



**Memorandum from the Office of the Inspector General**

September 22, 2010

Robert M. Deacy, Sr., LP 5D-C  
Peyton T. Hairston, Jr., WT 7B-K

**FINAL REPORT – INSPECTION 2010-13034 – REVIEW OF TVA'S KINGSTON ASH  
SPILL CLEAN-UP AND RECOVERY EFFORTS**

Attached is the subject final report for your review. This report does not include any recommendations and is to be used for informational purposes only. Accordingly, no response is necessary.

Information contained in this report may be subject to public disclosure. Please advise us of any sensitive information in this report which you recommend be withheld.

If you have any questions, please contact Michael R. Patty, Auditor, at (423) 785-4821 or Gregory C. Jaynes, Deputy Assistant Inspector General, Inspections, at (423) 785-4810. We appreciate the courtesy and cooperation received from your staff during this review.

*Robert E. Martin*

Robert E. Martin  
Assistant Inspector General  
(Audits and Inspections)  
ET 3C-K

KSL:NLR  
Attachment  
cc (Attachment):

Janet C. Herrin, WT 10D-K  
John C. Kammeyer, LP 5D-C  
Tom D. Kilgore, WT 7B-K  
Katherine B. Kline, KFP 1T-KST  
William R. McCollum, Jr., LP 6A-C  
Stephen H. McCracken, KFP 1T-KST  
Annette L. Moore, LP 3K-C  
Richard W. Moore, ET 4C-K

David R. Mould, WT 7B-K  
Anda A. Ray, WT 11A-K  
Emily J. Reynolds, OCP 1L-NST  
Joyce L. Shaffer, WT 9B-K  
John M. Thomas III, MR 3A-C  
Robert B. Wells, WT 9B-K  
Wendy Williams, WT 9B-K  
OIG File No. 2010-13034



Tennessee Valley Authority  
Office of the Inspector General

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# *Inspection Report*

## **REVIEW OF TVA'S KINGSTON ASH SPILL CLEAN-UP AND RECOVERY EFFORTS**

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Inspection 2010-13034  
September 22, 2010

## **ACRONYMS AND ABBREVIATIONS**

AOC	Administrative Order and Agreement on Consent
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COT	Community Outreach Team
EPA	Environmental Protection Agency
EE/CA	Engineering Evaluation/Cost Analysis
OIG	Office of the Inspector General
ORAU	Oak Ridge Associated Universities
RAO	Removal Action Objective
TDEC	Tennessee Department of Environment and Conservation
TVA	Tennessee Valley Authority

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- B. OBJECTIVES, SCOPE, AND METHODOLOGY
- C. MEMORANDUM DATED SEPTEMBER 17, 2010, FROM ROBERT M. DEACY TO ROBERT E. MARTIN



# Inspection 2010-13034 – Review of TVA’s Kingston Ash Spill Clean-up and Recovery Efforts

## EXECUTIVE SUMMARY

### Why the OIG Did This Review

Based on the OIG’s (Office of the Inspector General) ongoing commitments to provide oversight of the Kingston Fossil Plant ash spill clean-up and perform a follow-up review of reparations to victims, we assessed TVA’s (Tennessee Valley Authority) clean-up and recovery efforts. Specifically, on December 9, 2009, Richard W. Moore, TVA’s Inspector General, testified before the Subcommittee on Water Resources and Environment, U.S. House Committee on Transportation and Infrastructure. In his testimony, Mr. Moore stated that the TVA OIG will measure and track TVA’s progress in addressing the findings and recommendations in our reports and is committed to performing a follow-up review of reparations to victims.

The objectives of this review were to assess TVA's progress in two areas: (1) the clean-up of the ash and returning the area to its previous condition and (2) reparations to victims and restoration of the community.

### What the OIG Found

TVA’s actions to date indicate it is committed to cleaning up the Kingston Ash Spill and restoring the area to its pre-spill condition. TVA has also provided reparations to the victims and is making progress toward restoring the community to its previous state. We found, (1) clean-up efforts are proceeding judiciously and (2) specific TVA actions not only appropriately address restoration but also show a commitment to regain public confidence.

#### **TVA's Commitment to Clean Up and Restoration of Area to Pre-spill Condition**

We found comprehensive efforts have been completed and are still ongoing pertaining to the clean-up of the spill. TVA is making significant progress in the clean-up and continues to consider human health and the environment in the recovery. Specifically, we found that TVA (1) met its goal of removing the time critical ash necessary to reopen the Emory River by the end of May 2010, (2) implemented a removal plan for non-time critical ash in spring 2010 to facilitate a smooth transition between clean-up phases, (3) developed a good working relationship with the Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC) to manage and facilitate the clean-up, and (4) coordinated with EPA and TDEC to provide continuous environmental monitoring.



# Inspection 2010-13034 – Review of TVA’s Kingston Ash Spill Clean-up and Recovery Efforts

## EXECUTIVE SUMMARY

### **TVA's Commitment to Providing Reparations to the Victims and Restoring the Community**

We found TVA has made a concerted effort to address restoration and regain public trust. Specifically, TVA immediately established a process to handle real and personal property, loss of business, and mileage claims. In addition, we found TVA's adjudication of the claims was consistent, and in accordance, with approved processes and guidelines.

Other actions TVA has taken to restore the community and regain public trust have included:

- Committing \$43 million to economic development in Roane County.
- Initiating projects to improve community infrastructure, lessen the impact of recovery operations on the public, and promote Roane County.
- Promoting the sharing of information and coal ash research.
- Implementing various mechanisms to improve communications, address inquiries, and provide information to the Kingston residents and media.
- Providing independent health screenings.

### **Management Comments on Draft Report**

The Senior Vice President and Executive, Kingston Ash Recovery Project, in conjunction with the Senior Vice President, Diversity and Labor Relations, provided comments on a draft of this report. TVA management agreed with our findings and provided a few administrative and clarifying comments for our consideration. We reviewed and agreed with the technical comments provided and modified the report accordingly. Management's complete comments are included in Appendix C of this report.

## **BACKGROUND**

On Monday, December 22, 2008, between 12 midnight and 1 a.m., a portion of the dike for an ash containment area at Kingston Fossil Plant failed. Approximately 5.4 million cubic yards of fly ash and bottom ash were released onto land and adjacent waterways, including the Emory River that flows into the Clinch River near the plant. The approximate 1 billion gallons of coal combustion waste slurry covered about 300 acres of which 8 acres were privately owned lands, not owned or managed by Tennessee Valley Authority (TVA). The impacts of the tsunami and coal ash sludge destroyed and/or damaged (1) the railroad adjacent to the plant, (2) real and personal property, and (3) community infrastructure, including roads and utilities. TVA took immediate and ongoing actions to address the needs of those affected, clean up the spill, and protect human health and the environment. TVA also took action and made commitments to restore the area and regain public confidence and reiterated TVA's commitments many times. Correspondingly, TVA's Office of the Inspector General (OIG) committed to providing ongoing oversight, where warranted, and performing a follow-up review on reparations.

