mitchell  
Editor/Publisher  
40 New York Ave.  
Oak Ridge, Tennessee 37830  
(865) 483-1866  
smitchell@oakridgeobserver.com

**Chattanooga Times Free Press**

Rick Moore  
News Editor  
400 East 11th St.  
Chattanooga, Tennessee 37403  
(423) 757-6319  
rmoore@timesfreepress.com

John Vass  
Business Editor  
(423) 757-6322  
jvass@timesfreepress.com

**The Associated Press in Tennessee**

215 Centerview Dr., Suite 110  
Brentwood, Tennessee 37027

Bill Poovey  
Chattanooga Correspondent  
(423) 266-4600  
bpoovey@ap.org

Teresa Wasson  
News Editor  
(615) 373-9988  
twasson@ap.org

**Radio****WIVK (FM 107.7)**

Catherine Howell  
News Director  
P.O. Box 11167  
4711 Old Kingston Pike  
Knoxville, Tennessee 37939  
(865) 588-6511

**WKTS (FM 90.1)**

'The Bridge'  
331 Skyline View Dr.  
Kingston, Tennessee 37763  
(865) 717-3335

**WOKI (FM 100.3)**

News Talk 100  
4711 Old Kingston Pike  
Knoxville, Tennessee 37919  
(800) 951-8255  
wnox.news@citcomm.com

**WWST (Star 102.1)**

Star 102.1  
1533 Amherst Rd.  
Knoxville, Tennessee 37909  
(865) 656-STAR (7827)

**Television**

**WATE-TV (Channel 6)**

Joey Creed  
Assignment Editor  
1306 North Broadway  
Knoxville, Tennessee 37917-6501  
(865) 637-6397  
jcreed@wate.com

**WBIR-TV (Channel 10)**

Paul Brown  
Assignment Manager  
1513 Hutchison Ave.  
Knoxville, Tennessee 37917-3851  
(865) 637-1272  
pbrown@wbir.gannett.com

**WVLT-TV (Channel 8)**

Brian Gregory  
Executive Producer  
6450 Papermill Dr.  
Knoxville, Tennessee 37919-4812  
(865) 766-8210  
brian.gregory@wvlt-tv.com

**APPENDIX H  
MEETING LOCATIONS**

**Kingston Community Center**

201 Patton Ferry Rd.  
Kingston, Tennessee 37763  
(865) 376-9476

**Bethel Presbyterian Church**

203 S. Kentucky St.  
Kingston, Tennessee 37763  
(865) 376-6340

**First Baptist Church**

215 N. Kentucky St.  
Kingston, Tennessee 37763  
(865) 376-6041

**Roane State Community College**

276 Patton Lane  
Harriman, Tennessee 37748  
(865) 354-3000

**Roane County High School**

540 W. Cumberland St  
Kingston, Tennessee 37763-2796  
(865) 717-9577

**APPENDIX I  
ADMINISTRATIVE RECORD LOCATIONS**

**TVA Community Outreach and Learning Center**

509 North Kentucky St.  
Kingston, Tennessee 37763  
(865) 632-1700  
Toll-free: (800) 257-2675

Hours of Operation:  
Monday-Friday – 2 p.m. to 6 p.m.

**Kingston Public Library**

1004 Bradford Way  
Kingston, Tennessee 37763  
(865) 376-9905

Hours of Operation:  
Monday – 9 a.m. to 6 p.m.  
Tuesday – 9 a.m. to 6 p.m.  
Wednesday - 9 a.m. to 6 p.m.  
Thursday – 9 a.m. to 8:30 p.m.  
Friday – 9 a.m. to 6 p.m.  
Saturday – 9 a.m. to 12 noon  
Sunday – Closed

**Harriman Public Library** (on computer disk only)

601 Walden Ave.  
Harriman, Tennessee 37748-2506  
(865) 882-3195

Hours of Operation:  
Monday- Thursday – 9 a.m. to 5 p.m.  
Friday & Saturday – 9 a.m. to 1 p.m.

**EPA Regional Records Center**

Sam Nunn Atlanta Federal Center  
61 Forsyth St. SW, 11<sup>th</sup> Floor  
Atlanta, Georgia 30302  
(404) 562-8862

Hours of Operation:  
Monday-Friday – 8 a.m. to 5 p.m.

**APPENDIX J  
INTERVIEW QUESTIONNAIRE**

Interviewee:

Category:

TVA Interviewer:

Jacobs Interviewer:

Date:

**I. General Knowledge about Site**

- **A. What do you know about the Kingston Fossil Plant Ash Release?**
- **B. How do you know this information?**
- **C. What do you think about the site?**
- **D. What is the source of that opinion?**

**II. Reputation of Information Sources**

- **A. In general, how is TVA viewed in the community?**
- **B. How is TVA viewed in the community with respect to the ash release?**
- **C. What is TVA's reputation as a source of information?**
- **D. What about EPA? TDEC? US Fish and Wildlife? Tennessee Department of Natural Resources?**
- **E. How are local officials viewed in the community?**
- **F. Are there activists answering questions or providing information about the ash spill site? What's their reputation compared to TVA? To EPA? To TDEC?**

**III. Your Information Needs**

- **A. Do you want more information about the site and what TVA is doing?**
- **B. What do YOU want to know?**
- **C. How do you want to receive this information?**



- **D. What are your issues, concerns, maybe even fears regarding the ash release and clean up?**
- **E. Do you want to be involved in the recovery process beyond just receiving information?**
- **F. How much do you want to interact with TVA?**

#### **IV. The Community**

- **A. What are the issues, concerns and maybe even fears of the community?**
- **B. What do you think the community wants to know?**
- **C. How do you think the community wants to be involved?**
- **D. What is the history of the Kingston Fossil Plant's relationship to the community?**
- **E. Who else in the community should we be talking to?**

#### **V. Information Sources**

- **A. How do you usually get your information about important issues?**
- **B. What are the most popular newspaper, TV and radio stations in the area?**
- **C. Are there local radio or TV talk shows TVA should use?**
- **D. Is there a cable TV operation that people here watch?**
- **E. Are there local civic or service clubs that TVA should contact to provide information to or give speeches to?**
- **F. Should TVA find opportunities to reach children through schools or youth groups?**
- **G. TVA has provided information to the community in several ways. Have you used any of these sources or participated in these activities? How helpful were they to you?**
  1. Community Outreach and Learning Center –
  2. Visit from outreach team –
  3. Telephone update line number –
  4. TVA website –
  5. Homeowner meeting –
  6. Public meeting or open house –
  7. Letters from TVA –
  8. Advertisements from TVA in local papers –

## **VI. Feedback to TVA**

- **A. What is TVA doing well?**
- **B. What can TVA do more of?**

**APPENDIX K  
CATEGORIES OF INTERVIEWEES**

<b>Type of Interviewee</b>	<b>Number</b>
Residents	21
Civic Leaders	17
Government Officials	13
Environmental Stakeholders	6
<b>Total</b>	<b>57</b>

**APPENDIX L**  
**FEDERAL STATUTES GOVERNING ENVIRONMENTAL REGULATIONS**

The following federal environmental statutes and amendments require that community involvement be conducted for certain hazardous substance sites:

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 United States Code 9601, and following sections), also known as Superfund
- Superfund Amendments and Reauthorization Act of 1986 (SARA), which amended CERCLA
- Community Environmental Response Facilitation Act of 1992, which also amended CERCLA

The guidelines for conducting community involvement activities, including preparing a CIP, are set forth in the following:

- “Superfund Community Involvement Handbook” (EPA 2003a)
- “Superfund Community Involvement Toolkit” (EPA 2003b)

**APPENDIX M  
MATERIAL DATA SAFETY SHEETS FOR FLY ASH AND BOTTOM ASH**

**CLASS "F" FLY ASH**



**MATERIAL SAFETY DATA SHEET  
MSDS No. BP - 001**

**PRODUCT:** Class "F" Fly ash, coal fly ash

**SECTION I - Manufacturer**

Manager, Coal Combustion By-Products  
Tennessee Valley Authority  
1101 Market Street, LP 5G  
Chattanooga, Tennessee 37402-2801  
Telephone (423) 751-2422

<b>SECTION II – Product Composition, Constituents, and Ingredients</b>		<b>OSHA PEL</b>		<b>ACGIH TLV</b>	
<b>Constituent</b>					
Silica – SiO <sub>2</sub> (40 – 60 %) Crystalline (3-7%) Amorphous (33-57%)	Crystalline:			Crystalline:	
	Quartz (Respirable) CAS 14808-60-7	$\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$		Quartz (Respirable) mg/m <sup>3</sup> CAS 14808-60-7	0.05
	Quartz (Total)	$\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$		Cristobalite (Respirable) mg/m <sup>3</sup> CAS 14464-46-1	0.05
	Amorphous	$\frac{80 \text{ mg/m}^3}{\% \text{ SiO}_2}$		Tridymite (Respirable) mg/m <sup>3</sup> CAS 15468-32-3	0.05
				Amorphous:	
				Precipitated silica and silica gel CAS 112926-00-8	10 mg/m <sup>3</sup>
Aluminum oxide – Al <sub>2</sub> O <sub>3</sub> (18–31%) CAS 1344-28-1	Respirable Total	5 mg/m <sup>3</sup> 15 mg/m <sup>3</sup>		Total	10 mg/m <sup>3</sup>
Iron oxide – Fe <sub>2</sub> O <sub>3</sub> (5–25%) CAS 1309-37-1	Total	10 mg/m <sup>3</sup>		Total	5 mg/m <sup>3</sup>
Calcium oxide – CaO (1–6%) CAS 1305-78-8	Total	5 mg/m <sup>3</sup>		Total	2 mg/m <sup>3</sup>
Magnesium oxide – MgO (1–2%) CAS 1309-48-4	Total	15 mg/m <sup>3</sup>		Total	10 mg/m <sup>3</sup>
Titanium oxide – TiO <sub>2</sub> (1-2%) CAS 13463-67-7	Total	15 mg/m <sup>3</sup>		Total	10 mg/m <sup>3</sup>
Inorganic arsenic (16-210 ppm) CAS 7440-38-4	Total	10 µg/m <sup>3</sup>		Total	0.01 mg/m <sup>3</sup>

## CLASS "F" FLY ASH

SECTION III – Physical/Chemical Data	SECTION IV – Fire/Explosion Data
<b>Boiling Point:</b> No applicable information (N/A) <b>Vapor Pressure:</b> N/A <b>Vapor Density:</b> N/A <b>Water Solubility:</b> < 0.5% <b>Melting Point:</b> >2500°F <b>Percent Volatile:</b> N/A <b>Evaporation Rate:</b> N/A <b>Appearance:</b> gray-brown or tan to black powdery solid <b>Odor:</b> none	<b>Flash Point:</b> none <b>Lower/Upper Flammable Limits:</b> none/none <b>Autoignition:</b> none <b>Fire/Explosion Hazard:</b> none/none <b>Firefighting:</b> N/A <b>Extinguishing Data:</b> N/A

SECTION V – Reactivity/Incompatibility Data
<b>Reactivity:</b> Fly ash is stable under most conditions <b>Incompatibilities:</b> Fly ash: N/A Quartz: Test with small quantities of strong oxidizers before mixing.  <b>Hazardous decomposition:</b> none <b>Polymerization:</b> none

SECTION VI – Health Hazard Data
<b>Routes of entry:</b> Inhalation? yes    Skin? may cause irritation    Ingestion? unlikely
<b>Carcinogenicity:</b> NTP? yes    IARC? yes    OSHA? yes
<b>Inhalation Health Hazards:</b>  <b>Acute:</b> Respiratory tract irritation causing coughing, wheezing, and difficulty breathing  <b>Chronic:</b> The primary routes of exposure are inhalation and contact with eyes and skin. Fly ash is composed of inert dust (possibly irritating to mucous membranes), crystalline silica (a pneumoconiosis producing dust and animal carcinogen), and low concentrations of calcium oxide (possibly irritating to mucous membranes and wet skin). Fly ash contains trace amount of inorganic arsenic (identified as a carcinogen).  <b>Skin and Eye Health Hazards:</b>  <b>Acute:</b> Eye contact can cause severe, mechanical irritation. Skin contact may cause irritation.  <b>Chronic:</b> Skin contact may cause irritation.

SECTION VII – First Aid
<b>Inhalation:</b> Remove person from exposure area to fresh air. Keep person warm and calm. Call for medical help if person has breathing difficulty. Give artificial respiration if person is not breathing.
<b>Eye Contact:</b> Wash-out eyes with warm water for 15 minutes, occasionally lifting eye lids. Send person for medical attention.
<b>Skin Contact:</b> Remove contaminated clothing. Wash with soap and water. Launder clothing before reuse.

## CLASS "F" FLY ASH

### SECTION VIII – Exposure Controls and Personal Protective Equipment

**General:** Do not use compressed air to remove fly ash.

**Ventilation:** Use local exhaust ventilation to remove airborne fly ash from work areas when feasible.

**Eye Protection:** Employees should use dust-proof safety goggles in areas of high levels of airborne fly ash. Eye wash facilities should be available in case of eye exposure.

