

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

Documents submitted:

**Wet Ash Storage to Support Time Critical Land-Based Ash Removal
East of Dike #2 Work Plan**

Date submitted

9/15/2009

Submitted to whom

Leo Francendese

Concurrence

Received

Not Applicable

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Wet Ash Staging and Processing to Support Time Critical Land-Based Ash Removal East of Dike 2 Work Plan

1.0 Purpose

There are currently two temporary active storage locations for ash that is excavated out of the area east of Dike 2 (west storage area and the dredge test cell) with a third under development (Peninsula storage area). All told, these areas may hold over 700,000 cy. These temporary storage areas could also potentially be used for excess dry ash from the dredging operation. All three areas are being maintained as dry stacking locations to maximize the amount of ash that can be stored by maximizing the height of storage. In addition, the dredge cell test area, with an anticipated capacity of over 300,000 cy, is primarily a geotechnical test with strict requirements on ash placement. The other reason for maintaining a dry stack in these areas is to have dry ash available during wetter winter months if needed for continuous train loading/disposal operation. To maintain these areas as dry stack areas, there are limits as to how many truckloads of ash can be accepted daily (loads must be carefully placed and compacted) and under what conditions ash can be placed. If the storage area is too wet, time must pass without loading to allow the stored ash to dry before accepting even new dry ash. If the ash is too wet, it can cause the area already stacked to become wet.

To maximize excavation and hauling production of the ash east of Dike 2, two areas in the failed dredge cell are proposed to be used as wet staging areas to allow wet ash to be hauled and processed without damaging the dry stacks already under development. These areas are shown on the attached figure. The northern area is to the north of the dredge cell haul road and although about 13 acres in size, has roughly 5 to 6 usable acres. Much of this area is used for necessary dirty water drainage. Between 25,000 and 50,000 cy of ash may be contained in this area at any time. The second area is the previously identified test area B (was to be part of the dredge cell test) as well as the area that has been filled in with relic material from the high wall. This area covers roughly 13 acres and may hold between 50,000 and 100,000 cy.

2.0 Design

To provide more staging locations as well as a place to haul wet ash, parts of the failed dredge cell would be used as a wet ash staging/processing area. The attached figure illustrates areas that may be used to process/stage wet ash. The volume of ash coming to the area would be tracked by counting truckloads and assuming a volume per truck.

The ash would not be stacked or compacted but instead would be processed (dried) by producing windrows and areas where the ash can be turned and disced to promote drying. As the ash dries, it would be moved to one of the dry storage areas or to the loading area in the ballfield (if needed) when trucks are available that would not impact removing the ash from the river.

If the ash does not dry timely enough to support loading into rail cars, a similar volume of dry ash from either the embayment west of Dike 2 or in the dredge cell, would be hauled to the ballfield for loading in the trains. If dry ash is needed during wetter months to load into trains, this hauling may occur in the winter months. Otherwise, it would occur after the dredging operation is nearing completion and ash is needed to load trains. There would be no net gain or loss of time-critical ash disposed volume by using this approach.

Discussions with Stantec have concluded that there is no impact to the test in the dredge cell from using the adjacent area as wet ash staging. The limited amount of ash being placed would not pose a threat to underlying ash stability. As evidence by results from the dredge cell test, a few feet layer of ash does not change the underlying ash conditions.

3.0 Construction

Controlling ash migration is a key construction element of this task. Runoff would be directed to the existing dirty water ditches and ultimately to the settling basins as illustrated on the figure. However, ash migrating to the settling basins will be discouraged through contouring at the dump site (construction of berms), check dams, and wide areas in the channels. These measures will be put in place depending on where the ash is stored, the weather, and the condition of the ash. In deeper erosion channels, sock drains will be placed prior to ash placement to encourage subsurface flow. This area will be monitored for erosion and ash migration as part of the SWPPP inspections.