## **TVA'S IMMEDIATE ACTIONS**

TVA stated the first concerns, after determining there was no loss of life and no injuries needing medical attention, included safety of those near the plant and helping the people immediately impacted. In addition to damage assessments and visual inspections of the remaining coal ash impoundments at Kingston, visual inspections of all TVA coal ash and gypsum impoundments were immediately conducted and these inspections continue on a daily basis. Victims were provided housing, meals, and other necessities. In addition, TVA:

- Provided gift cards for food and clothing, cellular telephone service, and even money to replace Christmas gifts.
- Provided bottled water to those in the community whose water supply had been disrupted.
- Formed a Community Outreach Team (COT). The COT consisted of seven retirees, three Kingston employees, and two administrative assistants. TVA also named a Community Outreach Coordinator whose primary role was to listen to the citizens of Roane County and to address their concerns.
- Made door-to-door deliveries/visits, conducted a series of homeowners' meetings, placed informational ads in various media outlets, provided a recovery update telephone line, opened a community outreach center, and provided e-mail updates. TVA continues to make visits, hold meetings, and provide e-mail updates to those who have that option available. During the first 2 months following the spill, the community outreach center worked with more than 600 families. According to the Senior Vice President, Fossil Generation Development and Construction, the outreach center continues to

be open from 2 p.m. to 6 p.m. daily to answer any questions and to provide community needs assistance.

- Developed processes for the handling of real and personal property claims,<sup>1</sup> including acquisition and damage settlement actions. Furthermore, the acquisition of land and personal property was extended to those TVA deemed would be impacted by the recovery.

## SPILL CLEAN-UP AND RECOVERY

TVA is working with the Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC) to manage the clean-up of the Kingston Ash Spill in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).<sup>2</sup> The major recovery work necessary at Kingston is divided into time critical (i.e., Phase I) and non-time critical (i.e., Phase II) activities. The time critical work focused on removing the ash from the Emory River's main channel and from the waters directly east of the site's ash-storage area. The non-time critical ash consists of the ash in the embayments and on land west of Dike 2. TVA finished removing the time critical ash necessary for the reopening of the Emory River at the end of May 2010.<sup>3</sup> In the recovery efforts, TVA considers the impact to public health and the environment. For example:

- The comprehensive recovery plan included comprehensive monitoring of air, water, and soil.
- TVA has provided human health exposure information and a mechanism for individuals to have independent examinations.

## TVA COMMITMENT

On January 8, 2009, Tom D. Kilgore, President and Chief Executive Officer of TVA, testified before the U.S. Senate Environment and Public Works Committee. Mr. Kilgore stated that life in the Tennessee Valley region and the natural beauty of the region are special, and TVA is committed to restoring and protecting these resources. He assured the committee that "TVA will do a first-rate job of containment and remediation of the problems caused by the spill. We are going to be able to look our neighbors in the eye and say that TVA is doing the right thing."

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<sup>1</sup> The database for personal property claims included business interruption and mileage reimbursement claims. Therefore, for this report, our characterization of personal property claims includes claims for damage and destruction to personal property, business interruption, and mileage reimbursement.

<sup>2</sup> On May 11, 2009, TVA and EPA entered into an Administrative Order and Agreement on Consent (AOC) under Sections 104(a), 106(a), and 107 of the CERCLA of 1980 pursuant to which TVA will perform the removal action described in the AOC. This removal action involves the removal, processing, and disposal of a major portion of the ash material that was released into the Emory River from the Kingston Fossil Plant.

<sup>3</sup> Some small pockets of Phase I critical ash not necessary for the reopening of the Emory River were addressed in June 2010.



On March 31, 2009, before the Subcommittee on Water Resources and Environment, U.S. House Committee on Transportation and Infrastructure, Mr. Kilgore reemphasized that TVA is committed to cleaning up the spill and protecting human health and the environment. He also cited that TVA looks for opportunities, in concert with community leaders, to make the area better than it was before the spill occurred, and TVA is working to make things right. Specifically, the objectives cited in his testimony were to:

- Protect the health and safety of the public and recovery personnel.
- Protect and restore environmentally sensitive areas.
- Keep the public and stakeholders informed and involved in formulation of the response activities.
- Clean up the spill and improve the area wherever possible in coordination with the people of Roane County.

Mr. Kilgore once again testified before the Subcommittee on Water Resources and Environment, U.S. House Committee on Transportation and Infrastructure on December 9, 2009. Mr. Kilgore's testimony included a recovery and TVA performance update. Specifically, his testimony addressed, among other things, (1) restoration efforts including clean-up progress, purchase of affected properties, and TVA's economic development commitment of over \$40 million to the Roane County community, (2) environmental monitoring results, (3) initiatives taken regarding public health and safety, and (4) actions taken to improve overall TVA performance by addressing deficiencies in corporate culture and enterprise risk management. Mr. Kilgore also recapped TVA's commitment in his testimony. Specifically, he stated:

*Since the spill occurred, our commitment has not wavered--to clean up the spill, protect the public health and safety, and to restore the area. We have also continued to look for opportunities, working closely with the leaders and residents of Roane County, to make the area better than it was before the spill. We are deeply grateful to the community for their patience and support, and regaining the public's trust is important to all of us at TVA.*

## **OIG OVERSIGHT**

As stated previously, TVA's Inspector General, Richard W. Moore, committed his office to measure and track TVA's progress and perform a follow-up review of reparations to victims.

The TVA OIG has completed, or currently has in-progress, several reviews pertaining to the initial emergency response, root cause analysis, environmental monitoring, and impoundment stability. On June 12, 2009, the TVA OIG issued the first in a series of reports, Inspection 2008-12283-01 – Kingston Fossil Plant Ash Slide Interim Report. The first report evaluated TVA's (1) initial emergency response, (2) response to the media, and (3) reparations to the victims and restoration of the community. This review is a follow-up assessment of TVA's clean-up progress and reparations to victims and restoration of the community.

## **OBJECTIVES, SCOPE, AND METHODOLOGY**

Our objectives were to assess TVA's progress in two areas: (1) TVA's commitment to the Kingston Ash Spill clean-up and the return of the area to its previous condition and (2) TVA's actions pertaining to reparations to victims and restoration of the community. The scope of this review includes TVA's actions taken since our previous review regarding spill clean-up and reparations to the victims and community.

To perform this review, we interviewed TVA and regulatory officials as well as community leaders. We also obtained and analyzed various documents pertaining to clean-up and restoration efforts. Additional information about our methodology can be found in Appendix B.

This review was conducted in accordance with the "Quality Standards for Inspections."

## **FINDINGS**

TVA's actions to date indicate it is committed to cleaning up the Kingston Ash Spill and restoring the area to its pre-spill condition. TVA has also provided reparations to the victims and is making progress toward restoring the community to its previous state. We found (1) clean-up efforts are proceeding judiciously and (2) specific TVA actions not only appropriately address restoration but also show a commitment to regain public confidence.

## **TVA'S COMMITMENT TO CLEAN-UP AND RESTORE THE AREA TO PRE-SPILL CONDITION**

We found comprehensive efforts have been completed and are still ongoing pertaining to clean up of the spill. TVA is making significant progress in the clean-up and continues to consider human health and the environment in the recovery. Specifically, we found that TVA (1) met its goal of removing the time critical ash necessary to reopen the Emory River by the end of May 2010, (2) implemented a removal action plan for the non-time critical ash in spring 2010 to facilitate a smooth transition between Phases I and II<sup>4</sup> clean-up operations, (3) developed a good working relationship with EPA and TDEC to manage and facilitate clean-up activities, and (4) coordinated with EPA and TDEC to provide continuous environmental monitoring.