**Skin Protection:** Employees should wear protective clothing to prevent repeated or prolonged skin contact with fly ash.

**Respiratory Protection:** Respiratory protection is selected based on a hazard assessment of the work location, including the specific airborne agents, the concentration of the agents, and the permissible exposure levels (PEL). Selection must be done by a knowledgeable person following the requirements in OSHA's Respiratory Protection Standard, 29CFR1910.134(d) in order to obtain adequate protection from the respirators. Employees must be qualified to use a respirator, and all respirators must be certified by NIOSH. The following table gives guidance on selecting an appropriate respirator for inorganic arsenic protection. It also should protect against other airborne particulates associated with fly ash that are not regulated by substance, such as aluminum and iron oxides.

<u>Concentration of Airborne Agent</u>	<u>Required Respirator</u>
Not greater than 10X PEL	Half-mask air-purifying respirator equipped with P100 (high efficiency) cartridge(s) or any respirator listed below.
Not greater than 50X PEL	Full facepiece air-purifying respirator equipped with P100 (high efficiency) cartridge(s) or any respirator listed below.
Not greater than 1000X PEL	Powered air-purifying respirator in all inlet face coverings and equipped with P-100 (high efficiency) cartridge(s) or any respirator listed below.
Not greater than 2000X PEL	Supplied air respirator with full facepiece, hood or helmet or suit and operated in positive pressure mode or any respirator listed below.
Greater than 2000X PEL	Self-contained breathing apparatus with full facepiece and operated in positive pressure mode.

### SECTION IX – Safe Handling and Use Precautions

**Spill Cleanup:** Wet material and shovel into container with cover or HEPA vacuum. Avoid generating airborne dust.

**Use:** Handle material in closed systems if feasible to control dust.

## BOTTOM ASH



### MATERIAL SAFETY DATA SHEET MSDS No. BP - 002

**PRODUCT:** Bottom ash, coal boiler bottom ash

#### SECTION I - Manufacturer

Manager, Coal Acquisition and Supply  
Tennessee Valley Authority  
1101 Market Street, LP 5G  
Chattanooga, Tennessee 37402-2801  
Telephone (423) 751-2064

#### SECTION II – Product Composition, Constituents, and Ingredients

Constituent	OSHA PEL	ACGIH TLV
Silica – SiO <sub>2</sub> (50–60 %) Crystalline (2-4%) Amorphous (46-58%)	Crystalline:	Crystalline:
	Quartz (Respirable) CAS 14808-60-7	$\frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$ Quartz (Respirable) 0.05 mg/m <sup>3</sup> CAS 14808-60-7
	Quartz (Total)	$\frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2 + 2}$ Cristobalite (Respirable) 0.05 mg/m <sup>3</sup> CAS 14464-46-1
	Amorphous	$\frac{80 \text{ mg/m}^3}{\% \text{ SiO}_2}$ Tridymite (Respirable) 0.05 mg/m <sup>3</sup> CAS 15468-32-3
		Amorphous:
		Precipitated silica and silica gel CAS 112926-00-8 10 mg/m <sup>3</sup>
Aluminum oxide – Al <sub>2</sub> O <sub>3</sub> (18–28%) CAS 1344-28-1	Respirable 5 mg/m <sup>3</sup> Total 15 mg/m <sup>3</sup>	Total 10 mg/m <sup>3</sup>
Iron oxide – Fe <sub>2</sub> O <sub>3</sub> (9–29%) CAS 1309-37-1	Total 10 mg/m <sup>3</sup>	Total 5 mg/m <sup>3</sup>
Calcium oxide – CaO (1–5%) CAS 1305-78-8	Total 5 mg/m <sup>3</sup>	Total 2 mg/m <sup>3</sup>
Magnesium oxide – MgO (1–2%) CAS 1309-48-4	Total 15 mg/m <sup>3</sup>	Total 10 mg/m <sup>3</sup>
Titanium oxide – TiO <sub>2</sub> (1-2%) CAS 13463-67-7	Total 15 mg/m <sup>3</sup>	Total 10 mg/m <sup>3</sup>



## BOTTOM ASH

SECTION III – Physical/Chemical Data	SECTION IV – Fire/Explosion Data
<b>Boiling Point:</b> No applicable information (N/A) <b>Vapor Pressure:</b> N/A <b>Vapor Density:</b> N/A <b>Water Solubility:</b> N/A <b>Melting Point:</b> >2500°F <b>Percent Volatile:</b> N/A <b>Evaporation Rate:</b> N/A <b>Appearance:</b> gray-black coarse solid <b>Odor:</b> none	<b>Flash Point:</b> none <b>Lower/Upper Flammable Limits:</b> none/none <b>Autoignition:</b> none <b>Fire/Explosion Hazard:</b> none/none <b>Firefighting:</b> N/A <b>Extinguishing Data:</b> N/A

SECTION V – Reactivity/Incompatibility Data
<b>Reactivity:</b> Bottom ash is stable under most conditions <b>Incompatibilities:</b> Bottom ash: N/A Quartz: Test with small quantities of strong oxidizers before mixing.  <b>Hazardous decomposition:</b> none <b>Polymerization:</b> none

SECTION VI – Health Hazard Data
<b>Routes of entry:</b> Inhalation? yes    Skin? may cause irritation    Ingestion? unlikely
<b>Carcinogenicity:</b> NTP? yes    IARC? yes    OSHA? no
<b>Inhalation Health Hazards:</b>  <b>Acute:</b> Respiratory tract irritation causing coughing, wheezing, and difficulty breathing  <b>Chronic:</b> The primary routes of exposure are inhalation and contact with eyes and skin. Bottom ash is composed of inert dust (possibly irritating to mucous membranes), crystalline silica (a pneumoconiosis producing dust and animal carcinogen), and low concentrations of calcium oxide (possibly irritating to mucous membranes and wet skin).  <b>Skin and Eye Health Hazards:</b>  <b>Acute:</b> Eye contact can cause severe, mechanical irritation. Skin contact may cause irritation.  <b>Chronic:</b> Skin contact may cause irritation.

SECTION VII – First Aid
<b>Inhalation:</b> Remove person from exposure area to fresh air. Keep person warm and calm. Call for medical help if person has breathing difficulty. Give artificial respiration if person is not breathing.
<b>Eye Contact:</b> Wash-out eyes with warm water for 15 minutes, occasionally lifting eye lids. Send person for medical attention.
<b>Skin Contact:</b> Remove contaminated clothing. Wash with soap and water. Launder clothing before reuse.

## BOTTOM ASH

### SECTION VIII – Exposure Controls and Personal Protective Equipment

**General:** Prevent generation of airborne bottom ash dust. Do not use compressed air to remove bottom ash.

**Ventilation:** Use local exhaust ventilation to remove airborne bottom ash from work areas when feasible.

**Eye Protection:** Employees should use dust-proof safety goggles in areas of high levels of airborne bottom ash. Eye wash facilities should be available in case of eye exposure.

**Skin Protection:** Employees should wear protective clothing to prevent repeated or prolonged skin contact with bottom ash.

**Respiratory Protection:** Respiratory protection is selected based on a hazard assessment of the work location, including the specific airborne agents, the concentration of the agents, and the permissible exposure levels (PEL). Selection must be done by a knowledgeable person following the requirements in OSHA's Respiratory Protection Standard, 29CFR1910.134(d) in order to obtain adequate protection from the respirators. Employees must be qualified to use a respirator, and all respirators must be certified by NIOSH. The following table gives guidance on selecting an appropriate respirator for silica protection. It also should protect against other airborne particulates associated with bottom ash that are not regulated by substance, such as aluminum and iron oxides.

<u>Concentration of Airborne Agent</u>	<u>Required Respirator</u>
Not greater than 10X PEL	Half-mask air-purifying respirator equipped with P100 (high efficiency) cartridge(s) or any respirator listed below.
Not greater than 50X PEL	Full facepiece air-purifying respirator equipped with P100 (high efficiency) cartridge(s) or any respirator listed below.
Not greater than 100X PEL	Powered air-purifying respirator full-face covering and equipped with P-100 (high efficiency) cartridge(s) or any respirator listed below.
Not greater than 1000X PEL	Supplied air respirator with full facepiece, hood or helmet or suit and operated in positive pressure or pressure demand mode or any respirator listed below.
Greater than 1000X PEL	Supplied air respirator with full facepiece, hood or helmet or suit and operated in positive pressure or pressure demand mode with positive pressure self-contained escape apparatus, or self-contained breathing apparatus with full facepiece and operated in positive pressure or pressure demand mode.

### SECTION IX – Safe Handling and Use Precautions

**Spill Cleanup:** Wet material and shovel into container with cover or HEPA vacuum. Avoid generating airborne dust.

**Use:** Handle material in closed systems if feasible to control dust.

**APPENDIX N  
ADDITIONAL RESOURCES**

**Crawford & Company**

7102 Commerce Way, Suite 102  
Brentwood, Tennessee 37027  
(800) 257-2675

**Oak Ridge Associated Universities  
Health Studies**

MC-210-45  
P.O. Box 117  
Oak Ridge, Tennessee 37831-0117  
(865) 576-3115  
kingstonquestions@orau.org  
www.orau.org

**Ridgeview Resources for Living**

221 Devonia Street  
Harriman, Tennessee 37748  
(865) 882-1164  
www.ridgevw.com

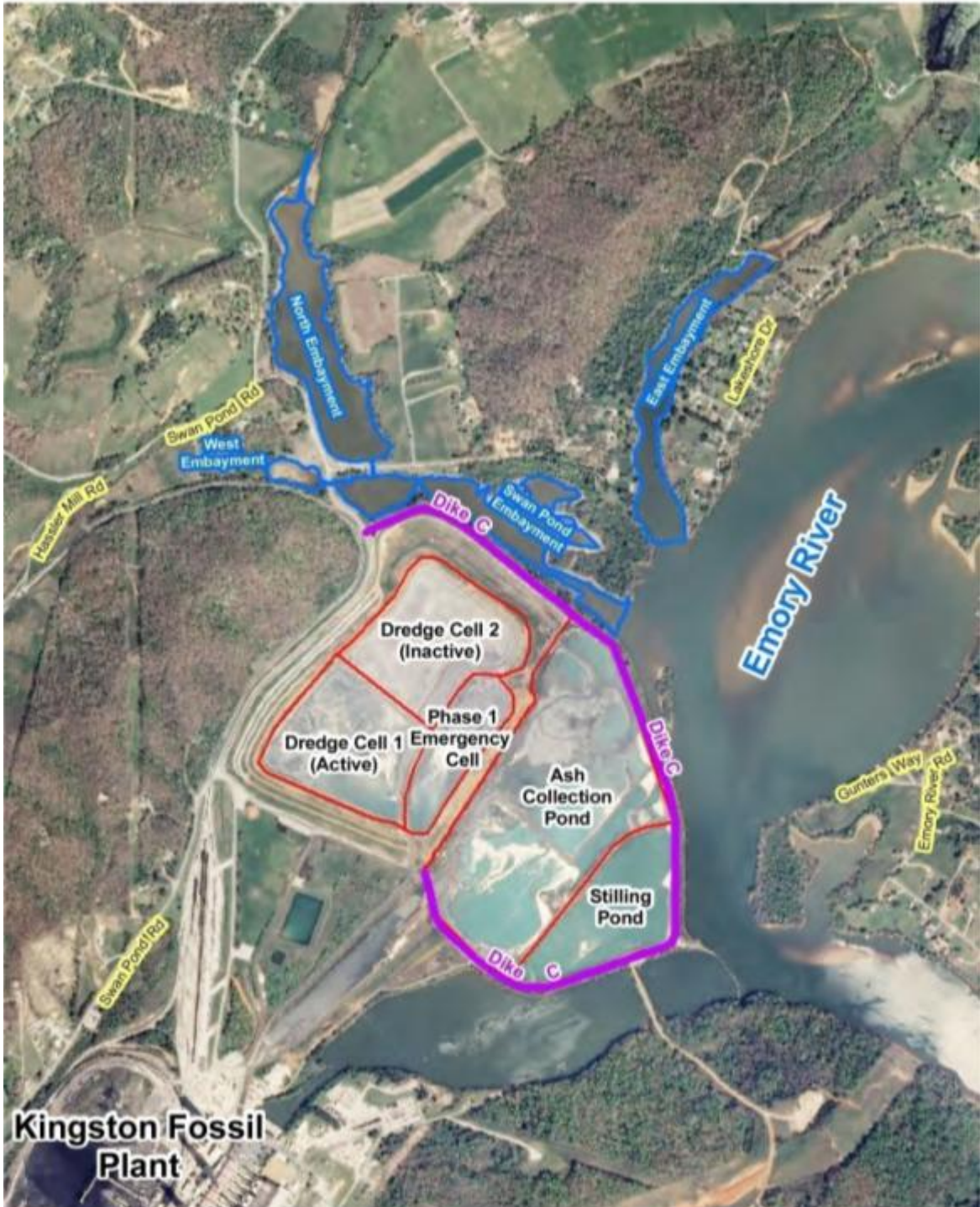
**APPENDIX O**  
**LINKS TO CONGRESSIONAL TESTIMONY**

Tom Kilgore, President and Chief Executive Officer, Tennessee Valley Authority Testifying  
before the U.S. Senate Environment and Public Works Committee  
January 8, 2009  
<http://www.tva.gov/kingston/pdf/testimony.pdf>

