

Tennessee Valley Authority
Regulatory Submittal for Kingston Fossil Plant

Documents submitted:
Construction Support Geotechnical Investigation of East Dike Work Plan

Date Submitted:
03/25/2010

Submitted to whom
Leo Francendese

Concurrence

Received Not Applicable

TVA

Mike Scott
Steve McCracken
Kathryn Nash *KAN*
Dennis Yankee *DNY*
Michelle Cagley *MC*

Received Not Applicable Jacobs

Steve Richardson
Julie Pfeffer

Approvals

TVA

Michael J Scott

Date 3/25/10

EPA

Leo Frank

Date 3/25/10

Consulted w/ TDEC

cc:

- Anda Ray, TVA
- Barbara Scott, TDEC
- Leo Francendese, EPA
- Mike Scott, TVA
- Dennis Yankee, TVA
- Kathryn Nash, TVA
- Cynthia Anderson, TVA
- Steve McCracken, TVA
- EDM
- Julie Pfeffer, Jacobs
- Steve Richardson, Jacobs
- Michelle Cagley, TVA
- Greg Signer, TVA
- KIF Incident Document Control
- Katie Kline, TVA
- Gretchen Wahl, Jacobs
- Dannena Bowman, EPA
- Jeff Gary, Jacobs
- Robert Pullen, Jacobs

KINGSTON ASH RECOVERY PROJECT

Work Plan

for

**Construction Support
Geotechnical Investigation of East Dike**

1. INTRODUCTION AND PURPOSE

The work is being performed to install monitoring equipment to aid in the stability analysis of the East Dike. Six borings are to be made to gather soil data and to facilitate installation of piezometers.

2. DESIGN AND CONSTRUCTION COMPONENTS.

The proposed location of the bore holes requires that temporary roads be constructed for the drilling equipment. The bore holes are to be installed to the right and left of the existing road along the intake channel. The soils in the area of the bore holes are very soft and moist thereby necessitating the placement of stone and geogrid to provide a temporary access way capable of supporting the drilling equipment from the road to the proposed location of the bore holes. Note attached sketch PBL #1.

The piezometer enclosure is to be a two inch pipe in a 4 to 6 inch bore hole that extends from the designated depth to approximately 3 feet above the ground. The piezometers are to be Type II. The enclosures and piezometers are to be installed by the drilling contractor. Note attached sketch and initial drilling scope.

3. CONSTRUCTION QUALITY CONTROL

The accessways to the drill hole locations are to be "proof rolled" for stability. Significant deformation will require additional stone base. Installation of piezometers will be per manufacturers recommendation.

4. SAFETY AND HEALTH

The work will be accomplished in accord with the Site Safety Plan, and augmented with the Job Safety Analysis. The work will be in the vicinity of an overhead electrical power transmission line. Particular emphasis in the JSA is to be directed toward the overhead power source. In addition, an underground electrical power transmission line is located along the edge of the existing road. The location has been marked by "Utility Locators".