### **TVA Met Its Goal for Removing Time Critical Ash**

The first phase of TVA's clean-up activities at Kingston pertained to the removal of time critical ash.<sup>5</sup> We found TVA is making significant progress in the clean-up and continues to consider human health and the environment in the recovery.

During numerous TVA OIG visits to the ash spill site, we observed extensive and ongoing clean-up operations. Ash was dredged from the Emory River channel, sluiced to ditches where it is treated with polymer, dewatered, and temporarily stored at Kingston. The dewatering area is sloped to drain into the plant's existing ash pond, and drainage has been engineered at the site to contain the runoff. Groundwater wells were drilled and are being monitored.

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<sup>4</sup> Phase I is plan for removal of time critical ash. Phase II is plan for removal of non-time critical ash.

<sup>5</sup> TVA has designated ash recovery in waters directly east of the ash storage area as "time-critical" or "Phase I" because removing it quickly reduces the chance that the ash will move downstream, restores flow, reduces flood risk, and allows for recreation to resume in selected areas.

Figure 1 shows the sluiced ash being removed and temporarily placed in the temporary storage area.



Figure 1

The removed ash is placed into filter presses as shown in Figure 2. The filter press removes moisture from the ash.



Figure 2

Once ash has been excavated and temporarily placed in the storage staging area at the plant, lime is sprinkled onto the ash to speed up the drying process. The ash is then placed into train cars to be sent to the Arrowhead Landfill in Perry County, Alabama. We were informed by the Senior Manager, Kingston Recovery Operations, that ash has to be at a 25 percent moisture level before it can be shipped to Perry County, Alabama.

Figure 3 shows equipment dousing lime onto the ash at the temporary staging area where it is loaded onto train cars.



Figure 3



TVA utilizes special rail car liners (i.e., "Burrito Wraps") in each rail car so ash particulates are less likely to escape, as shown in Figure 4.



Figure 4

Source: TVA Kingston Recovery Progress Photographs

As stated previously, TVA met its goal for removing the time critical ash and the Emory River reopened on schedule on May 29, 2010, after being closed following the Kingston Ash Spill.<sup>6</sup> According to the General Manager of the Site-Recovery Operations, "The opening of the river is a milestone in TVA's continuing work to restore the area and shows our commitment to the Kingston community." As of June 6, 2010, approximately 2,400,000 tons of ash has been transported to Perry County, Alabama. While all time critical ash has been removed from the river, off-site disposal of the ash removed from the Emory River to Perry County, Alabama, will continue through the end of 2010.

<sup>6</sup> TVA's goal was the removal of Phase I critical ash necessary for the reopening of the Emory River by May, 2010. We did note that some outlying pockets not necessary for reopening the river were removed in June 2010.

Figures 5 and 6 are pictures of the Emory River where clean-up has occurred and the river reopened.



Figure 5



Figure 6

Figures 7 and 8 are pictures of a backwater area of the Emory River where time critical ash has been removed.



Figure 7



Figure 8



TVA faced the challenge of cleaning the area without causing more harm. For example, removing the time critical ash quickly reduces the chance that the ash will move downstream, restores flow, reduces flood risk, and allows for recreation to resume in selected areas. TVA monitored the plume created by dredging and dredged only to designated depths that would restore flow to the original channel without disturbing existing "legacy" and native river sediments. TVA has openly publicized that some of the ash will remain in the Emory River.

### **Plan for Removing the Non-Time Critical Ash is in Place**

In order to have a smooth transition between Phase I and Phase II operations, it was necessary for TVA to obtain EPA and TDEC approval and to implement a removal action plan by spring 2010. TVA, EPA, and TDEC developed a work plan for selecting the method of removal of the non-time critical ash in the embayments and on land west of Dike 2. This plan is known as the CERCLA Engineering Evaluation/Cost Analysis (EE/CA) Work Plan. Figure 9 shows ongoing work corresponding to the failed impoundment continues.



Figure 9

The EE/CA Work Plan presented three alternatives to meet the CERCLA requirements to (1) protect public health and the environment over the long-term, (2) comply with state and local regulations, and (3) be cost effective. According to EPA, all alternatives had to meet the following Removal Action Objectives:

- Minimize direct contact between ash material and the Swan Pond Embayment and water flowing through the embayment area into Watts Bar Reservoir.
- Minimize migration of ash and its constituents from the Swan Pond Embayment or dredge cell into affected waters due to erosion.
- Minimize direct contact exposure by human or ecological receptors to ash on the ground.
- Restore the Swan Pond Embayment to pre-spill conditions.
- Close the former dredge cell in accordance with applicable Tennessee Solid Waste Rules.
- Dispose of waste streams from the removal action.

According to a January 2010 EPA fact sheet, CERCLA also required each alternative to be evaluated based on the following criteria:

- Effectiveness of technology to meet the removal action objectives in terms of overall protection of human health and the environment, compliance with applicable requirements, long-term effectiveness and permanence, and short-term effectiveness.
- The technical and administrative feasibility of implementing an alternative and the availability of materials, equipment, or services required during implementation.
- The estimated relative cost of each technology, which includes the capital cost of material, equipment and installation, and annual operating and maintenance costs such as mowing, erosion repair, and dike repair.

The differences between the three main alternatives<sup>7</sup> included (1) the amount of coal ash disposed off-site versus on-site, (2) final elevation of closed dredge cell, (3) type and amount of construction traffic, (4) duration of work, and (5) cost. Common elements among the three alternatives included (1) restoration of embayments and sloughs to pre-spill conditions, (2) closure of failed dredge cell and adjacent ash pond, and (3) enhanced perimeter dikes designed to withstand liquefaction<sup>8</sup> of foundation ash at earthquake loads. Specific elements of all three alternatives are summarized in Appendix A of this report.

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<sup>7</sup> There were three main alternatives studied for the removal of the non-time critical ash. However, there were slight variations in the alternatives denoted by 'a' and 'b' (e.g., option 3b). See Appendix A for more information.

<sup>8</sup> Liquefaction is the conversion of soil into a fluid-like mass during an earthquake or other seismic event.

The EE/CA Work Plan was available for public comment from January 19, 2010, to April 5, 2010. After public comments were considered, the Non-Time Critical Removal Action Embayment/Dredge Cell Action Memorandum was released on May 18, 2010. The memorandum cited the chosen alternative and included TVA's responses to public comments. TVA received comments from 36 individuals and various groups, including the Roane County Environmental Review Board, the Environmental Integrity Project, and the Roane County Community Advisory Group.