Tom Kilgore, President and Chief Executive Officer, Tennessee Valley Authority Testifying  
before the U.S. House Committee on Transportation and Infrastructure, Subcommittee on  
Water Resources and Environment  
March 31, 2009  
[http://www.tva.gov/kingston/pdf/Testimony\\_03\\_31\\_09.pdf](http://www.tva.gov/kingston/pdf/Testimony_03_31_09.pdf)

Tom Kilgore, President and Chief Executive Officer, Tennessee Valley Authority Testifying  
before the U.S. House Committee on Transportation and Infrastructure, Subcommittee on  
Water Resources & Environment  
July 28, 2009  
<http://www.tva.gov/kingston/728hearing/TVATKTestimony.pdf>

APPENDIX P  
AERIAL IMAGE OF KINGSTON FOSSIL PLANT PRE-ASH SLIDE 2008



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



**APPENDIX Q**  
**AERIAL IMAGE OF KINGSTON FOSSIL PLANT DECEMBER 23, 2008**



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

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

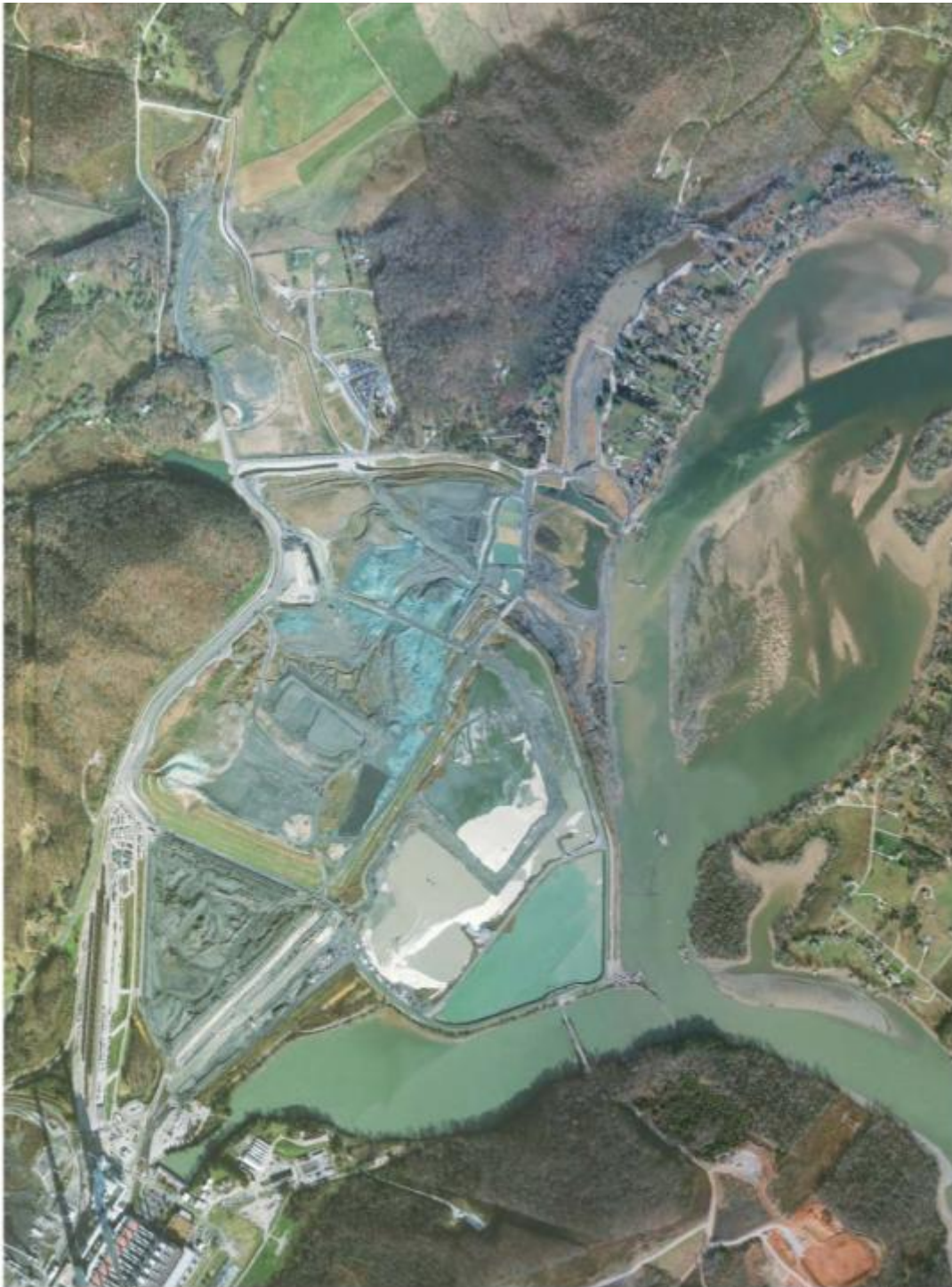


**APPENDIX R  
AERIAL IMAGE OF KINGSTON ASH RECOVERY PROJECT AUGUST 14, 2009**

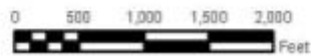


Tennessee Valley Authority  
OE&R - ER&S  
Geographic Information & Engineering

**APPENDIX S**  
**AERIAL IMAGE OF KINGSTON ASH RECOVERY PROJECT DECEMBER 1, 2009**



Date of map imagery: 12/01/2009

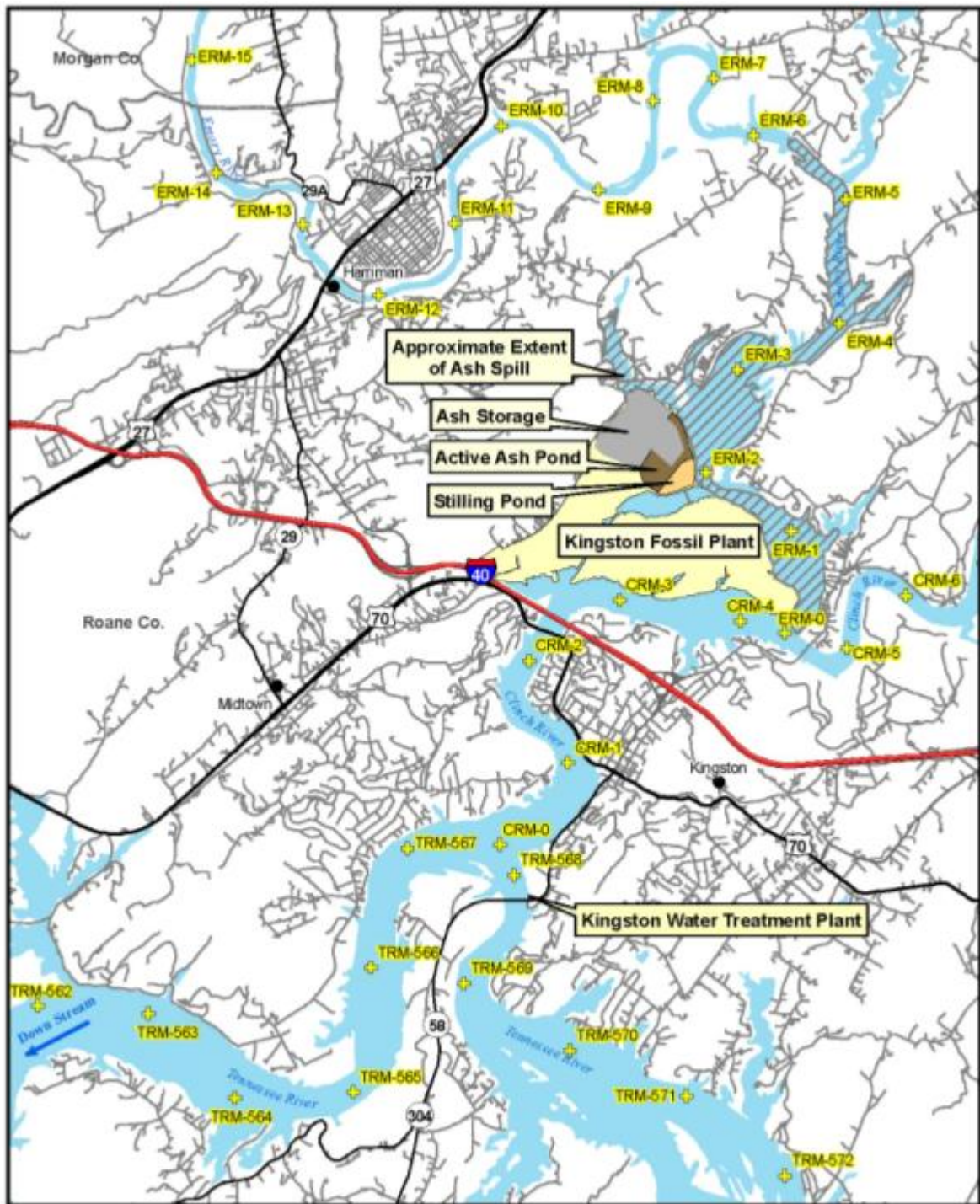


Filename: 3map04y\_391021\_3aer\_811.pdf

Tennessee Valley Authority  
E&T - Environmental Resources  
Geographic Information & Engineering



