

KINGSTON COAL ASH DISASTER CHRONOLOGY

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Obed Watershed Community Association

February 2009

Note: TVA - TN Valley Authority, EPA - U.S. Environmental Protection Agency, TDEC - TN Department of Environment and Conservation, TWRA TN Wildlife and Resource Agency.

Warnings:

- **November 2003** - A wet depression formed in the toe of the dike. TVA repaired a blowout in dike.
- **December 2003:** TVA decided against various options because of cost. The rejected options included converting to a dry fly ash collection system (\$25 million), constructing a synthetic liner for the pond (\$5 million), or building a cutoff wall around the perimeter of the dredge pond (\$2.6 million.) TVA decided that using a synthetic liner could set a precedent for all other dredge cells. Instead, TVA installed drains to relieve water pressure. Repairs completed in 2005.
- **2006 Slope Failure** occurred causing some ash to seep into an adjacent ditch. High capacity drains installed, improvements made to surface drainage, and the damaged area reinforced.
- **January 2008:** Another leak discovered.
- **October 2008:** The most recent inspection found a "minor" wet spot.

12:40 am Monday, December 22, 2008 - first 911-call received

- Failure of a 40 acre coal ash containment retention wall. 70% of ash in the retention cell was released: 5.4 million cubic yards of fly ash.
- Ash covered 300 acres as deep as six feet
- No loss of human life.
- Toppled power lines, ruptured gas line, covered rail line to coal plant.
- Pushed three houses off their foundations and affected 36 pieces of residential property.
- Emory River made impassable between river mile markers 0.0 and 4.2.
- TVA on scene four hours later (4:40 am - first TVA contact with Roane County rescue crew)

Monday, December 22, 2008

- TVA CEO Tom Kilgore: "We don't think there's anything immediately of danger because most of that's contained." "Several weeks of cleanup"
- Water release from upstream dams reduced to minimize flow downstream.
- TVA report on water quality downstream - "nothing above normal."
- TVA says that heavy rain and freezing temperatures may be the cause
- TVA's public relations staff issues memo for briefing news media on how to spin the disaster.

Tuesday, December 23, 2008

- TVA sampled water in the Emory, Clinch, and Tennessee, reporting that water treated through normal means would be safe to drink and concentrations of toxic metals were below state limits to protect fish.
- TVA advises affected residents to boil water before using it.
- Kilgore on the ash: "I don't think (the residents) have a problem being in their houses. I wouldn't pick any (ash) up or wade in it."
- TVA places a barrier of rocks in Emory River to reduce ash flows into the waterway.
- TVA brings in heavy equipment to start clearing debris from a section of Swan Pond Road that is completely blocked.
- TVA starts putting back the released ash back into area from which it was released

Wednesday, December 24, 2008

- EPA first tests sludge.
- 30 track hoes, bulldozers, dump trucks and tanker trucks are on site with 100 workers.
- TWRA monitors habitat area.

Thursday, December 25, 2008

- TVA: "There is no threat to the environment from the accident."
- Residents are not being informed about precautions they should take, causing concern among environmental groups.

Friday, December 26, 2008

- TVA reports 5.4 million cubic yards released, three times the original estimate.
- TDEC states that the mixture of ash and water does not pose an immediate risk to residents unless ingested.
- TVA reports elevated levels of lead and thallium in water near the breach. Elsewhere, TVA says the water is within regulatory limits. TVA claims that the metals can be removed by water treatment systems. Mercury and arsenic found in "barely detectable" levels.
- TDEC agrees to the emergency installation of a submerged weir across the channel of the Emory to slow the water and capture sediment.
- TVA, TDEC, and EPA are all conducting independent sampling.
- TDEC Division of Solid Waste is working with TVA to ensure material safely stored and to determine an appropriate final disposal site for this material.

Saturday, December 27, 2008

- TVA releases document on the hazards of the material released and issues its first precautions for residents related to ash.
- TVA continues to manage river flows on the Clinch and Tennessee rivers to minimize impact on recovery and monitoring activities as well as to reduce the possibility of water from the plant flowing past the Kingston water supply intake.

Sunday, December 28, 2008

- Kingston City Council holds a public meeting with Tom Kilgore. More than 300 attend.
- Roane County asks TVA and EPA to monitor groundwater for wells used for drinking.
- EPA reports "very high" levels of arsenic found in water sample collected from the affected area. Several heavy metals found in quantities "slightly above drinking water standards," including lead and thallium. Elevated contaminants not found at the Kingston water intake.

Monday December 29, 2008

- EPA has yet to place ban on fish consumption other than those already in place.
- TVA issues joint statement with EPA that direct contact with the ash should be avoided and that pets and children should be kept away from the affected areas. Water from private wells or springs may be contaminated if impacted by the release and should not be used for drinking, cooking or bathing until they have evaluated.
- Roane County Mayor says that an engineering firm will review inspection reports for whatever storage facility TVA uses to store the ash in the future. County says it has a tentative agreement with TVA to use a different storage method for the ash in the future.
- Roane County has formed a long-range recovery committee in conjunction with Harriman, Kingston, Rockwood, and Oliver Springs and members of the affected public.

Tuesday December 30, 2008

- TVA reports air monitors have been installed and that virtually no airborne ash detected.