According to EPA and our review of comments, the majority of those who provided public comments supported Alternative 3 that called for on-site disposal. That alternative was selected by TVA and approved by EPA and TDEC. The May 18, 2010, Non-Time Critical Removal Action Embayment/Dredge Cell Action Memorandum states that the alternative was selected:

*...because it meets the RAOs [Removal Action Objective], complies with [applicable requirements], effectively and safely contains the ash, minimizes off-site transportation and disposal impacts, reduces uncertainty associated with acceptability of off-site disposal, and is the most cost effective.*

According to a May 2010 EPA fact sheet, the chosen alternative calls for fly ash that was released into the Swan Pond Embayment, as well as the ash that was not released from the ash pond and former dredge cell, to remain on-site. Other specifics include:

- No material will be taken off-site, and a new dike that reaches down to the shale bedrock will be installed around the perimeter of the on-site disposal area to keep ash from entering the Swan Pond Embayment in the future.
- The new dike will consist of overlapping soil-cement columns that will be able to withstand a local 6.0 magnitude earthquake.
- The project is expected to take four years to complete. It will cost approximately \$268.2 million with an estimated \$686,000 per year in annual maintenance costs for the first 30 years.
- A review will be conducted by EPA every five years to ensure structural integrity of the cell.

Per EPA's April 2010 Quarterly fact sheet, Phase III is part of the non-time critical activities and will involve the completion of a comprehensive ecological and human health assessment of any residual ash that is left behind. According to EPA, this study will take between 18 and 24 months to complete and will be a comprehensive analysis on anything that swims, walks, or crawls.

### **Good Working Relationship Between TVA, TDEC, and EPA**

During our review, we interviewed TVA, TDEC, and EPA personnel to ascertain the level of communication, coordination, and working relationship between the three agencies. We determined that while there have been some challenges, the overall consensus between the agencies is that a good and effective relationship exists. For example:

- During a discussion, the TDEC on-site coordinator stated that the biggest issue was communication due to the large quantity of documentation that is involved in the clean-up. The coordinator further stated that it has been a challenge to track all of the documentation; however, the clean-up operation is currently meeting all milestones, which is a "major success story" for this type of operation. It was further stated by the TDEC representative that all three agencies have made an effort to attend to or address all of the citizens' concerns.
- When asked about the working relationship between EPA and TVA, the EPA remedial project manager stated that it had been great, especially on the TVA side. It was also stated that in past projects, TVA was not nearly as accommodating as it has been during this project. However, EPA's on-site coordinator stated that one difficulty was in trying to change TVA's culture from reactive to proactive.
- The TVA general manager of Kingston Recovery said that the working relationship between agencies was the best experience he has had in working with multiple different agencies because each agency wants the same, speedy outcome for this clean-up project. He also mentioned that he had been involved in clean-up projects outside of TVA that moved slower and got bogged down in processes; however, the current on-site EPA personnel have done an outstanding job of taking needed actions and getting work done.

### **Environmental Monitoring**

TVA continues to monitor air and water during the non-time critical ash removal activities. Under the EPA and TDEC approved "Non-Time Critical Surface Water" and "Dust Control and Air Monitoring" plans, TVA will monitor air and water at the site until the end of non-time critical ash removal. Ground and surface water sampling as well as sediment and biologic sampling are ongoing. The sampling data along with other information will be used to support an assessment of the Emory River and other river areas impacted by the spilled ash. Further long-term commitments to monitoring, beyond non-time critical ash removal, will be dependent upon results of the assessment and will be evaluated and determined as non-time critical activities come to closure.

TVA's environmental monitoring program at Kingston focuses on ongoing evaluation of different media including (1) air; (2) water (i.e., surface, raw, storm, and groundwater); (3) sediment; and (4) biological. These medias comprise important migration pathways that could potentially expose human and/or ecological populations in the vicinity of the spill. TVA has five fixed-location air

monitoring stations around the plant and spill site and one off-site monitoring station, as well as handheld instruments to monitor the air quality around the Kingston site. TVA continues to investigate ecological pathways for any possible effects of fly ash contaminants, including longer-term effects from possible bioaccumulation. Results from studies thus far show no significant impacts on the fish, birds, and other organisms living within the vicinity of the spill. EPA has stated that they will be monitoring the site for the next 30 years to ensure that environmental conditions remain at acceptable levels. TVA also plans to continue environmental monitoring well after the recovery efforts have been completed.

We also want to note in this report that Marshall Miller & Associates, Inc. was engaged by the TVA OIG to perform environmental reviews pertaining to the Kingston Ash Spill. The scope of Marshall Miller's work included reviewing:

- The sampling and monitoring plans prepared by TVA following the ash release that occurred on December 22, 2008. Marshall Miller evaluated the adequacy and completeness of TVA's environmental recovery plans to determine whether these plans provide comprehensive and effective measures to adequately monitor the potential short and long-term impacts to human and ecological receptors. This inspection (i.e., Inspection Report 2008-12283-07) focused on two key areas, data management, and review of the environmental monitoring program. In summary, Marshall Miller found no significant deficiencies in the plans or procedures used by TVA or its contractors in characterizing impacts resulting from the ash release or recovery efforts.
- The transportation and disposal plans prepared by TVA in response to the ash release. In addition, Marshall Miller determined if appropriate steps are being taken to minimize the environmental impacts and if regulatory requirements are being met. This inspection (i.e., Inspection Report 2008-12283-08) found that TVA is taking appropriate steps to minimize the environmental impacts of transporting ash from Kingston to the Arrowhead Landfill in Perry County, Alabama. Furthermore, no significant deficiencies in documents reviewed, regulatory requirements, or in the landfill operations were found.
- TVA's long-term recovery plans for the areas affected by the ash spill. This inspection (i.e., Inspection Report 2008-12283-06) found no significant deficiencies in any of the proposed alternatives, including the selected alternative for the restoration of the Swan Pond Embayment.

## **TVA'S COMMITMENT TO PROVIDE REPARATIONS TO THE VICTIMS, RESTORE THE COMMUNITY, AND REGAIN PUBLIC TRUST**

TVA's actions to date have shown a commitment to provide reparations to victims and restore the community. Specifically, TVA immediately established a

process to handle real and personal property claims. In addition, we found TVA's adjudication of the claims was consistent, and in accordance, with approved processes and guidelines.

Furthermore, we also found TVA has taken significant actions to restore the community and regain public trust. Actions include (1) committing \$43 million to economic development in Roane County, (2) infrastructure, clean-up, and marketing considerations/deliverables, (3) the promotion of information sharing and coal ash research, (4) communication improvement initiatives, and (5) providing independent health screenings.

### **Real Estate and Personal Property Claims**

Immediately following the spill, TVA made a commitment to those directly affected by the spill to restore their lives. We found that not only did TVA address immediate needs of those impacted by the Kingston Ash Spill, processes and criteria were developed and approved to address real and personal property claims. Real and personal property claim settlements have totaled \$46,139,375 through July 29, 2010, and \$493,859 through July 27, 2010, respectively. TVA continues to work to settle claims, as demonstrated by TVA's recent settlements in June 2010 of two of the most challenged claim offers. The Senior Vice President, Fossil Generation, Development and Construction, informed us on July 1, 2010, that:

- TVA has a process to reopen property acquisition discussion with local residents who previously had declined TVA's offer to purchase their property.
- TVA has a process to ensure that responses to claims filed with TVA's claims adjustor, Crawford and Company,<sup>9</sup> are handled quickly. This process will continue until there are no longer new claims filed.

During this review, we selected a random sample of real and personal property claims to determine if TVA's adjudication of the claims was consistent, and in accordance, with approved guidelines/criteria. In summary, for the claims we selected for review we found that TVA's adjudication of the claims was consistent, and in accordance, with approved processes and guidelines.