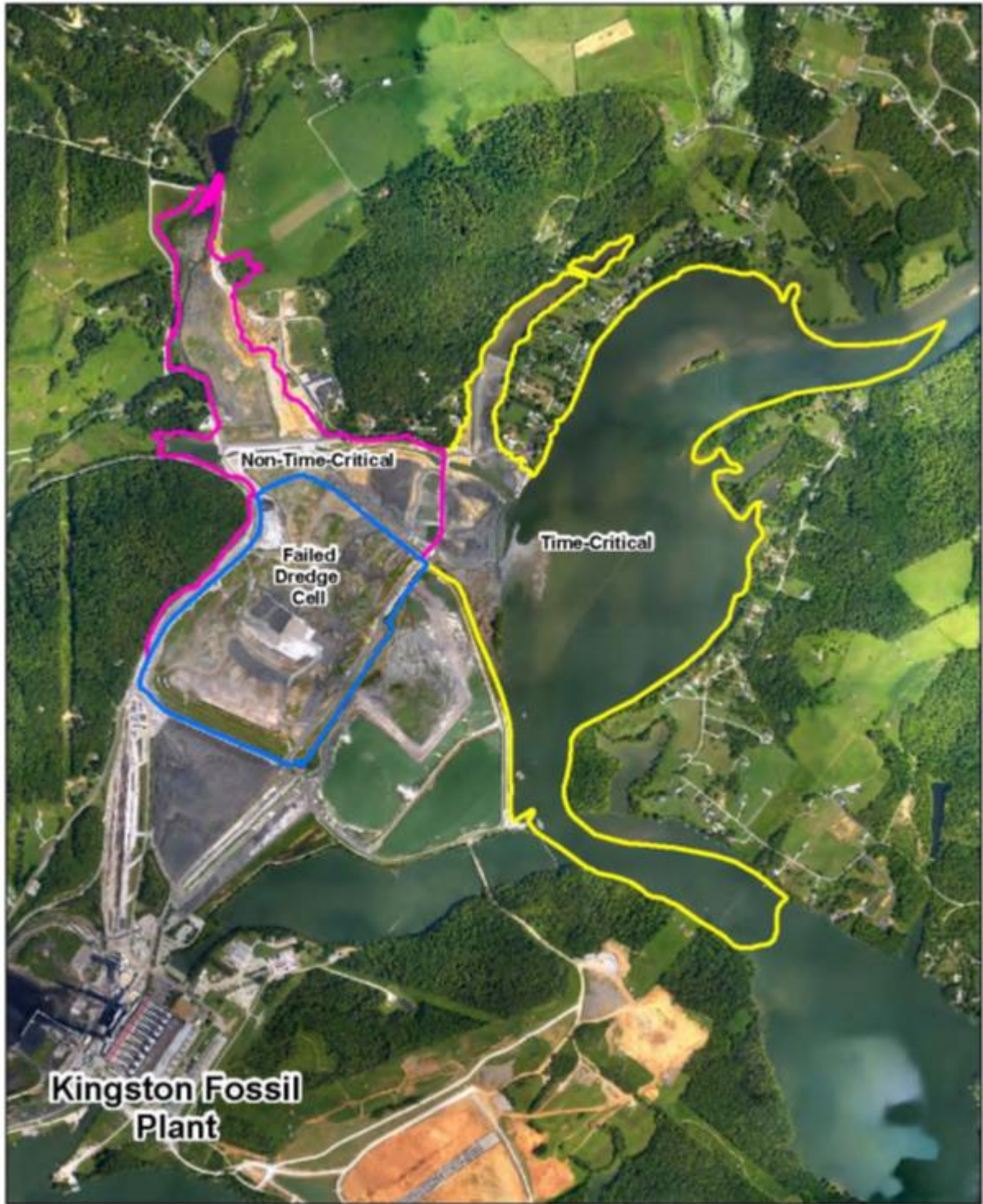
**APPENDIX T  
KINGSTON FOSSIL PLANT VICINITY MAP**



Tennessee Valley Authority  
CE&R - ERSS  
Geographic Information & Engineering



APPENDIX U  
TIME-CRITICAL AND NON-TIME CRITICAL REMOVAL ACTIONS

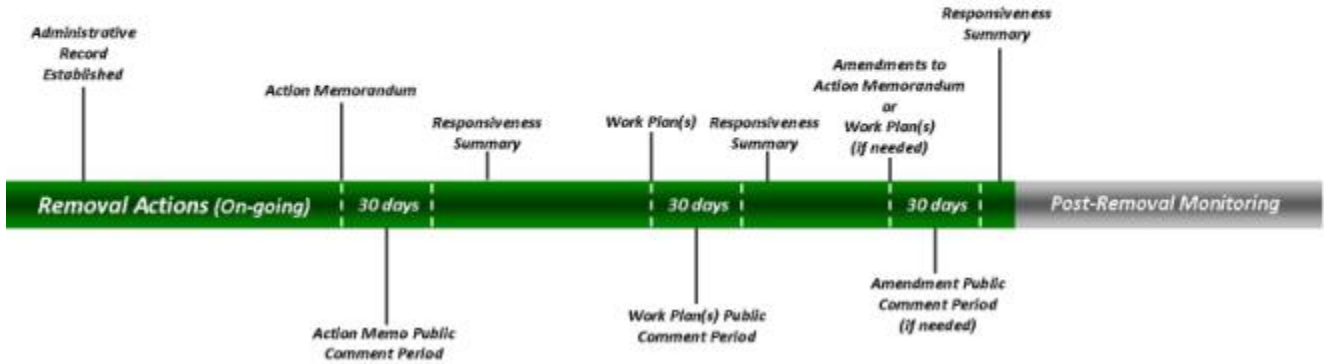


Tennessee Valley Authority  
CE&R - ER&S  
Geographic Information & Engineering

# APPENDIX V KINGSTON ASH RECOVERY PROJECT COMMUNITY INVOLVEMENT TIMELINES

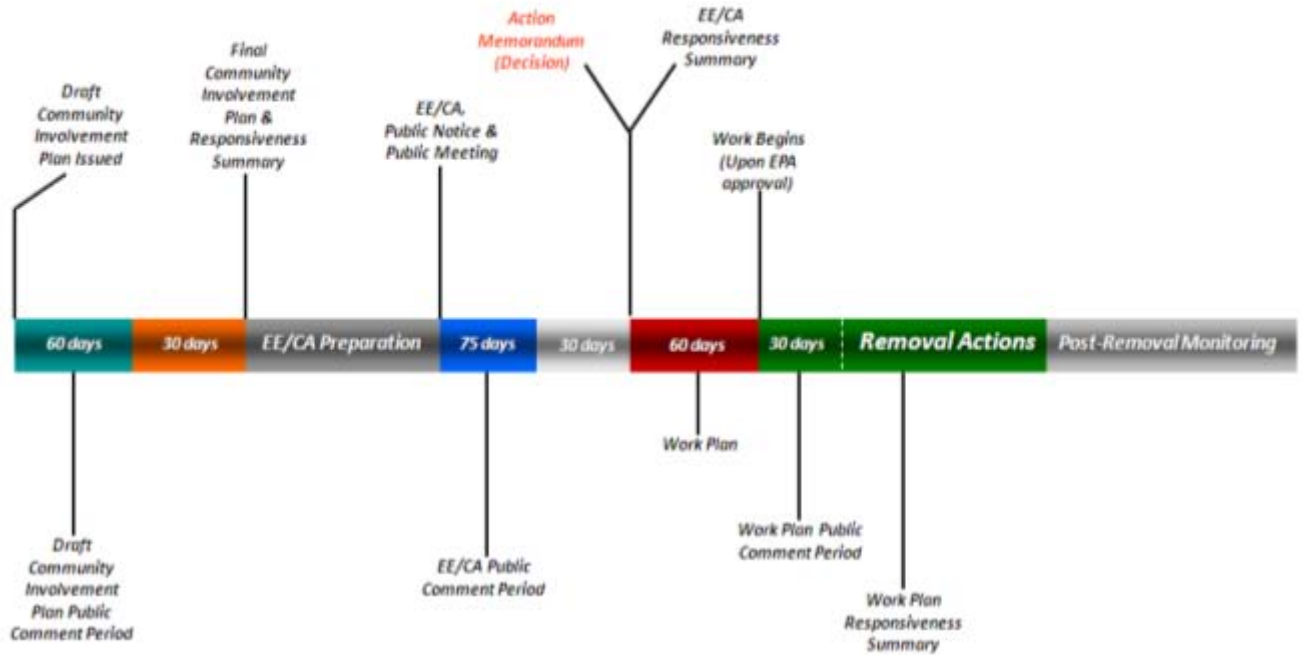
## Timeline I

**Time-Critical Action:** Timeline of Formal Public Input in Decision-Making Process



## Timeline II

**Non-Time-Critical Action:** Timeline of Formal Public Input in Decision-Making Process



**APPENDIX W**  
**SUMMATION OF COMMENTS RECEIVED AND RESPONSE TO COMMENTS**

**Tennessee Valley Authority (TVA) Kingston Ash Recovery Project**  
**Draft Community Involvement Plan**  
**Public Comment Period October 19-December 20, 2009**

On May 11, 2009, the U.S. Environmental Protection Agency (EPA) signed an Administrative Order and Agreement on Consent (AOC) pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) with the TVA to oversee the cleanup of coal ash at the TVA Kingston Ash Recovery Project (the Site). Under the AOC and the requirements of CERCLA, TVA was required to prepare a Community Involvement Plan (CIP) for the site.

On October 16, 2009, EPA approved TVA's Draft CIP.

On October 21, 2009, TVA issued a public notice announcing the availability of the Draft CIP and starting a 30-day public comment period. The initial public comment period ran from October 21-November 20, 2009. On November 5, 2009, TVA announced to the Roane County Community Advisory Committee (CAG) that it was extending the public comment period on the Draft CIP through December 20, 2009, an additional 30 days. TVA also announced the extension in ads in local papers and in letters to groups that had requested the extension.

TVA has reviewed and carefully considered the public's comments. Pursuant to the AOC, site work and community involvement activities have been on-going during the public comment period. The Draft CIP is available at the Administrative Record, which can be found online at [http://www.tva.com/kingston/admin\\_record/index.htm](http://www.tva.com/kingston/admin_record/index.htm) or at the locations below:

TVA Outreach Center  
509 N. Kentucky Street  
Kingston, Tennessee  
(865) 632-1700

Kingston Public Library  
1004 Bradford Way  
Kingston, Tennessee  
(865) 376-9905

On computer disk at:

Harriman Public Library  
601 Walden Street  
Harriman, Tennessee  
(865) 882-3195

TVA has concluded the public comment period for the Kingston Ash Recovery Project Draft CIP. Public comments submitted are responded to within this document, the Draft CIP Responsiveness Summary. The Responsiveness Summary will be included as Appendix W in the Final CIP. Presented below are the comments and TVA's responses to the comments received during the public comment period by email and mail.

1. Public Interviews: It is not clear how the 50 public interviews were used by TVA to make this plan responsive to the public's needs. Due to the following, the interview approach and analysis of the results are of concern: (1) TVA hand-selected members of the community to participate in the interviews; (2) TVA employees personally conducted the interviews. An independent third party would likely receive more truthful, open answers; (3) Fifty interviewees is equivalent to 0.4 percent of the combined populations of Kingston and Harriman and less than 0.1 percent of the total population of Roane County (using the population counts provided in the Plan). Fifty is a small sample size and unlikely to represent the full range of community concerns; (4) The results of the interviews were not analyzed scientifically with percentages or other numerical comparisons and preclude a clear understanding of the primary concerns and the number of citizens who share the same opinions on issues related to the site.
  - Response: The National Contingency Plan (NCP) [40 CFR § 300.430(c)(2)(i); 300.415(n)(3)(i); and 300.415(n)(4)(i)] requires the lead agency (at this site, TVA) to "conduct community interviews with local officials, community residents, public interest groups, or other interested or affected parties, as appropriate." EPA guidance in their Superfund Toolkit recommends a minimum of 25 interviews. Community interviews are not designed to be a statistically representative survey of public opinion. They are designed, according to the NCP "to solicit their concerns and information needs, and to learn how and when citizens would like to be involved in the Superfund process." TVA, with EPA's advice and approval, identified a cross-section of the community, including residents, elected officials, leaders of community-based organizations, church groups, environmental organizations, and local business leaders, including many who had been publicly critical of TVA and the cleanup process. TVA invited more than 80 individuals to be interviewed for the CIP. The interviewees were informed their names and responses would be kept confidential to provide anonymity to answer interview questions truthfully. More than 50 individuals agreed to be interviewed. TVA continues to gather information about the public's concerns and expectations through public meetings, availability sessions, public comment periods, attendance at Roane County Community Advisory Group (CAG) and other community meetings, emails and phone calls from the public, etc.
2. Relationship with the agencies: The Plan states that the Roane County Community Advisory Group (CAG), which formed to represent the community independently of cleanup agencies, will be advised by EPA and TVA during the cleanup. This information inaccurately represents the relationship between the CAG and the cleanup agencies. Agencies commonly assist CAGs during cleanups by providing regular

updates regarding substance and process related to the cleanup and making available whatever technical, management or legal expertise that the CAG may need to effectively engage in the cleanup. The CAG's advisor is a third party entity that is not affiliated with the cleanup agencies. EPA community involvement specialists do provide advice, as requested by a CAG. The point is that the CAG must operate independently and be perceived by the community as operating independently from the agencies.

- Response: At the time the Draft CIP was written, the CAG had not yet been selected as the Technical Assistance Program (TAP) recipient. Therefore, the TAP and CAG information are presented separately in the Draft CIP. TVA and EPA have provided and will continue to provide the CAG with technical information, regular updates and access to the site so they can facilitate TVA's communication with the public and the community's involvement in the decision-making process at the site as the CAG's stated purpose in EPA Guidance for CAGs at Superfund Sites OSWER Directive 9230.0-28 PB94-963293. The final CIP will be revised to reflect the CAG's relationship to EPA and TVA.
3. Ecological quality, "Section 3.3.3. Environmental": This section does not address any environmental issues related to the biological characteristics of the site, including plants and wildlife. The lack of environmental concerns is another indicator that the limited number of interviewees may have impacted the representation of concerns about the site. TVA could note that though interviewees did not specifically address issues pertaining to fish and natural resources, TVA will be providing information about how they will be restoring the habitat and improving environmental quality.
- Response: Section 3.3.3 Environmental accurately represents the key environmental concerns of the more than 50 interviewees. TVA has provided information about issues pertaining to fish and natural resources throughout the cleanup process. The Engineering Evaluation/Cost Analysis (EE/CA) Report and the decision documents that follow will detail the actions TVA and EPA will be taking to protect and restore fish and other natural resources. The final CIP will be updated to include the previous statement.
4. Vulnerable populations: According to the numbers provided in the Plan, over 40 percent of Roane County's population is in a vulnerable age category (either under five years old, under 18 or over 65). Citizens that fall into these age categories are vulnerable because they are more susceptible to health effects from environmental pollution, as well as infectious disease, than healthy adults. TVA could acknowledge this percentage and indicate that it will be doing its best to ensure the cleanup will protect these special populations' health.
- Response: The purpose of this plan is to discuss how TVA will communicate with and involve the public throughout the cleanup. The Plan notes the percentage of people in Roane County that are under 18 or over 65, and includes outreach activities that are designed to appeal to these populations (website and other new

media, as well as emails, newspapers, and presentations to schools and civic groups).

A human health risk assessment is being prepared for the Embayment and Dredge Cell EE/CA and will specifically address potential risks to children and adults from potential lifetime exposures to ash-related constituents. These assessments will evaluate health risks posed in the area and will be publically available in the EE/CA report.

The Tennessee Department of Health (TDH), in conjunction with the federal Agency for Toxic Substances and Disease Registry (ATSDR), has released a draft Public Health Assessment (PHA) for the TVA Kingston coal ash release. The PHA addresses environmental issues related to actual or possible human exposure and was available for review and public comment online at <http://health.state.tn.us/coalashspill.htm> through March 9, 2010.