- TVA building weir in Emory River.
- Developer and residents sue for \$165 million. Jot and Brenda Raymond own and develop the North Lake Estates and residents Chris and Lea Ann Raymond.
- Southern Alliance for Clean Energy notifies TVA of its intent to sue.
- EPA collects private well water samples for analysis.
- TDEC announces it is testing for radioactivity in the sludge.

Wednesday, December 31, 2008

- Still no word on the results of the sludge tests or underlying soil.
- Corps of Engineers has hired Luhr Brothers, Inc. to dredge the river bottom. The Columbia, Ill. contractor will use a hydraulic system to vacuum the river bottom. "It's our responsibility to clear the channel to make sure it's back to its original depth." Up to six feet of ash clog the river.
- Roane County school system announces it will use bottled water "for the time being."
- Governor Bredesen visits disaster site and calls for a much more aggressive role for the state in future environmental monitoring, inspections of all TVA retention ponds and a review of state environmental regulations. Currently, the state does not inspect TVA facilities.

Thursday January 1, 2009

- Appalachian Voices' Upper Watauga Riverkeepers report that the samples it took near ground zero in the Emory River have arsenic levels 300 times regulatory limits. High levels of barium, mercury, and other substances also were found.
- Kingston councilmen Brant Williams blasted TVA for failing to provide any water test results. At the December 28 public meeting, Kilgore had promised daily water test reports.
- TVA announces it will spray seed and straw on the ash to combat dust and erosion.

Friday, January 2, 2009

- EPA reports that the water sample it took on December 23 at the confluence of the Emory and Clinch Rivers had arsenic levels 149 times higher than maximum contaminant levels, lead at five times above normal levels, and slightly elevated total levels of beryllium, cadmium, and chromium. Samples from a municipal water intake did not have dangerous levels of chemicals or metals except for thallium which was three times maximum levels.

Monday, January 5, 2009

- TVA sets up a community outreach center.
- Senator Corker tours site.
- TDEC reports that the test results of water samples taken at treatment plants and 22 water wells were all within drinking water standards. EPA took 100 air samples, and none violated acceptable standards.

Tuesday, January 6, 2009

- At a special called meeting of the Kingston City Council, TVA CEO Tom Kilgore, Kingston coal plant managers, and TVA environmental "experts" field questions. 47 tons of rye grass seed have been sprinkled on ash. Water cannons will be used to keep ash damp. Various federal and state agencies at the public meeting to answer questions
- Sierra Club, Appalachian Center for the Economy and the Environment, Earthjustice, and Public Justice with local residents send a formal notice to TVA of their intent to sue for federal court oversight of cleanup and resident compensation.

Thursday, January 8, 2009

- Senate Environment and Public Works Committee holds hearings on the coal ash disaster. Chair Senator Barbara Boxer promises greater scrutiny of TVA and coal ash regulations.

- Rep. Zach Wamp that says Congress should give TVA economic stimulus money for the cleanup.
- American Coal Ash Association holds a public meeting to answer questions about coal ash. It claims the coal ash sludge is more of a nuisance than hazard. The association's membership includes 41 utilities, including TVA.

Friday, January 9, 2009

- Erin Brockovich holds public meeting in Kingston.
- Class action lawsuit is filed by eight residents near site of disaster, represented by Gary Davis.
- Second coal ash release is reported at Widows Creek on Gunter's Reservoir in Alabama.
- Senator Barbara Boxer calls for a "top-to-bottom review" of the safety of TVA's waste disposal sites.
- TVA and other agencies announce the transition from "emergency to recovery mode."

Sunday, January 11, 2009

- Joint emergency command and information center in Midtown closed.

Monday, January 12, 2009

- TVA holds a public hearing in Roane County, Kilgore's third meeting with public.
- TVA reports that it is spending more than a \$1 million a day for the cleanup.
- More than 250 landowners have filed damage claims with TVA.
- TVA reports spikes of toxics are appearing in the water after rains.

Tuesday, January 13, 2009

- TDEC notified TVA that the utility will reimburse TDEC for the state's response to the disaster and for a statewide review of coal ash impoundments.
- TDEC orders TVA to submit a formal cleanup plan and a plan for long term health monitoring for state approval within 45 days, turn over all documents related to the cause of the spill, cooperate with TDEC's assessment of the damage, and submit ongoing monitoring.
- TWRA reports finding damaged and stressed fish downstream from site.

Thursday, January 15, 2009

- Watts Bar Interagency Working Group approves dredging of Emory River embayment sediment despite concern that mercury and radioactive isotopes from Oak Ridge weapons complex are buried in the sediment.
- TVA holds open house to ask TVA "experts" questions.

Friday, January 16, 2009

- State warns that imposters claiming to be state health officials are visiting homes near disaster.
- An action alert from Natural Resource Defense Council generated more than 1500 emails to TVA to ask agency to pay for testing of people near disaster site, overloading the TVA system. United Mountain Defense has been raising funds to pay for blood and tissue tests of residents at a cost of \$500 per person.

The Obed Community Association has as its purpose community appreciation and volunteer involvement in ongoing appreciation for our natural and cultural heritage of the Obed River watershed within Cumberland County. Louise Gorenflo, OWCA community educator, produced this fact sheet. Those wanting to join this membership organization or more information may contact Dennis Gregg, OWCA director, at 484-9033, 85 Hood Drive, Crossville, TN 38555.