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<sup>9</sup> Crawford is based in Atlanta, Georgia, and is an independent provider of claims management solutions to the risk management and insurance industry as well as self-insured entities.



## Real Property Claims

We chose a random sample of 15 settled real property claims to determine if TVA adjudicated the claims consistently, and in accordance, with established guidelines/criteria. The claims reviewed were selected from the population of real property claims settled as of May 14, 2010. In summary there were 154 claims totaling \$44,078,975<sup>10</sup> as of May 14, 2010. As of July 29, 2010, we determined there were in total 196 real property claims.

We found that TVA developed a claims process for the acquisition of real property that has been affected by the ash spill or by the recovery. The claims process was approved by the TVA Board of Directors. Specifically, the process first requires two independent appraisals of the property. In the limited circumstances when there is a significant difference between these appraisals, TVA obtains a third appraisal from an appraiser holding the MAI designation from the Appraisal Institute. The highest appraised value of the property is used by TVA in determining what amount to offer the owner. TVA also considers information provided by the owner in response to TVA's offer, including any additional appraisals provided by the owner. Once the fair market value is established and the owner agrees, TVA pays that amount at closing, adjusted for liens, pro rata taxes, and other items identified on the agreed closing statement. Furthermore, if there is to be any compensatory payment by TVA, it is also paid at closing.

To determine if the claims were handled consistently, and in accordance, with established guidelines/criteria for the claims selected for evaluation, we reviewed documentation and conducted interviews, as necessary, to verify that:

- Two independent appraisals were conducted.
- The highest appraisal value was used for payment.
- If a significant variance existed between the original two appraisals, a third independent appraisal was conducted.
- The payment made had proper TVA approval based on the authority granted by the TVA Board.
- A settlement agreement was signed by TVA and the applicable owner. We also reviewed claim documentation to identify any process exceptions and/or unusual transactions. Based upon our review of the documentation for the claims we selected for review, we determined there were no exceptions and found nothing to indicate that the real property claims were not handled in a consistent manner, and in accordance, with TVA's approved process and guidelines/criteria.

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<sup>10</sup> Some of the acquired properties were necessary for recovery efforts and other properties are being used to house TVA clean-up employees as well as contractors.

## Personal Property Claims

We chose a random sample of 15 settled personal property claims to determine if TVA adjudicated the claims consistently, and in accordance, with established guidelines/criteria. The claims reviewed were selected from the population of personal property claims settled as of March 8, 2010. In summary, there were 221 personal property claims of which 66 were settled totaling \$458,177.

TVA contracted with Crawford to handle all personal property claims. Personal property claims included the following:

- Docks, boat houses, and other general property
- Watercraft
- Miscellaneous items, such as outdoor furniture, play equipment, and sports equipment
- Business income loss
- Mileage for extra travel on alternate routes by residents due to road destruction and closure

Crawford developed a claims process for handling all personal property claims that TVA approved. After receiving a call from a claimant and obtaining all relevant/necessary information, a field adjuster determines whether a physical inspection is required. For all claims, except business loss and mileage claims, a field adjuster inspects the property, obtains estimates, and writes the appraisal. The inspection, estimates, and appraisal are included in a report that is submitted to TVA for approval. Once by TVA and agreed on by the claimant, TVA provides the claimant compensation and the claimant would sign a settlement agreement.

In the case of a business loss claim, the business is required to submit a narrative stating how the loss resulted from the ash spill. Businesses are also required to submit other documentation, such as former tax information in order to substantiate the claim. In the case of mileage claims, residents fill out mileage worksheets and sign a form to confirm that their statement of mileage is accurate. TVA then reimburses claimants for extra mileage driven due to road closings relating to the ash spill.

To determine if the claims were handled consistently, and in accordance, with established guidelines/criteria, we reviewed documentation for selected claims to verify:

- A physical inspection was performed.
- An appraisal was conducted.
- Estimates were obtained.



- The claimant submitted proper documentation in the case of business loss and mileage claims.
- Crawford submitted a formal report to TVA.
- The claim had proper TVA approval.
- The claimant signed a settlement agreement.

We also reviewed claim documentation to identify any process exceptions and/or unusual transactions. Based upon our review of the documentation for the claims we selected for review, we determined there were no exceptions and found nothing to indicate that the personal property claims were not handled in a consistent manner, and in accordance, with TVA's approved process and guidelines/criteria.

As mentioned earlier in this report, Mr. Kilgore stated that TVA would be "working closely with the leaders and residents of Roane County, to make the area better than it was before the spill." To address current and future economic development concerns and regain public trust, TVA:

- Committed \$43 million for economic development projects.
- Has taken actions to improve community infrastructure, lessen the impact of recovery operations on the public, and promote Roane County.
- Partnered with appropriate entities to support the sharing of information and coal ash research.
- Has taken actions to improve communication.
- Has provided free independent health screenings.

#### **TVA Economic Development Funding -- \$43 Million**

TVA, in cooperation with Roane County officials, formed the Roane County Economic Development Foundation and provided \$43 million to fund infrastructure capital projects, such as school, sewer, and water projects. The Foundation consists of four Roane County officials (i.e., mayors of Kingston, Rockwood, and Harriman and the Roane County Executive) and four TVA management representatives, including three vice presidents and the Kingston plant manager. The Foundation Charter specifically states:

*TVA desires to provide funding for economic development projects, including infrastructure capital projects such as school, sewer, and water projects, which will contribute to the long-term recovery and success of the communities affected by the ash slide at TVA's Kingston Plant.*

Proposed economic development projects were vetted and approved by the respective city councils, Roane County Commission, and/or public officials before being submitted to the committee for review and final approval. For example, funding for Roane County, Tennessee School Facilities Plan was approved by

the Roane County Commission on September 28, 2009. Additionally, the plan to expand and improve Kingston's sewer plant was approved by the Kingston City Council on February 10, 2009. Both of these projects were approved by the Foundation in September, 2009.

Once approved, a Funding Agreement is executed for the project. Each project Funding Agreement specifies that TVA retains the right to audit, without restriction, all books and records pertaining to each project. We conducted separate interviews with the mayors of Kingston, Rockwood, and Harriman and the Roane County Executive. When questioned about the Foundation and projects, the importance of providing transparency and accountability was evident. Our (1) review of documentation, including the Foundation Charter, funding agreements, and city council and county commission resolutions and (2) interviews with Roane County officials and TVA management find that the project consideration and approval process provides transparency and accountability.

The following table contains all the projects that have been approved by the Foundation.