5. Public input: It is unclear whether or not TVA will make revisions to future cleanup documents after receiving input from the community during public comment periods. The common procedure used under Superfund (CERCLA) is as follows: a Draft document is completed for all agencies to review and the public may have an opportunity to comment; the agency makes revisions and a Draft Final is released to the public; public comments are taken; a final document is released. The language in the Plan could be revised to reflect this sequence of events that allows for real public participation. Broader public participation is permitted and may include release of the Draft to the CAG before the public release date in anticipation of the CAG taking time to review it and make comment.
  - Response: Work under a CERCLA removal action often takes place at a quicker pace than under a remedial action. Generally, draft documents are not released to the public for comment before final documents are produced. Instead, public comments on one document are addressed in the Responsiveness Summary for that document and reflected in the preparation of the next document. For instance, comments on the EE/CA Work Plan will be addressed in the Responsiveness Summary for the EE/CA Work Plan, and those comments will be incorporated into the EE/CA Report as appropriate. Comments received on the EE/CA Report will be addressed in the EE/CA Responsiveness Summary and reflected in the non-time critical removal decision and the Action Memorandum as appropriate. Because the pace of work is moving so quickly, TVA will consider public comments throughout the removal action. TVA will incorporate community comments in documents as warranted.
6. Missing data: According to the Plan, “Data shows that concentrations of metals in the ash are below the limits for classification as a hazardous waste.” This data is not available in the EE/CA Work Plan, nor is there a reference in the Work Plan to direct readers elsewhere to obtain the information. In addition, this statement is misleading because the fly ash is exempt from classification as a hazardous waste due to federal



law, the Bevill Amendment. The Plan could be reworded to state: “Coal ash is exempted from classification as hazardous waste by the Bevill Amendment” and indicate how the public can find the data that proves the waste does not need be disposed of in a hazardous waste landfill. The public should be aware that there are levels of certain constituents in the fly ash that present a threat to human and ecological health.

- Response: The principal intent of the statement quoted is to present information related to TVA’s utilization of an off-site solid waste landfill (Resource Recovery and Response Act [RCRA] Subtitle D) to dispose of the ash currently being removed from the Emory River. The ash is not classified as a hazardous waste and does not exceed the limits established by the Toxicity Characteristic Leaching Procedure (TCLP). TVA is not using this information to assess impacts on human health and the environment. The purpose of TCLP testing is to demonstrate that the ash meets the requirements for disposal at the Arrowhead Landfill in Perry County, Alabama, a Subtitle D permitted facility. The TCLP data are posted at [http://www.tva.gov/kingston/solids/dredged\\_ash/index.htm](http://www.tva.gov/kingston/solids/dredged_ash/index.htm).

EPA guidance and protocols will be followed to perform human health and ecological risk assessments related to the ash cleanup (See response #10 below).

7. Official name of the project: EPA and TVA have used at least three different names for the accident site and the cleanup effort. The Plan calls it the TVA Fossil Plant Release Site. The EPA website calls it TVA Kingston Fly Ash Release. TVA’s EE/CA Work Plan uses the name Kingston Fly Ash Recovery Project. The agencies could discuss this problem and make a decision regarding the official name of the cleanup site that distinguishes it from the fossil plant so that one name is used uniformly over the course of the cleanup.

- Response: The final CIP, along with all documents going forward, will present a consistent official name. The project name is the Kingston Ash Recovery Project.

8. Enhanced Public Involvement: Public involvement serves several purposes, including engaging and empowering the affected community, improving the cleanup in process and substance and adding another review to actions that will affect the lives of community members. Thus, an enhanced public involvement program (with appropriate plan) is in the interest of all parties. Public involvement could be greatly enhanced in the Plan with 1) commitments to provide CAG briefings; 2) monthly and quarterly public events; 3) a commitment to maintain information on the TVA website; 4) written update reports to the public; 5) including the CAG on technical updates/reports among other measures.

- Response: It is TVA’s goal that public involvement and communication between the community and TVA will grow and improve over the course of the project. Since the completion of the Draft CIP (during EPA’s review and the 60-day public comment period) TVA has increased its briefings to the CAG through monthly



meetings and weekly emails about site activities. Also TVA has committed to holding monthly availability sessions while public interest warrants them, as well as quarterly public meetings; TVA will continue to maintain information on the TVA website, provide (and in several cases, hand-deliver) written updates to the public, and provide the CAG with technical updates and ground and helicopter tours of the site. TVA will also address school, civic, and community groups. Section 4.1 Communications Tools will be updated to accurately reflect current communication activities.

9. 2.3.4 Sampling and Monitoring, paragraph 3, page 11: The text in this paragraph indicates that data show concentrations of metals in the ash below the limits for classification as a hazardous waste. EPA uses the Toxicity Characteristic Leaching Procedure to determine how much of the contaminants will leach out of the ash (and thus, become bioavailable) and compares that number to a federal standard, but this method and the data from this testing are not mentioned in the Plan or the EE/CA Work Plan. Moreover, there is a distinct set of standards used to determine the threat posed to human health and ecological quality, which is not clarified in the Plan. The Plan gives the impression that because the ash does not qualify for disposal in a hazardous waste landfill under the Bevill Amendment, there is no threat to human health or wildlife. Using the data provided in Table 8 of the EE/CA Work Plan, TASC prepared a comparison of the maximum detected concentrations of metals at the TVA site to the federal hazardous waste parameters listed under CERCLA (see Table 1 below). These maximum concentrations will be used for the risk assessments that will determine the threats to human and ecological health posed by the site, according to the EE/CA Work Plan. The text in this section of the Plan could be reworded to provide a clearer understanding of classification of fly ash. The Plan could be edited to state: “Coal ash is exempted from classification as hazardous waste by the Bevill Amendment” and provide a reference so that the public can see the leachate data for themselves. The public should be aware of the leachability test and the exemption of coal ash under the Bevill Amendment.

- Response: As stated in response #6, the principal intent of this paragraph is to present information related to TVA’s utilization of an off-site solid waste landfill (RCRA Subtitle D) to dispose of the ash currently being removed from the Emory River. The ash is not classified as a hazardous waste and does not exceed the limits established by the TCLP. TVA is not using this information to assess impacts on human health and the environment. The purpose of TCLP testing is to demonstrate that the ash meets the requirements for disposal at the Arrowhead Landfill in Perry County, Alabama, a Subtitle D permitted facility. The TCLP data are posted at [http://www.tva.gov/kingston/solids/dredged\\_ash/index.htm](http://www.tva.gov/kingston/solids/dredged_ash/index.htm).

EPA guidance and protocols will be followed to perform human health and ecological risk assessments related to the ash cleanup (See response #10 below).

10. 2.3.4 Sampling and Monitoring, paragraph 4, page 11: The Plan states that the average concentrations of metals in the ash are similar to the range of concentrations that are expected in native soil in Tennessee. Averaging sample concentrations does not give a true representation of the risk posed by the contaminants to the public and the environment. It is important to give the public a clear understanding that there are samples that exceed state and federal standards and local or state background levels. The text could state that the cleanup will not underestimate the risk to public health by using averaged samples as the basis for cleanup.

- Response: The reference in the Draft CIP to average concentrations relative to background is intended to provide a regional perspective on the site concentrations. TVA will adhere to EPA guidance for both human health and ecological risk assessment. The EPA guidance includes assumptions which are intentionally conservative so as to not underestimate the risk.

EPA guidance supports the use of an estimate of the average concentration for evaluation of risks to human and ecological receptors, however, because of the uncertainty associated with estimating the true average concentration, the 95% Upper Confidence Limit (UCL<sub>95</sub>) on the mean is used for risk assessment purposes as a conservative estimate of potential exposures over an individual's lifetime.

11. 3.1 Community Profile, fourth paragraph, page 13: Rather than just list the information provided in the Community Profile, the Plan could use it to perform some informative calculations. According to the numbers, 42.9 percent of the affected population is in a vulnerable age category, including children under the age of five, children under age 18, and seniors aged 65 and above. These three age groups are the most susceptible to environmental pollution. Children are not little adults; they have not fully developed and their immune systems are not as strong as adults'. Seniors also have weaker immune systems. A revised draft could indicate that with such a large proportion of vulnerable age groups in the general population, TVA will take extra care when conducting human health risk assessments to be protective of their health and wellbeing.

- Response: As stated in response to comment #4, the purpose of this plan is to discuss how TVA will communicate with and involve the public throughout the cleanup. The Plan notes the percentage of people in Roane County that are under 18 or over 65, and includes outreach activities that are designed to appeal to these populations (website and other new media, as well as emails, newspapers, and presentations to schools as well as civic groups).

A human health risk assessment is being prepared for the Embayment and Dredge Cell EE/CA Report and will specifically address potential risks to children and to adults from potential lifetime exposures to ash-related constituents. These assessments will evaluate health risks posed in the area and will be publically available in the EE/CA Report.

The TDH, in conjunction with the federal ATSDR, has released a draft PHA for the TVA Kingston coal ash release. The PHA addresses all environmental issues related to actual or possible human exposure and is available for review and public comment online at <http://health.state.tn.us/coalashspill.htm> through March 9, 2010.

12. 3.2.1 Outreach, final paragraph, page 14: TVA's reasoning for buying property near the spill site is vague. It is unclear how the residents and houses were impacted by the recovery efforts when the TVA began buying houses so quickly after the accident. In addition, it is unclear whether the reasoning is related to health issues. If this is the case, it is confusing that professional staff now resides in the purchased houses. TVA could further explain the basis of its decision-making in this section.

- Response: As stated in the Draft CIP, TVA's guidelines for purchasing property were based on whether the property was impacted from the spill or the recovery efforts.

Residents were offered the opportunity to sell their property but were not required to do so. Comprehensive air monitoring around the site has led TDEC to state that "The particulate matter and metals measured in air near the site are below national and state standards or are less than any levels of concern. There is no indication of health concerns for area residents or workers." According to their February 24, 2010 POLREP ([www.epakingstontva.com](http://www.epakingstontva.com)), EPA continues to confirm "TDEC's belief that there is no known threat to public health from an air pollution exposure associated with the clean-up of the ash spill at the TVA Kingston Steam Plant". There is no indication of health concerns for the environmental and other professional staff residing in the purchased homes.

13. 3.2.2 Public Meetings/Open house, page 15: Holding an open house is not evidence of community involvement – it's the number of community members who attend the event. The Plan does not indicate the specific number of citizens in attendance at the open house events and public meeting. TVA cannot be sure that its messages and information are reaching far into the community if it does not keep track of the number of citizens that attend its events. Including these numbers in the Plan would also make clear to readers the extent to which the community is choosing to participate in TVA's outreach.

- Response: Community involvement is the result of a number of activities listed in Section 3.2 of the Draft CIP: immediate outreach efforts, the Outreach Team, the Community Outreach Center, the toll-free phone line, doorknob tags, electronic signs, Realty Services, contracting with ORAU, Public Meetings/Open Houses, working with Public Officials, meeting with the Long-Term Recovery Committee, establishing the Roane County Economic Development Foundation, communicating with the media, the website, etc. TVA does not require members of the public to sign in at its events, although people are given the opportunity to sign in if they wish to record their attendance or be added to the email list. Attendance at homeowner meetings ranged from 20-75. We estimate that attendance at public meetings has ranged from 200-250 community members at

early meetings to 40-50 at TVA's most recent public meeting on January 26, 2010. Recent availability sessions have attracted 15-25 people.

14. 3.2.4 Communications, last paragraph, page 16: There was confusion brought forth at the agencies' Availability Session on November 10, 2009 about which website serves as the primary resource for information regarding the site and the cleanup. The Plan could mention EPA's website also, identify what differences exist between TVA's website and EPA's, and what the purpose is of each. For public understanding, it would be beneficial if TVA explained what resources are available on its website and which resources are available on [www.epakingstontva.com](http://www.epakingstontva.com).
  - Response: The EPA's Kingston website is maintained by EPA; TVA does not have editorial control of that website. The TVA Kingston Ash Recovery Project Webpage is a clearinghouse for all TVA information regarding the Kingston site. It is the electronic repository for all documents included in the Administrative Record. It also contains fact sheets, reports and regular updates. It includes notifications about public comment periods. Further, the website also has video clips, FAQs and links to other key agencies. TVA encourages the public to access both EPA and TVA websites to obtain information.
  
15. 3.3 Key Community Concerns, entire section: TVA's analysis of its interviews with community members is characterized by general statements and quotations from individuals, rather than a scientific approach that would indicate a number, or percentage, of residents with an opinion on a certain point. While the open-ended questionnaire does not lead the interviewee by giving him or her pre-selected answers to choose from, there is not a good way to analyze this type of survey in order to give a true comparison of the community's opinions. The survey analysis could include a list of topics and concerns brought up in the interviews and the number of citizens who mentioned each topic to show the range of concerns and patterns of comments.
  - Response: TVA used the questionnaire in the EPA Superfund Toolkit as the basis of its questionnaire for the community interviews. Rather than being a statistically representative survey of public opinion, the community interviews used to develop CIPs are designed to elicit the advice and counsel of community leaders and those most impacted and interested in site cleanup. The advice of these leaders and residents helps the lead agency (in this case, TVA) identify community concerns and the best ways to communicate with all stakeholders.
  
