

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

**Documents submitted:
Test Embankment Program**

**Date submitted
6/10/2009**

**Submitted to whom
Glen Pugh, TDEC**

Concurrence

Received Not Applicable TVA

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Anda Ray
Mike Scott
Kathryn Copeland
Cynthia Anderson
Dennis Yankee
David Stephenson

Received Not Applicable Jacobs

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John Moebes
Julie Pfeffer
Jack Howard
Donna Cueroni
Paul Clay

Approvals

TVA

Michael J Scott

Date

6/10/09

TDEC

Phase 1 of Plan

Date

TDEC

Phase 1 and 2 of Plan

Date

cc:

- Anda Ray, TVA
- Barbara Scott, TDEC
- Leo Francendese, EPA
- Mike Scott, TVA
- Dennis Yankee, TVA
- Kathryn Copeland, TVA
- Cynthia Anderson, TVA
- John Moebes, Jacobs
- EDM
- Julie Pfeffer, Jacobs
- David Stephenson, TVA
- Michelle Cagley, TVA
- Greg Signer, TVA
- KIF Incident Document Control
- Katie Kline, TVA
- Gretchen Wahl, Jacobs
- Barbara Scott, TDEC
- Dannena Bowman, EPA
- Jeff Gary, Jacobs



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid Waste Management
Fifth Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243 – 1535
615-532-0780

June 24, 2009

Ms. Anda Ray
Tennessee Valley Authority
1101 Market Street
Chattanooga, TN 37402-2801

Re: TVA – Kingston Test Embankment Program

Dear Ms. Ray:

The Tennessee Department of Environment and Conservation, Division of Solid Waste Management received the above document as prepared by Stantec Consultants on June 12, 2009. The test embankment program is divided into two phases. The first phase involves preparation of a base layer (working platform) using either geogrid or stone and the removal of the top of the relic ash fill and using it as fill to promote drainage. The second phase is placement of certain recovered ash in the test fill.

TDEC hereby approves phase one of the test embankment program for immediate implementation. Placement of recovered ash in the test fill is not included in this approval and may not begin without separate approval.

Sincerely,

Glen Pugh
Solid Waste Program Manager
Division of Solid Waste Management

Cc: Chuck Head - TDEC
Barabara Scott - TDEC
Leo Francendese - EPA
Cynthia Anderson - TVA



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid Waste Management
Fifth Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243 – 1535
615-532-0780

July 13, 2009

Ms. Anda Ray
Tennessee Valley Authority
1101 Market Street
Chattanooga, TN 37402-2801

Re: TVA – Kingston Test Embankment Program – Phase Two Approval

Dear Ms. Ray:

The Tennessee Department of Environment and Conservation, Division of Solid Waste Management received the above document as prepared by Stantec Consultants on June 12, 2009. The test embankment program is divided into two phases. The first phase involves preparation of a base layer (working platform) using either geogrid or stone and the removal of the top of the relic ash fill and using it as fill to promote drainage. Phase One was approved on June 24, 2009.

Phase Two consists of controlled, monitored placement of recovered ash in the test fill. TDEC hereby approves Phase Two of the test embankment program. This approval does not include permanent placement of recovered ash in the test fill area.

Sincerely,

Glen Pugh
Solid Waste Program Manager
Division of Solid Waste Management

Cc: Chuck Head -TDEC
Barabara Scott -TDEC
Leo Francendese - EPA
Cynthia Anderson - TVA

Test Embankment Work Plan

1.0 Purpose of Work

The test embankment program is intended to observe the response to loading within various foundation layers as well as portions of Dike D under instrumented conditions. The embankment shall be constructed using maximum 3(H):1(V) slopes with intermediate benching to a peak elevation of 802 feet in accordance with the quality control protocols established in approved program documents. Results of preliminary stability analyses indicate that in order to maintain drained (or stable) conditions, instruments (i.e. piezometers, slope inclinometers and settlement plates) shall be monitored to determine that embankment construction proceeds at a rate wherein targeted threshold limits are not exceeded. These limits have been established for the ratio of excess pore water pressure to the applied embankment load and the ratio of horizontal to vertical displacements as outlined herein. The data and information gained from this test fill, regardless of whether the entire test fill is completed, will provide a basis for the closure design of the dredge cell.

There are two primary phases to this activity. The initial phase of work will be placing the base layer as well as providing proper drainage for the area by removing the top of the relic layer and using it as fill material. A decision has already been made to not use bottom ash as the base layer. This decision is reflected in the response to comments contained in the attached plan. Instead rock or a geogrid will be used. The second phase will be the placing of ash in the dredge cell. Once phase 1 has begun phase 2 activities can begin. It is expected that for some period of time that work for both phases will be ongoing.

Approval for this work plan can be granted holistically or in phases.

2.0 Design Components

The design of this program is found in the attached Test Embankment Program report prepared by Stantec.

3.0 Construction Management

The construction requirements of this program are found in the attached Test Embankment Program report prepared by Stantec.

4.0 Schedule

Because one of the variables being tested is the rate of ash placement and because of the size of the test required, this activity is anticipated to take 6 to 10 months depending on the conditions observed. In the event that potentially unstable conditions are realized

based on the instrumentation readings and/or field observations, all embankment test activities will cease and an evaluation will be made by qualified personnel relative toward established program objectives and the resulting path forward. It may be necessary to stop the test early. This will be a decision made by the engineers and project manager, along with consultation with TDEC and EPA.

5.0 Waste Management

Only minor construction debris such as material packaging is anticipated to be generated through this activity. This will be disposed with other construction debris at the site on an approved construction debris landfill.

6.0 Health and Safety

The major risks are from heavy equipment. All construction activities will be done in accordance with site-wide Health and Safety Plan. Dust control will be done in accordance with the Site Dust Control Plan.