<b>ROANE COUNTY ECONOMIC DEVELOPMENT FOUNDATION</b>		
<b>(APPROVED PROJECTS AS OF JANUARY 2010)</b>		
<b>Project</b>	<b>Amount</b>	<b>Date Approved</b>
Roane County Industrial Park Entrance	\$31,195	9/16/2009
Harriman's Princess for Arts & Education Conference Center	\$1,700,000	9/16/2009
Kingston's Sanitary Sewer Upgrade	\$5,000,000	9/16/2009
Roane County's School Facilities Plan	\$32,000,000	9/30/2009
Harriman's Public Library Improvement	\$200,000	9/30/2009
Harriman's Road Paving	\$100,000	9/30/2009
Rockwood's Downtown Revitalization Committee (Main St. Project)	\$7,000	9/30/2009
Rockwood's Health Facilities	\$20,000	9/30/2009
Roane County's Public Relations Assistance	\$1,000,000	9/30/2009
Roane County's Lost Property Taxes	\$160,296	1/26/2010
Rockwood's Econ Development/Infrastructure Improvement Projects	\$1,940,000	1/26/2010
Roane County Alliance's Retail Marketing Project	\$30,175	1/26/2010
Town of Oliver Spring's Economic Plan and Tourism Campaign	\$25,000	1/26/2010
<b>Current Amount Allocated</b>	<b>\$42,213,666</b>	
<b>Amount Designated by TVA</b>	<b>\$43,000,000</b>	
<b>Amount Remaining</b>	<b>\$786,334</b>	

Figure 10

### TVA's Community Stewardship

In addition to the \$43 million in economic development projects funded through the Foundation, TVA has taken other actions to improve community infrastructure, lessen the impact of recovery operations on the public, and promote Roane County. Those actions have included:

- Utility work along Swan Pond Road and Hassler Mill Road to restore and enhance water and gas lines. Figures 11 and 12 reference and show the water line enhancement project.



Figure 11



Figure 12

Figure 13 shows work being performed on the gas line project.



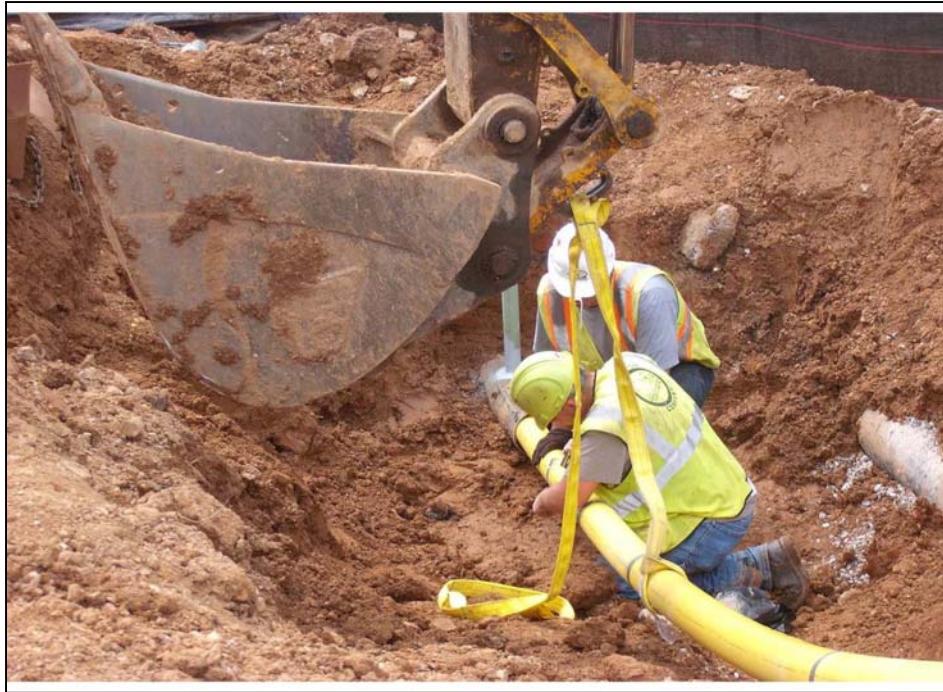


Figure 13

- The installation of an additional rail spur in the ash staging area and switching in order to eliminate blockage of Swan Pond Road due to train loading of ash. Figure 14 shows the train loading area.



Figure 14

- Building grade separation (i.e., an underpass under Swan Pond Circle Road) in order to move ash from Berkshire Slough back to the site without

interrupting site operations or Swan Pond Circle traffic. This underpass will mitigate accident risk by limiting exposure of local traffic to ash moving trucks. Figure 15 shows construction of the temporary road that traffic will be rerouted to while the underpass is being built.



Figure 15

- Limiting dredging near residents to only daytime hours from 7 a.m. to 7 p.m.
- Rebuilding roads that were destroyed in the spill and paving 9.5 miles of roads used during construction leaving them better than before the spill.
- Sponsoring the Bass Federation national championship on Watts Bar Lake in order to help restore the reputation of the lake.
- Providing local police to control traffic going onto and out of Swan Pond Road in the mornings and in the evenings to help residents due to increased number of workers and machinery at the site.
- Providing Roane County an economic development strategy through the Valley Targeted and Prepared Community Program, which is sponsored by TVA Economic Development. The study assessed markets, analyzed county strengths and weaknesses, and developed a targeted industry list.

Our interviews with Roane County community leaders found that TVA is working to regain public confidence and these actions are indicative of the commitment. While they are complimentary of TVA actions, some concern exists that TVA will not monitor long-term impacts once recovery is complete. However, the officials also stated that TVA has responded timely to questions and informational needs. We additionally found that the Non-Time Critical Removal Action

Embayment/Dredge Cell Action Memorandum approved by the EPA requires that TVA monitor the environmental effects even after the clean-up is complete.

### **TVA Sponsored Research Activities**

In March 2010, TVA sponsored the TVA Kingston Fly Ash Release Environmental Research Symposium at Roane State Community College in Harriman, Tennessee. Oak Ridge Associated Universities (ORAU)<sup>11</sup> stated the purpose of the symposium was to (1) facilitate the exchange of information among researchers and coordinate site access and sampling logistics and (2) identify the priorities and gaps in current research and technology regarding the impact of fly ash in the environment. It was TVA's goal that this symposium would facilitate development of new beneficial uses of coal combustion products and new environmental information that would benefit TVA, the utility industry, regulators, and the public. As stated on ORAU's Web site, sessions were presented covering the following topics:

- TVA Kingston Recovery Status
- Site characterizations
- Geochemistry
- Ecotoxicology
- Ecological studies
- Environmental Risk Assessment and Management

Speakers at the symposium included: TVA's Senior Vice President, Environment and Technology, TVA's senior toxicologist, and representatives from EPA, ARCADIS,<sup>12</sup> Oak Ridge National Laboratory, and the U.S. Army Engineer Research Development Center.

In addition to sponsoring the research symposium, TVA is funding more than \$2 million in coal ash research grants that are being administered by ORAU. According to an ORAU press release and interviews with ORAU, ORAU solicited proposals from applicants interested in conducting basic and applied research on (1) identifying alternative ways to beneficially reuse and/or process coal combustion products and (2) examining the effects of coal fly ash releases in the environment. ORAU received 172 pre-proposals and 68 full grant proposals from which 6 recipients were selected. According to ORAU, of those finalists, one will look at alternative uses while the other five will look at long-term effects. In addition, ORAU solicited proposals for commercial coal ash management, processing, and marketing services.

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<sup>11</sup> ORAU is a university consortium leveraging the scientific strength of 98 major research institutions to advance science and education by partnering with national laboratories, government agencies, and private industry.

<sup>12</sup> ARCADIS is an international company providing consultancy, engineering, and management services in infrastructure, environment, and buildings, to enhance mobility, sustainability, and quality of life. ARCADIS develops, designs, implements, maintains, and operates projects for companies and governments.