16. 3.3 Key Community Concerns, paragraph 1, page 16: There are several issues presented in this paragraph that undermine the credibility of the community interviews. The number of citizens interviewed is very small compared to the overall population. Fifty interviewees is approximately 0.4 percent of the combined populations of Kingston and Harriman and less than 0.1 percent of the total population of Roane County (using the population counts provided in the Plan). Fifty is a small sample size and therefore unlikely to represent the full range of community concerns. Secondly, the interviewees were hand-selected by TVA, which would indicate that the

community as a whole was not given the chance to participate and give its opinion. Lastly, the interviews were conducted by TVA employees rather than an independent third-party. This sampling design is flawed when compared to professional, scientific methods. Ideally, TVA would conduct a second interview or survey that would be made available to the entire populations of Roane County, Kingston and Harriman, conducted by an independent party and then analyzed using numbers and comparisons to determine patterns and a broader range of concerns.

- Response: According to the EPA Superfund Toolkit, the minimum number of interviewees is 25. TVA invited more than 80 people to participate in its interviews, and over 50 interviews were conducted. Interviewees were selected to fit the criteria given in NCP [40 CFR § 300.430(c)(2)(i); 300.415(n)(3)(i); and 300.415(n)(4)(i)] which requires the lead agency (in this case, TVA) to “conduct community interviews with local officials, community residents, public interest groups, or other interested or affected parties, as appropriate.” TVA invited leaders and residents who had been vocal in their opinions about the site in the press and at public meetings. As the lead cleanup agency at the site, TVA had the responsibility to conduct the public interviews. A public opinion survey of the population of Roane County would provide interesting data but less practical guidance for communicating with the public and involving them in the decision-making process for the Kingston Ash Recovery Project. Residents also have the option of sharing their thoughts and opinions with TVA through the website [www.tva.gov/kingston](http://www.tva.gov/kingston), emails, phone calls, public meetings, or face-to-face encounters.

17. Section 3.3.3. Environmental, page 18: This text indicates that local citizen concerns about environmental media are limited to questioning how contamination might impact the natural resources they rely on and how that might impact their health. As such, environmental concerns related to nature itself (e.g. wildlife, native plants) are not referenced in this section. This absence may indicate that the fifty interviews conducted were not enough to gather a full range of information on concerns or that the topic was not brought forward from the interviews into the report.

- Response: The issues identified in Section 3.3 are generally those mentioned in response to two questions in the questionnaire, Appendix J of the Draft CIP. They are question III.D, “What are your issues, concerns, maybe even fears regarding the ash release and clean up?” and question IV.A “What are the issues, concerns and maybe even fears of the community?” Community concerns and issues mentioned by the interviewees were “brought forward” and included in the Draft CIP.

However, since brought forward by the CAG in response to the Draft CIP, the Final CIP will identify this concern in Section 3.3.3 Environmental.

18. Section 4.1.1 Required Activities, Administrative Record and Information Repository, bullet two, page 22: The text referring to public comment leaves readers with an

unclear understanding of whether the public's input will lead to document revisions and thus, revisions to the actual work conducted during cleanup.

- Response: As stated in response to comment #5, work under a CERCLA removal action often takes place at a quicker pace than under a remedial action. Generally, draft documents are not released to the public for comment before final documents are produced. Instead, public comments on one document are addressed in the Responsiveness Summary for that document and reflected in the preparation of the next document. For instance, comments on the EE/CA Work Plan will be addressed in the Responsiveness Summary for the EE/CA Work Plan, and those comments will be incorporated into the EE/CA Report as appropriate. Comments received on the EE/CA Report will be addressed in the EE/CA Responsiveness Summary and reflected in the non-time critical removal decision and the Action Memorandum as appropriate. Because the pace of work is moving so quickly, TVA will consider public comments throughout the removal action. TVA will incorporate community comments in documents as warranted.

19. Community Advisory Group, bullet three, page 25: The text states that "EPA and TVA will advise members of this CAG throughout the response process." The text could be revised to indicate that the CAG will select its own, independent advisor but that EPA and TVA will be providing the CAG with regular updates as to substance and process related to the cleanup. In addition, this section could include more language on the updates EPA and TVA have already been providing and any other regular correspondence that occurs between the agencies and the CAG. If TVA and EPA intend to provide more than the minimum requirements of CERCLA, then those enhancements should be spelled out in the Plan.

- Response: As stated in response to comment # 2, at the time the Draft CIP was written, the CAG had not yet been selected as the TAP recipient. Therefore, the TAP and CAG information are presented separately in the Draft CIP. TVA and EPA have provided and will continue to provide the CAG with technical information, regular updates and access to the site. This will facilitate TVA's communication with the public and the community's involvement in TVA's decision-making process at the site as the CAG's stated purpose. See EPA Guidance for Community Advisory Groups at Superfund Sites OSWER Directive 9230.0-28 PB94-963293. The final CIP will be revised to reflect the CAG's relationship to EPA and TVA.

20. 4.2.2 Non-Time Critical Removal Actions, last paragraph, page 30: This section emphasizes that timeliness is critical to the cleanup progression, but it is silent on how the comments on and suggested changes to the Work Plan will be incorporated into the work outlined within it. The language in this section could be edited to include information on whether the Work Plan is finalized or if there is room for editing before work begins in spring 2010.

- Response: As covered in response to comment #5 and #18, work under a CERCLA removal action often takes place at a quicker pace than under a remedial action. Generally, draft documents are not released to the public for comment before final documents are produced. Instead, public comments on one document are addressed in the Responsiveness Summary for that document and reflected in the preparation of the next document. For instance, comments on the EE/CA Work Plan will be addressed in the Responsiveness Summary for the EE/CA Work Plan, and those comments will be incorporated into the EE/CA Report as appropriate. Comments received on the EE/CA Report will be addressed in the EE/CA Responsiveness Summary and reflected in the non-time critical removal decision and the Action Memorandum as appropriate. Because the pace of work is moving so quickly, TVA will consider public comments throughout the removal action. TVA will incorporate community comments in documents as warranted.

21. Section 2.2 Site Location: The mileages listed are “as the crow flies,” correct? Not roadway mileages?

- Response: Mileages will be adjusted to reflect approximate driving distance from the Kingston Fossil Plant based on information gathered from Google Maps (<http://maps.google.com>) as of February 3, 2010.

22. On page 7, the last paragraph says, “EPA initiated a sampling program on December 23, 2008 which included an area approximately one mile upstream of the release area on the Clinch River.” The release was on the Emory River... do you mean “on the Clinch River approximately one mile upstream from the confluence of the Clinch and Emory Rivers?”

- Response: No, however the sampling area was not described correctly in the Draft CIP. The Final CIP will be revised to accurately describe the designated sampling area during the emergency response.

23. On page 12 it states that “no evidence that past contamination of sediments would have any impact on TVA’s dredging of ash?” Why did we hear so much about the selenium then? What happened to it?

- Response: The reference on page 12 to “past contamination” refers to contamination of the Clinch and Emory River sediments from sources or events other than the ash spill.

For example, it is known that past practices at facilities on the Department of Energy’s Oak Ridge Reservation have resulted in mercury and radionuclide contamination of Clinch River sediments. Due to flow dynamics between the Clinch and Emory Rivers at various times of the year, it is possible that some of this “legacy” contamination could have entered the mouth of the Emory River. The sampling by the interagency group was intended to determine if TVA’s

dredging activities would disturb any potentially-significant levels of these contaminants.

Regarding selenium, there have been two independent reviews of the potential for dredging to increase selenium levels in the environment. These reviews were triggered by some expressed concerns over the potential mobilization of selenium concentrations that would exceed aquatic toxicity levels. Reports issued by an EPA Science Panel Review (at the request of the Senate Committee on Environment and Public Works) and the U.S. Army Engineering and Development Center concluded that TVA dredging activities would not result in mobilization of adverse levels of selenium. Both reports can be found at the following link <http://www.epakingstontva.com/Selenium%20Reports/Forms/AllItems.aspx>

24. On page 22, Communication Tools: states that the following tools will be used to pass information to the public. Several of the tools make specific mention of the methods of information dispersal planned, such as newspaper ads or email. But no mention is made on the next couple of pages about how or where the Responsiveness Summaries, Public Meetings and Open Houses are going to be advertised. Might be worth a few words there to clarify methods of advertisement.

- Response: Agreed. The methods that TVA will use to advertise the availability of information will be added to the section entitled “Communication Tools” where applicable. Public Meetings and Open Houses will be advertised in local newspapers, through the [www.tva.gov/kingston](http://www.tva.gov/kingston) web page, and on electronic message boards. The Responsiveness Summaries will be available in the Administrative Record and online.

25. On page 28 the chart states under Time-critical removal actions: “1. Prevent the coal ash from release from negatively impacting public health and the environment.” This statement is rather curious; once the ash was released it immediately had negative impact on the environment (maybe not so immediately on public health). Can’t prevent that from happening; already done. Maybe should say something like “mitigate or alleviate” the negative impact of the coal ash release... or maybe a work like “salvage” or “rehabilitate.” But “prevent” is not appropriate here.

- Response: This is a direct quote from the portion of the Administrative Order on Consent that describes the difference between time-critical, non-time critical and remedial actions.

26. In Appendix F: “Potentially” Responsible Party????? It’s TVA’s plant, TVA’s ash pond, and TVA’s broken dam... The dam was not broken due to another party’s actions. I guess you have to list it this way since there are lawsuits on the table, and you don’t want to hand them anything. But maybe it would be a little less... insulting to the community if TVA was listed as, I don’t know, maybe Property Owner of Record or something.



- Response: Potentially Responsible Party is common environmental law terminology used by the EPA to describe an individual or company (such as an owner, operator, transporter, etc.) that is responsible or potentially responsible for creating or contributing to contamination problems at a CERCLA site.

27. In the interest of saving paper, for anyone crazy enough to print out all 79 pages... I suppose there is a reason why each appendix has to have a cover sheet, but only the one I see as really needing one is Appendix M, Material Data Sheets. For the other, the title of the Appendix itself says the same thing as the cover sheet just before it, and takes up less than one page each.

- Response: Agreed. In future copies, TVA will remove the cover sheets for the Appendices, except for Appendix M.

# Request for Public Comment



## Engineering Evaluation/Cost Analysis (EE/CA) Report on Non-Time-Critical Ash Removal

TVA wants to hear from you about the next phase of work on the Kingston Ash Recovery Project. To help describe the alternatives being considered for site cleanup, TVA has published an EE/CA Report.



SEE REVERSE SIDE FOR INFORMATION  
FEBRUARY 15, 2010

### What is an EE/CA Report?

The EE/CA Report describes the objectives of the removal action in the embayment and dredge cell areas and compares three alternatives for restoring the environment impacted by the spilled fly ash. The EE/CA Report is available for public review and comment through April 5, 2010.

A separate EE/CA Report for residual ash in the river system will be prepared after time-critical dredging is completed.

### What are the alternatives?

#### ALTERNATIVE 1

- **Ash Removal:** 2.8 million cubic yards (cy) of ash from embayment
- **Dredge Cell:** 10.8 million cy graded for drainage and dike installed to keep ash from entering embayment in future
- **Disposed:** 2.8 million cy offsite; 10.8 million cy onsite; 4.0 million cy in ash pond
- **Dredge Cell Height:** 790 ft. above sea level (Swan Pond Rd. is 765 ft.)
- **Disposal Traffic:** 380 trains for 19 months, or 280 trains and 35,000 trucks for 14 months
- **Project Duration:** 2.8 years to close dredge cell plus 10 months to close ash pond
- **Cost:** \$440 million to \$450 million

#### ALTERNATIVE 2

- **Ash Removal:** 6.8 million cy of ash from embayment and dredge cell
- **Dredge Cell:** 6.8 million cy of remaining ash graded to gradual slope
- **Disposed:** 6.8 million cy off-site; 6.8 million cy in dredge cell; 4.0 million cy in ash pond
- **Dredge Cell Height:** 765 - 780 ft. above sea level
- **Disposal Traffic:** 910 trains for 45 months, or 810 trains and 35,000 trucks for 39 months
- **Project Duration:** 4.1 years to close dredge cell plus 10 months to close ash pond
- **Cost:** \$720 million to \$740 million

#### ALTERNATIVE 3A

- **Ash Removal:** 2.5 million cy of ash from embayment with on-site disposal in the closed dredge cell

- **Dredge Cell:** 13.6 million cy stacked in closed dredge cell
- **Disposed:** None off-site; 13.6 million cy in closed dredge cell; 4.0 million cy in ash pond
- **Dredge Cell Height:** 805 ft. above sea level
- **Disposal Traffic:** None
- **Project Duration:** 4 years to close dredge cell plus 10 months to close ash pond
- **Cost:** \$320 million

#### ALTERNATIVE 3B

- **Ash Removal:** 2.5 million cy of ash from the embayment with on-site disposal spread across the closed dredge cell and ash pond.
- **Dredge Cell:** 17.6 million cy of ash spread across the closed dredge cell and ash pond
- **Disposed:** None off-site; 17.6 million cy spread across closed dredge cell and ash pond
- **Dredge Cell Height:** 790 ft. above sea level
- **Disposal Traffic:** None
- **Project Duration:** 4.1 years to close all
- **Cost:** \$270 million

### How do you provide comments?

The EE/CA Report is available for review at [www.tva.gov/kingston/eeca](http://www.tva.gov/kingston/eeca) or at:

**TVA Outreach Center**  
509 N. Kentucky Street  
Kingston, Tennessee  
(865) 632-1700

**Kingston Public Library**  
1004 Bradford Way  
Kingston, Tennessee  
(865) 376-9905

These same documents are available on computer disk at the following location:

**Harriman Public Library**  
601 Walden Street, Harriman, Tennessee  
(865) 882-3195

Comments about the EE/CA Report may be submitted until April 5, 2010. All public comments will be considered before a final decision is made on the cleanup alternatives.