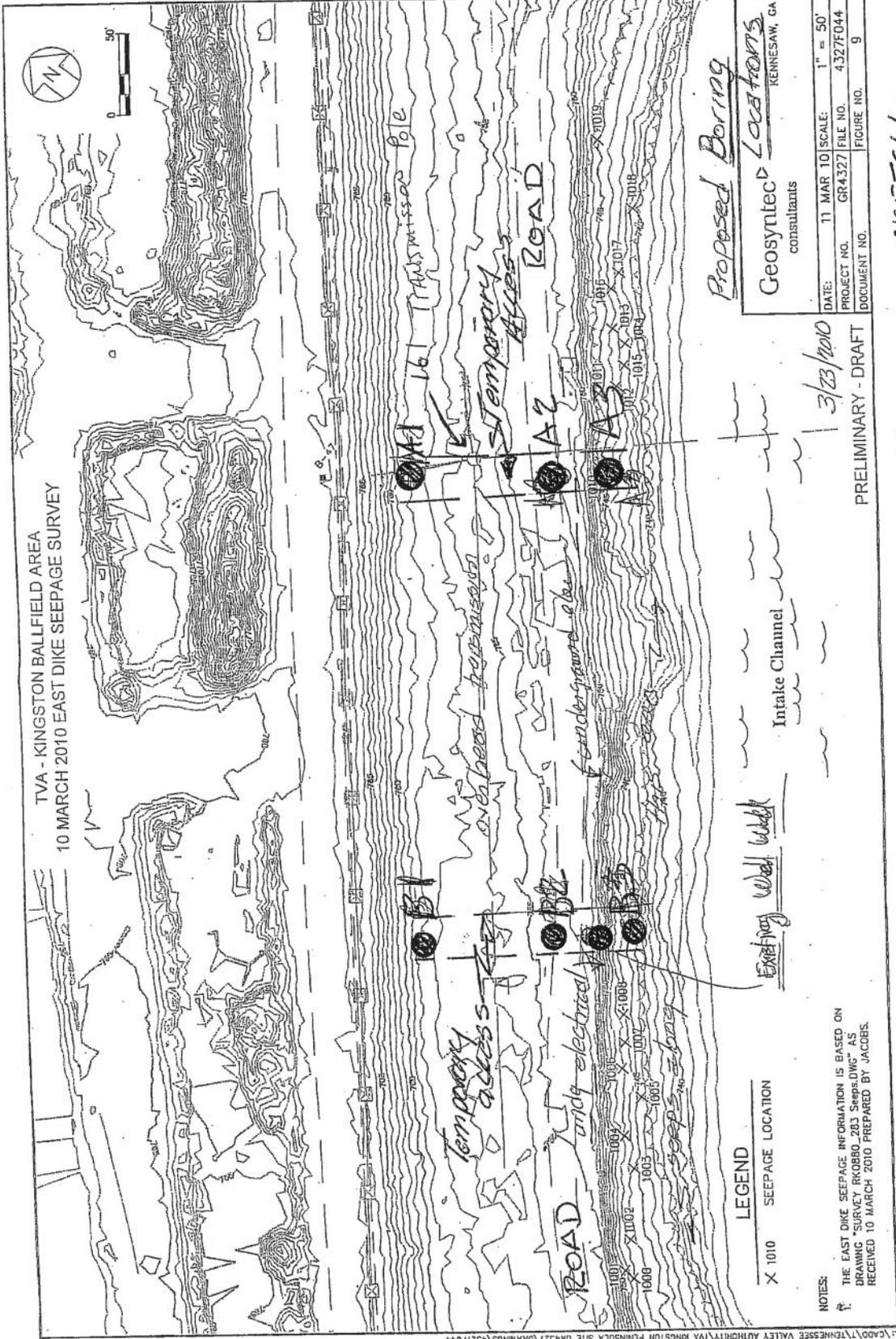
5. TRANSPORTATION MANAGEMENT

6. WASTE MANAGEMENT

Minor clearing and grubbing will produce about two truck loads of debris which will be discarded at the plant waste site east of the intake channel. The tailings from the drilling operation will amount to approximately 10 cubic feet of material and will be spread over the adjacent area.

7. PROJECT MANAGEMENT

Jacobs will provide overall project management and construction management. Civil Projects will provide all construction services. Technical oversight of the piezometer installation and other geotechnical issues will be by Geosyntec. The estimated start date is 3-25-10 and is to be completed on or before 3-31-10.



SKETCH
P13L #1

Figure 11. Seepage Locations Along Side Slope of East Dike (Drawing Provided by Jacobs on 3/10/10)

NOTES:
THE EAST DIKE SEEPAGE INFORMATION IS BASED ON
DRAWING SURVEY RK08B0_283 Seeps.DWG AS
RECEIVED TO MARCH 2010 PREPARED BY JACOBS.