## Communication Improvement

Immediately following the ash spill, TVA was criticized for its communication practices. TVA communication practices were addressed in the OIG Inspection 2008-12283-01 – Kingston Fossil Plant Ash Slide Interim Report. Subsequent to our report, TVA has made an effort to improve its level of communication by benchmarking industry practices and implementing a robust process for standardizing its communication to the media as well as the public. According to a memo from TVA's Senior Vice President of Communications, in response to our recommendations, TVA identified four key areas to improve communications:

- Meet the requirements for National Incident Management System training, which would allow TVA to communicate effectively with other agencies in an emergency.
- Develop a Crisis Communications Plan.
- Create protocols for verifying information in materials for release and documenting the necessary reviews and approvals.
- Develop written standards and procedures for conducting media relations activities.

TVA has met those goals by developing and/or implementing respective processes and/or communication tools. These include the development and/or implementation of the following:

- National Incident Management Training
- Crisis Communications Plan
- TVA news release checklist
- Fact-checking process
- Copy editing process
- Examples of checklist use for reviews/approvals
- TVA news release guidelines
- Media Response Strategy
- Media relations staff guide
- Rapid Response Plan
- Guidelines for letters to the editor
- TVA fact book
- Redesigned Web site
- Talking point and key message templates
- communications plans template

In discussions with local community officials, they stated that, overall, TVA has been doing a better job in communicating with the community. Through observations and fulfillment of our oversight responsibility, we have determined that TVA has implemented various mechanisms to address inquiries and provide information to the Kingston residents and media. Information sources include:

- Periodic public meetings where updates are provided and questions answered.
- The Outreach Center, which has information on site clean up progress and other TVA initiatives.
- News releases and TVA's Kingston recovery Web site. In addition to fact sheets, reports, and other documents (i.e., TDEC, EPA, and congressional hearing information) the Kingston Recovery Web site includes:
  - Environmental test results pertaining to air and water quality monitoring.
  - Kingston Ash Recovery Project Weekly Reports. Examples of information topics discussed in the weekly reports include: (1) recovery highlights; (2) infrastructure and ash management; (3) ash dredging and processing; (4) ash disposition; (5) cenosphere recovery; (6) routine air, water, and sediment sampling; (7) dike reinforcement; and (8) communications.
  - Area Resident Information Updates. TVA is posting updates that include information on plant activities as well as the clean-up for area residents.
- Message Boards. TVA continues to use electronic message boards positioned along Swan Pond Road to alert residents in the surrounding area to meetings, train crossings, road closings, etc.

While TVA has worked diligently to improve communications, it has encountered some lessons learned. Failure of TVA to communicate plans for the overlook and contracting with ORAU were cited as examples, in addition to the test burn incident that led to a change in Kingston site-wide communications. Specifically, a September 18, 2009, test burn release incident referred to as the "Snowflake Incident," led to TVA stating in the *Fall 2009 Report to Our Roane County Neighbors* that "The lack of communication in this situation was completely avoidable; communication and listening will improve even further." In response to the incident, the recovery site manager and the communications team agreed to take the lead for the entire site, not just the clean-up area, but also the plant. TVA recognized that the culture at the plant must be changed to consider visibility issues associated with both plant operations and spill recovery. A site-wide communications and notification plan that includes both the Kingston recovery site and plant was developed. In addition, to further improve communications at Kingston, a recovery site employee attends the Plan of the Day meeting at the plant each morning and a plant employee attends the Recovery Operations meeting at the end of each day.

Based upon the above actions, we conclude that TVA has improved its communications efforts and has made process improvements that should



facilitate the delivery of timely and accurate information. Kingston community leaders stated that TVA has responded timely to questions and requests for information.

### **Health Monitoring Program**

Due to public concern of possible health effects resulting from the ash spill, TVA partnered with ORAU to provide free, independent health screenings for any resident who so desired. ORAU brought in four doctors from the Vanderbilt University Medical Center to conduct the screenings. Each of these doctors specializes in either epidemiology or toxicology. In total, around 300 people signed up for the health screenings and 214 of those came in for the screening as of April 2010.

On August 17, 2010, ORAU released the results of the health screenings performed in relation to the Kingston Ash Spill. The results showed no adverse health effects to participants in the medical evaluations performed after the ash spill. While some results showed above normal levels of certain components identified in coal ash, reevaluation determined that the increased levels were due to diet and supplement ingestion. Additionally, ORAU stated they did not expect any long-term physical health effects and suggested to TVA that testing be repeated after a period of time to determine whether any changes have occurred.

ORAU attempted to make the screening process simple. In order to sign up, residents could either go to the TVA Web site and navigate through the "Kingston Recovery" link, or go to the ORAU Web site directly and navigate through the "Kingston Plant Health Screening Program" link. Once on the Kingston Project page within ORAU's Web site, residents could learn more about the program, look at frequently asked questions, learn about the doctors who performed the screenings, e-mail ORAU about health concerns, and sign-up for a free screening. In summary, while TVA's Kingston Recovery Web site posts information on the health program initiative, ORAU's Web site gives those residents affected by the fly ash spill a place to: (1) sign-up to be contacted for medical screening, (2) ask Oak Ridge Associated Universities any questions regarding health concerns or the medical screening process itself, and (3) learn about the medical screening protocol as well as view related forms. Also, according to ORAU personnel outreach programs have included providing a video of a doctor explaining his role in the screenings, passing out inquiry cards, giving talks about the health screening opportunities and process, and placing a crawler ad on public television.

According to ORAU personnel, TVA was very supportive of their efforts both to communicate to the community and to perform the screenings. In addition, TVA wanted to take a "hands-off" approach to the health screenings in order to ensure that the screenings were done independently. ORAU representatives stated that it was admirable how TVA stepped up to help the community with both property damage and health concerns.

## **MANAGEMENT COMMENTS ON DRAFT REPORT**

The Senior Vice President and Executive, Kingston Ash Recovery Project, in conjunction with the Senior Vice President, Diversity and Labor Relations, provided comments on a draft of this report. TVA management agreed with our findings and provided a few administrative and clarifying comments for our consideration. Specifically, management:

- Provided clarification on the amount of ash that as of June 6, 2010, was transported to Perry County, Alabama, for disposal.
- Suggested wording changes to clarify the real property claims adjudication process.

We reviewed and agreed with the technical comments provided and modified the report accordingly. Management's complete comments are included in Appendix C of this report.