**Comments may be mailed to TVA, P.O. Box 40, Kingston, TN 37763-0400, or e-mailed to [kingstoncomm@tva.gov](mailto:kingstoncomm@tva.gov).**

TVA-10-001

## APPENDIX Y EE/CA SPEAKING ENGAGEMENTS

### Public Speaking Engagements

<u>Name of Group</u>	<u>Date</u>	<u>Location</u>	<u>Topic</u>	<u>Speaker</u>
Harriman Community & City Council	6-Jan-2009	Harriman United Methodist Church	Kingston Recovery Meeting	Tom Kilgore, TVA CEO & TVA Management
Kingston Community & City Council	6-Jan-2009	Kingston Community Center	Kingston Recovery Meeting	TVA Management
Roane County Commission	12-Jan-2009	Roane County Courthouse, Kingston, TN	Kingston Recovery Meeting	Tom Kilgore, TVA CEO
Local Industry Toho Tenax	14-Jan-2009	Toho Tenax	Kingston Recovery Q&A session w/plant management	John Harenza & Bert Robinson, TVA Management
Kingston Recovery Open House	15-Jan-2009	Roane State Community College, Harriman, TN	Kingston Ash Recovery Project	Kingston Ash Recovery Project Management & Staff
Local Industry Toho Tenax	22-Jan-2009	Toho Tenax	Kingston Recovery Q&A session w/plant employees	John Harenza & Bert Robinson, TVA Management
Tennessee General Assembly	18-Feb-2009	Nashville, TN	Kingston Recovery Joint Hearing	Tom Kilgore, TVA CEO & Bill Sansom, TVA Board of Directors Chairman
Kingston Recovery Open House	30-Mar-2009	Roane State Community College, Harriman, TN	Kingston Ash Recovery Project	Kingston Ash Recovery Project Management & Staff
Y-12 Management Meeting	6-Apr-2009	Oak Ridge, TN	Kingston Ash Recovery Project	Ron Hall, TVA Management
Roane County Long Term Recovery Committee	22-Apr-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
World of Coal Ash Association	5-May-2009	Lexington, KY	General Update on Ash Recovery Project	Mike Scott, TVA Management
Roane County Long Term Recovery Committee	6-May-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
Roane County Long Term Recovery Committee	20-May-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
EPA/ORD Board of Scientific Advisors	5-Jun-2009	Duluth, MN	Kingston Ash Recovery Project	Neil Carriker, TVA Management
Tennessee Citizens for Wilderness Protection	16-Jun-2009	Oak Ridge, TN	Kingston Ash Recovery Project	Neil Carriker, TVA Management
Kingston Ash Recovery Project Public Meeting	23-Jun-2009	Roane State Community College, Harriman, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management & Staff
Elected Stakeholders	25-Jun-2009	TVA Recovery Offices	Kingston Root Cause Analysis	Kingston Ash Recovery Project Management
Roane County Long Term Recovery Committee	1-Jul-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
Roane County Long Term Recovery Committee	29-Jul-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
East Tennessee Economic Council Meeting	31-Jul-2009	Oak Ridge, TN	General Update on Ash Recovery Project	Kim Greene, TVA Management
East Tennessee Economic Council Meeting	1-Aug-2009	Oak Ridge, TN	General Update on Ash Recovery Project	Anda Ray, TVA Management
Coal Generation 2009 Conference	19-Aug-2009	Charlotte, NC	General Update on Ash Recovery Project	Mike Scott, TVA Management
Leadership Roane	21-Sep-2009	Roane County Park, Harriman,	General Update on Ash Recovery Project	Mike Scott, TVA Management
American Coal Ash Association – Fall Meeting	22-Sep-2009	Denver, CO	General Update on Ash Recovery Project	Kathryn Nash, TVA Management
TVA Kingston Retirees Association	28-Sep-2009	Kingston, TN	General Update on Ash Recovery Project	Mike Scott, TVA Management
Oak Ridge Emergency Management Forum	1-Oct-2009	Oak Ridge, TN	Kingston Ash Recovery Project	Neil Carriker, TVA Management
Roane County Long Term Recovery Committee	7-Oct-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
TVA Fall Industrial Conference	28-Oct-2009	Nashville, TN	General Update on Ash Recovery Project	Mike Scott, TVA Management
Tennessee Chamber of Commerce and Industry - The 27th Annual Environmental Awards Conference	29-Oct-2009	Nashville, TN	General Update on Ash Recovery Project	Mike Scott, TVA Management

<b>Chattanooga Engineers Club</b>	16-Nov-2009	Chattanooga, TN	General Update on Ash Recovery Project	Mike Scott, TVA Management
<b>Roane County Long Term Recovery Committee</b>	18-Nov-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
<b>Roane County Long Term Recovery Committee</b>	16-Dec-2009	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
<b>University of Tennessee Knoxville Chemistry Department</b>	21-Jan-2010	UTK Campus, Buehlar Hall, Knoxville, TN	General Update on Ash Recovery Project	Bill Rogers, TVA
<b>Kingston Ash Recovery Project Public Meeting</b>	26-Jan-2010	Roane County High School, Kingston, TN	EE/CA & General Update on Ash Recovery Project	Kingston Ash Recovery Project Management & Staff
<b>Roane State Community College Industrial Hygiene Class</b>	9-Feb-2010	Roane State Community College, Harriman, TN	EE/CA	Steve McCracken, TVA Management
<b>Arcadis Sediment Management Conference</b>	11-Feb-2010	Ft. Lauderdale, FL	TVA's Unexpected Excursion Into the World of CERCLA	Neil Carriker and Dennis Yankee, TVA Management
<b>Roane State Community College Environmental Health Class</b>	11-Feb-2010	Roane State Community College, Harriman, TN	EE/CA	Steve McCracken, TVA Management
<b>Roane Alliance Industrial Development Board</b>	11-Feb-2010	Roane Alliance, Kingston TN	EE/CA	Steve McCracken, TVA Management
<b>Kingston Optimists</b>	11-Feb-2010	Cherokee Middle School Baseball Field, Kingston, TN	EE/CA	Steve McCracken, TVA Management
<b>Tennessee General Assembly</b>	16-Feb-2010	Nashville, TN	Update Briefing on Ash Recovery Project	Steve McCracken, Bob Deacy
<b>Roane County Long Term Recovery Committee</b>	17-Feb-2010	Roane County Courthouse, Kingston, TN	General Update on Ash Recovery Project	Kingston Ash Recovery Project Management
<b>Mid-East CAC Seniors - Harriman</b>	17-Feb-2010	710 Clifty St., Harriman, TN	EE/CA	Steve McCracken, TVA Management
<b>Mid-East CAC Seniors - Roane County</b>	18-Feb-2010	Kingston Community Center, Kingston, TN	EE/CA	Steve McCracken, TVA Management
<b>Harriman Lions</b>	22-Feb-2010	Donna's Restaurant, Harriman, TN	EE/CA	Craig Zeller, EPA Management
<b>Harriman Kiwanis</b>	24-Feb-2010	Roane State Community College, Harriman, TN	EE/CA	Steve McCracken, TVA Management
<b>Oak Ridge Kiwanis</b>	2-Mar-2010	Ryan's Steakhouse, Oak Ridge, TN	EE/CA	Steve McCracken, TVA Management
<b>Kingston Rotary</b>	2-Mar-2010	Sweet-n-Spicy Restaurant, Kingston, TN	EE/CA	Steve McCracken, TVA Management
<b>VFW Post 6598</b>	4-Mar-2010	195 Tub Springs Rd., Harriman, TN	EE/CA	Tim Russ, TVA Management
<b>Kingston Lions</b>	8-Mar-2010	Kingston Community Center, Kingston, TN	EE/CA	Steve McCracken, TVA Management
<b>Harriman Rotary</b>	11-Mar-2010	Roane State Community College, Harriman, TN	EE/CA	Steve McCracken, TVA Management
<b>Kingston Ash Symposium</b>	11-Mar-2010	Roane State Community College, Harriman, TN 9:00 – 9:30 a.m. 9:30 – 10:00 a.m. 10:30 – 11:00 a.m. 11:00 – 11:30 a.m. 11:30 a.m. – 12:00 p.m. 1:00 – 1:30 p.m. 1:30 – 2:00 p.m. 2:30 – 4:00 p.m. 4:30 – 5:30 p.m.	Welcome/Introduction/Purpose Session 1 – EPA - KIF recovery status Session 2 – Site Characterization Overview Session 3 – Geochemistry Overview Session 4 – Ecotoxicology Overview Session 5 – Ecological Studies Overview Session 6 – Ecological Risk Assessment/Risk Management Overview Poster Session for Registered Attendees Sampling Coordination Meeting	Anda Ray, TVA Craig Zeller, EPA Bill Rogers, TVA Mark Chappell, USACE-ERDC Rick Sherrard, TVA Marshall Adams, ORNL Dan Jones, Arcadis Tyler Baker, TVA
<b>West Knoxville Rotary</b>	12-Mar-2010	Buddy's BBQ/Bearden Banquet Hall, Knoxville, TN	EE/CA	Steve McCracken, TVA Management
<b>Rockwood Rotary</b>	15-Mar-2010	Victorian Square, Rockwood,	EE/CA	Mike Scott, TVA Management
<b>American Coal Ash Association - Winter Meeting</b>	17-Mar-2010	Nashville, TN	General Update on Ash Recovery Project	Kathryn Nash, TVA Management
<b>Cleveland Associated Industries – Environmental Committee</b>	18-Mar-2010	Cleveland Country Club, Cleveland, TN	EE/CA	Dennis Yankee, TVA Management



<b>Roane County School Principals</b>	19-Mar-2010	Board of Education, Roane County, TN	EE/CA	Steve McCracken, TVA M
<b>Red Bank United Methodist Church</b>	2-Apr-2010	Red Bank , TN	EE/CA	Kathryn Nash, TVA Mana
<b>Associated Construction Women/Construction Financial Management Association Joint Monthly Meeting</b>	8-Apr-2010	Rothchild Catering, Knoxville, TN	General Update on Ash Recovery Project	Kathryn Nash, TVA Mana
<b><u>Kingston Ash Recovery Project Public Official Site Visits &amp; Tours</u></b>				
<b>Roane Co. Executive Mike Farmer</b>	22-Dec-2008	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Senator Ken Yager</b>	23-Dec-2008	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Representative Lincoln Davis</b>	30-Dec-2008	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Governor Phil Bredesen and local officials</b>	31-Dec-2008	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Representative Dennis Ferguson</b>	31-Dec-2008	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Senator Bob Corker and local officials</b>	5-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Roane Co. Executive Mike Farmer</b>	5-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Harriman Mayor Chris Mason</b>	5-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Rockwood Mayor Michael Miller</b>	5-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Kingston Mayor Troy Beets</b>	5-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Representative Heath Shuler</b>	5-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	Phillips and Jordan staff
<b>Office of U.S. Representative Zach Wamp (staff)</b>	5-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Harriman City Council</b>	6-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Representative John J. Duncan, Jr.</b>	12-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Office of Representative John J. Duncan, Jr. (staff)</b>	12-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Senator Ken Yager</b>	12-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Roane County Emergency Services Director Howie Rose</b>	12-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Kingston City Council</b>	12-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Surface Transportation Board Member Doug Buttrey</b>	14-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Office of U.S. Sen. Lamar Alexander (staff)</b>	15-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Office of U.S. Senator Bob Corker (staff)</b>	15-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Representative Joe McCord</b>	16-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Representative Frank Niceley</b>	16-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Representative David Hawk</b>	16-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management