4.0 Schedule

Use of the wet staging areas is critical to allowing a month reduction in the schedule for removing ash east of Dike 2. Current plans are to complete the land based ash removal activities by the end of January 2010. By using all of the proposed wet staging areas (in conjunction with implementing other improvements in already approved work plans), the completion date is expected to be the end of December 2009. This schedule improvement provides one less month that ash is in the river during the wetter time of the year. The attached curve illustrates the potential production of ash from east of Dike 2 (not including removal of the protective berm) with all improvements in place.

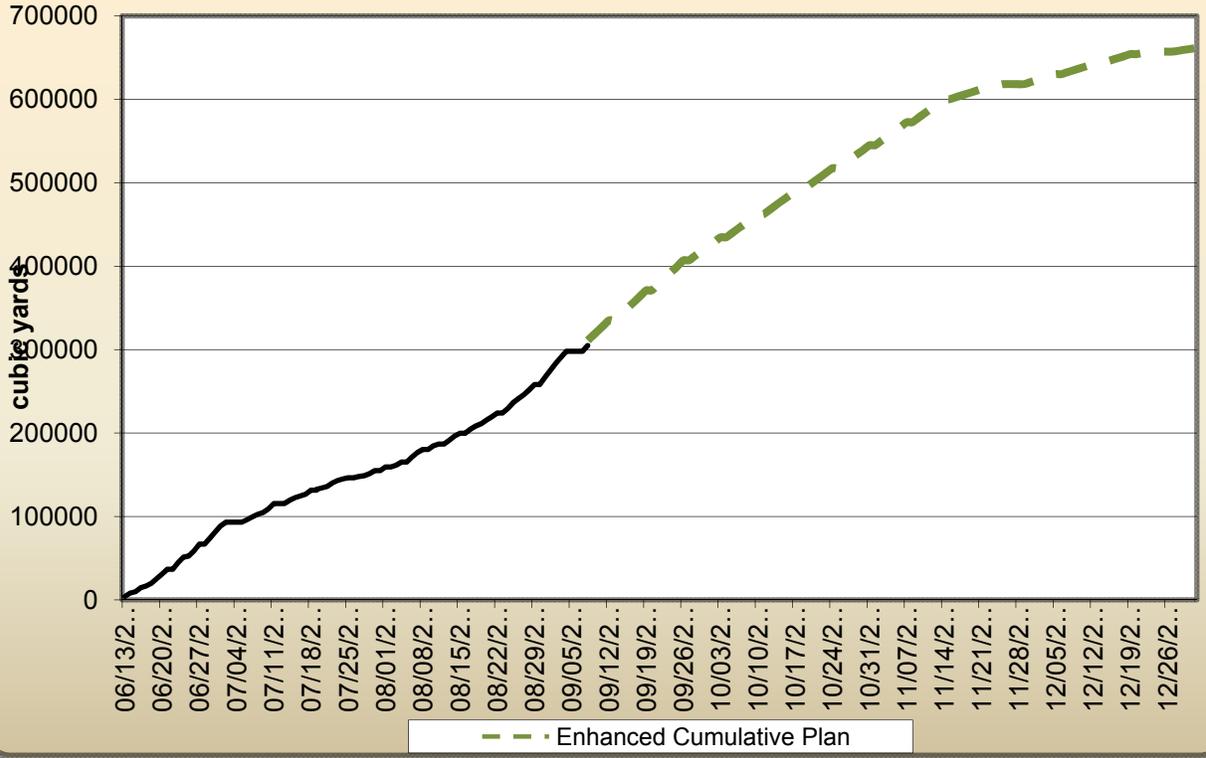
5.0 Waste Management

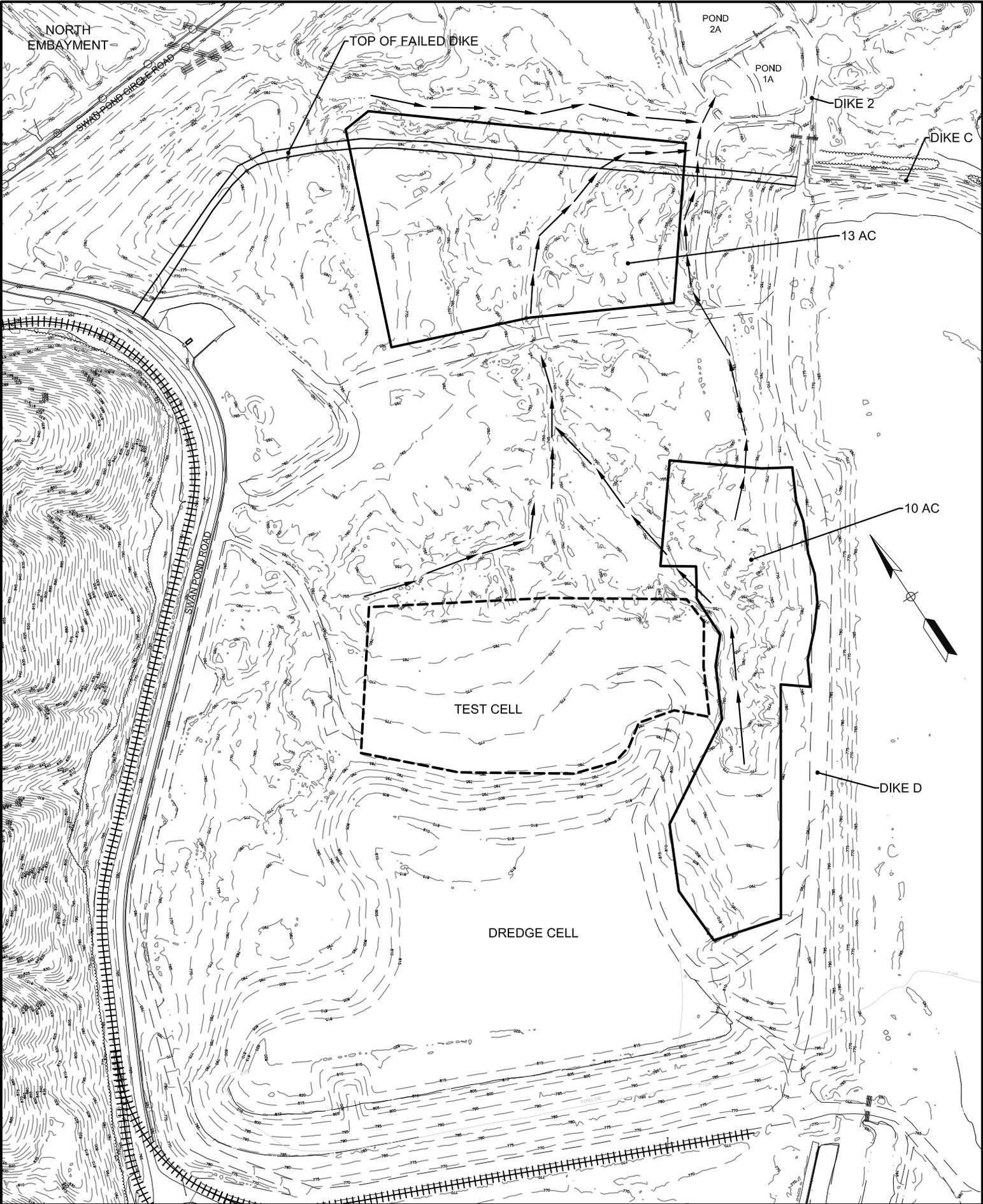
This work plan does not generate any additional waste.

6.0 Health and Safety

The greatest concern for health and safety by implementing this work plan is that more work will occur during wet site conditions. Care must be taken for personnel entering/exiting equipment, for personnel on the ground slipping, and for trucks slipping. If the conditions deteriorate to unsafe conditions, work will be suspended, even with a wet ash storage area. All work will follow the site safety and health plan.

Ash Removal East of Dike 2 - Weekly





WET MATERIAL PROCESSING AREA
TVA Kingston Fossil Plant