## Alternatives Developed in the EE/CA Study

Non-Critical Ash Removal				
Proposal	Proposal Description	Cost	Off-Site Disposal Method	Timeframe for Completion
Option 1a	Removal of 2.8 million cubic yards from the embayment and disposed of Off-site. A dike will be installed to keep remaining ash in the Dredge Cell.	\$439.6 to \$455.3 Million	910 trains shipped to the Perry County landfill.	2.8 Years + 10 months to close the Ash Pond
Option 1b	Removal of 2.8 million cubic yards from the embayment and disposed of Off-site. A dike will be installed to keep remaining ash in the Dredge Cell.	\$439.6 to \$455.3 Million	35,000 truckloads and 280 trains. The train shipments will be sent to the Perry County landfill. Trucks shipments will be sent to an approved landfill, such as the Chestnut Ridge Landfill near Knoxville.	2.8 Years + 10 months to close the Ash Pond
Option 2a	Removal of 6.8 million cubic yards from the embayment and Dredge Cell, leaving enough ash to reinforce remaining dikes. Disposal will be Off-site.	\$719.3 to \$741.1 Million	870 trains shipped to the Perry County landfill.	4 Years + 10 months to close the Ash Pond
Option 2b	Removal of 6.8 million cubic yards from the embayment and Dredge Cell, leaving enough ash to reinforce remaining dikes. Disposal will be Off-site.	\$719.3 to \$741.1 Million	35,000 truckloads and 810 trains. The train shipments will be sent to the Perry County landfill. Trucks shipments will be sent to an approved landfill, such as the Chestnut Ridge Landfill near Knoxville.	4 Years + 10 months to close the Ash Pond
Option 3a	Removal of 2.5 million cubic yards from the embayment and disposed of in the Dredge Cell.	\$268.2 to \$315.5 Million	N/A	3.8 Years + 10 months to close the Ash Pond
Option 3b	Removal of 2.5 million cubic yards from the embayment and disposed of in the Dredge Cell.	268.2 to \$315.5 Million	N/A	4.1 years to close both Ash Pond and Dredge Cell together

## **OBJECTIVES, SCOPE, AND METHODOLOGY**

Our objectives were to assess TVA's progress in two areas: (1) TVA's commitment to the Kingston Ash Spill clean-up and the return of the area to its previous condition and (2) TVA's actions pertaining to reparations to victims and restoration of the community. The scope of this review includes TVA actions taken since our previous review regarding spill clean-up and reparations to the victims and community.

To perform this review, we interviewed TVA and regulatory officials as well as community leaders. We also obtained and analyzed various documents pertaining to clean-up and restoration efforts.

To assess TVA's commitment to the Kingston Ash Spill clean-up and return of the area to its previous condition, we:

- Interviewed key TVA and regulatory personnel to determine their perspective on (1) clean-up progress, (2) working relationships, and (3) clean-up accomplishments, challenges, and hard spots.
- Obtained and reviewed clean-up documentation and recovery plans. Some specific documentation reviewed included the various alternatives for disposing of the non-time critical ash, clean-up cost data and estimated expenditures, and clean-up dredging, disposal, and environmental information.
- Visited Kingston to obtain first hand knowledge of the progress and to verify ongoing clean-up operations and the processes utilized in the clean-up. In addition to walkdowns of ongoing clean-up operations, we also documented operations and assessed clean-up progress through aerial reconnaissance.
- Interviewed TVA personnel, regulatory personnel, and community leaders, as deemed necessary, to determine their perspective on (1) TVA's progress in meeting its spill clean-up commitment, (2) the adequacy of TVA communications regarding clean-up progress and community impact, and (3) their input into the final state of the impacted area.

To assess TVA's actions pertaining to reparations to victims and restoration of the community, we:

- Interviewed key TVA personnel and Roane County officials to ascertain their perspective regarding TVA's actions to address victim and community damage and promote Roane County economic development.

- Obtained an understanding of the real and personal property claims processes by reviewing supporting documentation, including Board Resolutions and policy memorandums, and interviewing key TVA officials. Interviews included representatives from the following organizations:
  - Diversity and Labor Relations
  - Fossil Generation, Development and Construction
  - Office of the General Counsel
  - Realty Services
- Identified, documented, and assessed TVA's real and personal claims processes for reasonableness. We then reviewed selected claim settlements to verify process compliance and claim settlement consistency. Specifically, we:
  - Obtained listings of completed real and personal property claims through May 14, 2010, and March 8, 2010, respectively.
  - Randomly selected 15 of 154 closed (as of May 14, 2010) real property claim settlements, totaling \$6,448,350 and 15 of 66 personal property claim settlements, totaling \$225,698 for review.
  - Reviewed documentation and conducted interviews, as necessary, to determine if the claims selected for review were handled consistently, and in accordance, with approved guidelines/criteria.
- Identified and assessed communications to victims and the community to determine what mechanisms TVA has taken to provide timely information and updates and improve communication. In addition to attending public meetings held collectively by TVA, EPA, the Tennessee Department of Health, and TDEC, specific communications media reviewed included:
  - TVA weekly status reports
  - TVA Web site information
  - TVA fact sheets
- Interviewed independent contractors and TVA personnel and reviewed documentation to determine what steps TVA has taken to monitor the long term health and environmental effects of the ash spill.

September 17, 2010

Robert E. Martin, ET 3C-K

COMMENTS - DRAFT INSPECTION 2010-13034 - REVIEW OF TVA'S KINGSTON ASH SPILL  
CLEAN-UP AND RECOVERY EFFORTS

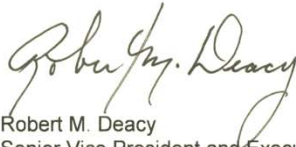
The Kingston Ash Recovery Project and Kingston Support Services have reviewed the subject document and are pleased to agree with your Findings for:

- Clean Up and Restoration of the Area
- Provide Reparations to Victims, Restore the Community, and Regain Public Trust

The Project did note the quantity of ash transported to Alabama as of June 6, 2010, is shown as "approximately 2,407,700 tons" (page 8). Our records show that number as 2,382,470 tons. We would recommend stating "approximately 2,400,000 tons".

In addition, attached are comments from Mr. Peyton Hairston's organization, Diversity and Labor Relations, referring to Real Property Claims, page 17.

Please do not hesitate to call if you need further information.



Robert M. Deacy  
Senior Vice President and Executive  
Kingston Ash Recovery Project

Cc: (attachment):  
Tom D. Kilgore, WT 7A-K  
William R. McCollum, Jr., LP 6A-K  
Peyton T. Hairston, Jr., WT 7A-K  
John C. Kammeyer, LP 5D-C  
Katherine B. Kline, KFP 1T-KST  
Stephen H. McCracken, KFP 1T-KST  
Annette L. Moore, LP 3K-C  
Anda A. Ray, WT 11A-K  
Joyce L. Shaffer, WT 9B-K  
John M. Thomas III, MR 3A-C  
Robert B. Wells, WT 9B-K  
Wendy Williams, WT 9B-K  
OIG File No. 2010-13034

**Pre-Decisional Deliberative Process**

Comment re Real Property Claims – page 17, second paragraph (changes highlighted in yellow)

We found that TVA developed a claims process for the acquisition of real property that has been affected by the ash spill or by the recover. The claims process was approved by the TVA Board of Directors. Specifically, the process first requires two independent appraisals of the property. In the limited circumstances when there is a significant difference between these appraisals, TVA obtains a third appraisal from an appraiser holding the MAI designation from the Appraisal Institute. The highest appraised value of the property is used by TVA in determining what amount to offer the owner. TVA also considers information provided by the owner in response to TVA's offer, including any additional appraisals provided by the owner. Once the fair market value is established and the owner agrees, TVA pays that amount at closing, adjusted for liens, pro rata taxes, and other items identified on the agreed closing statement. Furthermore, if there is to be any compensatory payment by TVA, it is also paid at closing.