<b>State Representative Bob Ramsey</b>	16-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Representative John Litz</b>	16-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Senator Steve Southerland</b>	21-Jan-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Roane County Commission</b>	6-Feb-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Office of U.S. Senator Bob Corker (staff)</b>	6-Feb-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>TDOT Commissioner Gerald Nicely &amp; staff</b>	14-Feb-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Representative Phil Roe</b>	17-Feb-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Representative Lincoln Davis</b>	17-Feb-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Senator Lamar Alexander</b>	19-Feb-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>State Representative Ron Lollar</b>	23-Feb-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Roane County Executive Mike Farmer</b>	10-Mar-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Kingston Mayor Troy Beets</b>	10-Mar-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>NE Valley Regional Field Team Meeting</b>	10-Mar-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Senator Bob Corker (via flyover)</b>	9-Apr-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Southeast District Power Distributor Managers</b>	15-Apr-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Office of U.S. Senator Lamar Alexander (DC staff)</b>	16-Apr-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Valley Relations Congressional Tour – Knoxville</b>	14-May-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Representative Eddie Bernice Johnson</b>	7-Jun-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Uniontown, AL elected officials</b>	8-Jun-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Government Accountability Office (GAO)</b>	16-Jun-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Association of Tennessee Valley Governments (ATVG)</b>	9-Jul-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Cumberland County Mayor and Commission</b>	27-Jul-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>U.S. Representative Lincoln Davis</b>	4-Aug-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Washington D.C. Staff Congressional Tour</b>	12-Aug-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Elected Stakeholders</b>	14-Dec-2009	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project One-year Tour	TVA Management
<b>Roane Community Advisory Group</b>	18-Mar-2010	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management
<b>Roane County Environmental Review Board</b>	6-May-2010	Kingston Fossil Plant, Harriman, TN	Kingston Ash Recovery Project Tour	TVA Management

## APPENDIX Z EPA ACTION MEMORANDUM FACT SHEET



### U.S. Environmental Protection Agency Action Memorandum (AM) Fact Sheet on Selected Engineering Evaluation/Cost Analysis (EE/CA) Alternative Kingston Fossil Fuel Plant Release Site Harriman, Roane County, Tennessee

May 2010

*This fact sheet is intended to keep the community informed about progress at the Tennessee Valley Authority (TVA) Kingston Fossil Fuel Plant Release Site. This fact sheet announces the selection of the Engineering Evaluation/Cost Analysis (EE/CA) alternative for non-time critical cleanup at the site.*

#### **SITE BACKGROUND**

On December 22, 2008, at approximately 1:00 a.m., a failure of the northwest side of a dike used to contain fly ash occurred at the TVA Kingston Fossil Fuel Plant, located at 714 Swan Pond Road in Harriman, Roane County, Tennessee. Subsequent to the dike failure, approximately 5.4 million cubic yards of fly ash were released into the Swan Pond embayment and three adjacent sloughs, eventually spilling into the main Emory River channel. The release extended approximately 300 acres outside of the fly ash storage areas of the plant. Local emergency officials first responded to the scene and, shortly thereafter, began to assist residents affected by the flows of fly ash. At the request of local and state emergency management agencies, the U.S. Environmental Protection Agency (EPA) responded to the scene the same day the incident occurred to monitor the cleanup, conduct water quality sampling and help establish a unified command system. EPA remobilized to the site to oversee the cleanup under the Administrative Order and Agreement on Consent signed by EPA and TVA on May 11, 2009.

#### **CLEANUP PLAN SELECTED**

EPA Region 4 has approved the TVA's selected cleanup plan for the next phase of coal ash removal at the TVA Kingston site. Following consultation with the Tennessee Department of Environment and Conservation, EPA and TVA signed the Action Memorandum (AM) on May 18, 2010, approving the selected cleanup plan.

Of the three alternatives considered in the EE/CA, the agencies chose this cleanup plan (Alternative 3b) above the others because of its protectiveness, ease of implementation, and cost effectiveness. All the ash will be consolidated in an on-site disposal area, and no material will be taken off-site—eliminating potential impacts associated with off-site disposal. Details about the plan are posted on the EPA's and TVA's web pages (see box to the right). The plan is also available at the information repositories listed on the back page.

**Find the complete AM and  
Responsiveness Summary:**

[www.epakingstontva.com](http://www.epakingstontva.com)  
[www.tva.gov/kingston](http://www.tva.gov/kingston)

#### **SELECTED ALTERNATIVE DETAILS**

The plan calls for all the fly ash that was released into the Swan Pond embayment to remain on-site. The approximately 2.5 million cubic yards of ash from the embayment will be disposed of in an on-site disposal area encompassing the ash pond and former dredge cell—no material will be taken off-site. A new dike will be installed around the entire perimeter of the on-site disposal area to keep the ash from entering the embayment in the future, and the area will be graded for drainage. This dike will go 60 to 70 feet below the ground to the shale bedrock, and will consist of overlapping soil-cement columns that are able to withstand a local 6.0 magnitude earthquake. Ash will be placed into the on-site disposal area slowly so that it does not slide and, once all the ash



has been put in place, a two-foot clay cover and one foot of top soil will be put over it. Vegetation will then be planted to prevent erosion.

The height of the closed on-site disposal area will be approximately 790 feet in elevation above mean sea level, which is 30 feet lower than the former dredge cell. Basically, this means that the height of the on-site disposal area will be about 25 feet above the road surface. This cleanup plan entails closing the ash pond at the same time as the former dredge cell. Closing the areas at the same time will eliminate the need for imported fill material to close the ash pond, which is expected to result in schedule efficiencies and cost savings. Following the removal of ash to native sediments, the embayment area will be restored to conditions that protect human health and the environment. This will enhance diverse habitats for fish, semi-aquatic amphibians, and bird species.

Drinking water, river water and groundwater in the area are sampled on a routine basis, and current results indicate no exceedances of drinking water standards or surface water quality criteria. Semiannual sampling of groundwater wells indicates no contaminant plume is present under or around the site. Continued ecological, groundwater and river sampling will be conducted after the cleanup is complete to monitor water conditions surrounding the site.

This cleanup plan is expected to take about four years to complete and will cost approximately \$268.2 million, which includes an estimated \$686,000 in annual maintenance costs for the first 30 years once the cleanup is complete. Ongoing five-year reviews will be conducted to ensure the integrity of the ash containment.

This cleanup plan builds on work already done during the time-critical phase. Ash recovered during the time-critical phase will continue to be taken off-site to the landfill in Perry County, Alabama. Disposal of this material off-site is expected to continue until the end of 2010.

#### **RESPONSIVENESS SUMMARY**

TVA received comments on its proposed plan from a total of 36 individuals and groups, including the Roane County Environmental Review Board, the Environmental Integrity Project and the Roane County Community Advisory Group. TVA's responses to all comments can be found in the responsiveness summary, an appendix of the AM, on the websites shown in the box on Page 1.

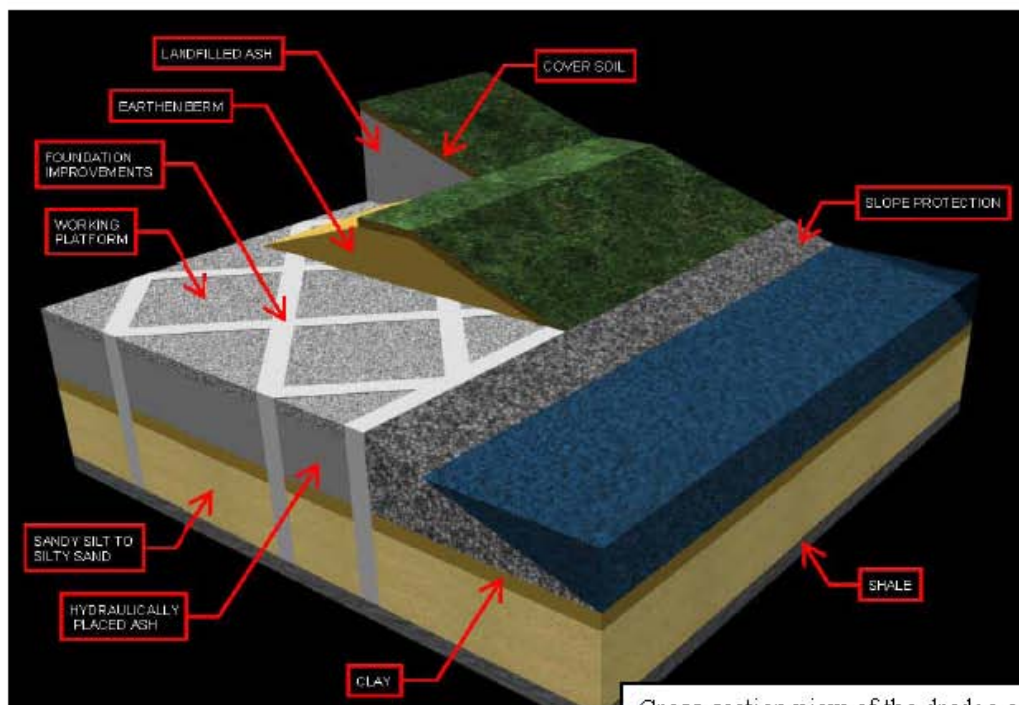
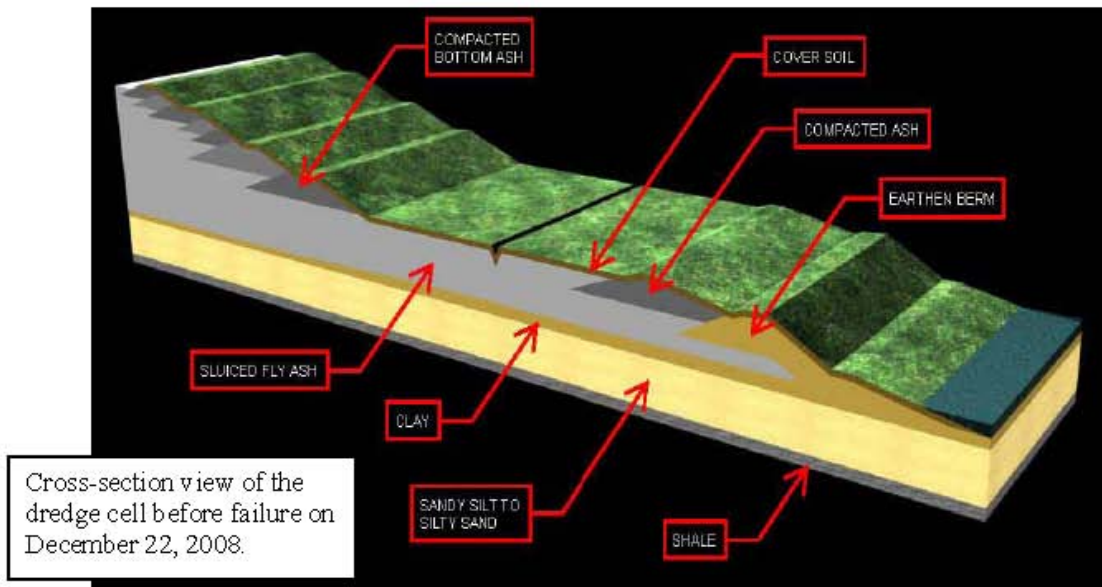
**ACTION MEMORANDUM PUBLIC COMMENT PERIOD**

There will be a 30-day public comment period on the AM starting  
**May 19, 2010 through June 18, 2010.**  
Please provide comments by email or mail to the addresses below.

<b>Email AM Public Comments to:</b> <a href="mailto:kingstoncomm@tva.gov">kingstoncomm@tva.gov</a>	<b>Mail AM Public Comments to:</b> Tennessee Valley Authority P.O. Box 40 Kingston, TN 37763-0400
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## DREDGE CELL WALL MODELS

Cross-section model of the dredge cell before the failure and after non-time critical actions are complete.



**TVA Kingston Cleanup Website: [www.epakingstontva.com](http://www.epakingstontva.com)**

**EPA Project Team Contacts**

On-Scene Coordinator

Leo Francendese  
865-717-1634  
[Francendese.Leo@epa.gov](mailto:Francendese.Leo@epa.gov)

Community Involvement Coordinator

Stephanie Y. Brown  
678-575-8505 or 877-718-3752  
[Brown.StephanieY@epa.gov](mailto:Brown.StephanieY@epa.gov)

Remedial Project Manager

Craig Zeller  
404-562-8827  
[Zeller.Craig@epa.gov](mailto:Zeller.Craig@epa.gov)

Tennessee Department of Environment and Conservation Contact

Barbara Scott  
865-696-9614  
[Barbara.Scott@tn.gov](mailto:Barbara.Scott@tn.gov)

**Information Repositories**

TVA Outreach Center

509 N. Kentucky St.  
Kingston, TN 37763  
865-632-1700

Harriman Public Library

601 Walden St.  
Harriman, TN 37748  
865-882-3195

Kingston Public Library

1004 Bradford Way  
Kingston, TN 37763  
865-376-9905

U.S. EPA Region 4

Sam Nunn Atlanta  
Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303



Region 4  
Attn: Stephanie Y. Brown  
U.S. EPA Region 4  
Office of Superfund  
61 Forsyth Street, SW  
Atlanta, GA 30303-8960

RETURN ADDRESS REQUESTED

FIRST CLASS

**TVA Kingston Fossil Fuel Plant Release Site:  
Action Memorandum Signed; Cleanup Plan Selected**