LEGEND
X 1010 SEEPAGE LOCATION

Proposed Boring

Geosyntec Consultants
Kennesaw, GA

DATE: 11 MAR 10 SCALE: 1" = 50'
PROJECT NO. GR4.327 FILE NO. 4327F044
DOCUMENT NO. FIGURE NO. 9

PRELIMINARY - DRAFT

3/23/2010

Intake Channel

Emergency well well

ROAD

temporary access

Intake electrical

overhead transmission

ROAD

temporary access

ROAD

Mississippian Pole

A1

A2

A3

A4

A5

B1

B2

B3

B4

B5

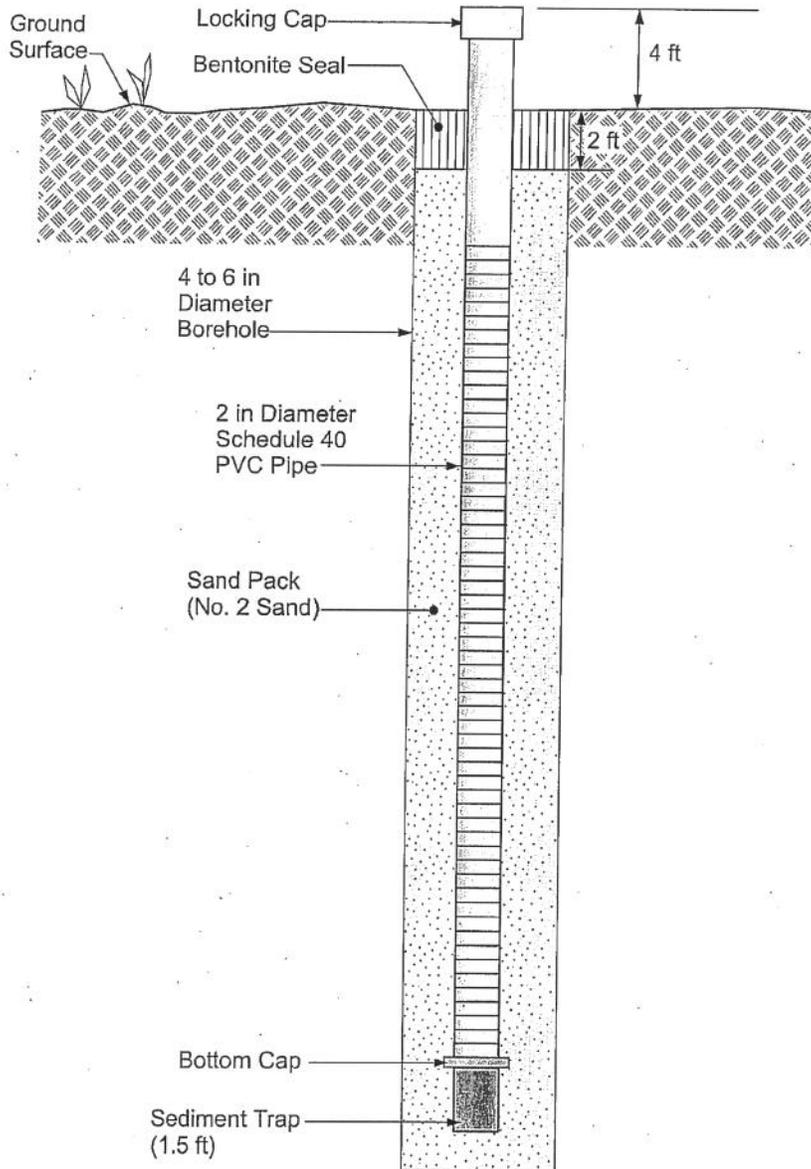
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GEO SYNTEC CONSULTANTS
KENNESAW, GEORGIA

TYPE II PIEZOMETER CONSTRUCTION DIAGRAM

SITE:	DRILLING COMPANY	IDENTIFICATION:
PROJECT NO.:	DRILLER	TYPE:
SUPERVISOR:	DATE COMPLETED	N: E:



NOT TO SCALE

Denton, Randy

From: JJWang@Geosyntec.com
Sent: Wednesday, March 24, 2010 3:43 PM
To: KCampbell@mactec.com
Cc: Denton, Randy; GEOSYNTEC CONSULTANTS INC; RBachus@Geosyntec.com; Mscimen@Geosyntec.com
Subject: KIF East Dike Drilling Scope

Kelvin:

Below is the initial drilling scope. The scope may be modified during drilling based on actual subsurface conditions.

- Drill three (3) borings along two cross-sections for a total of six (6) borings. Borings should be drilled to auger refusal depths. Split spoon samples should be obtained continuously.
- Report groundwater during drilling and after 24 hours at each boring location.
- Obtain undisturbed samples for triaxial and permeability testing at selected depths by Geosyntec assuming undisturbed samples can be recovered.
- Install 2-in ID temporary monitoring wells at locations and depths determined by Geosyntec. One temporary well per boring location. Temporary wells should be installed in separate borings, offset approximately 5 ft from the initial borings.
- Prepare boring logs indicating material description (visual classification) from ground surface to auger refusal.

Please let me know if you have any questions. Thanks.

Justin Wang, P.E., G.E.
Project Engineer

1255 Roberts Boulevard, NW, Suite 200
Kennesaw, GA 30144-3694
Phone: 678.202.9564
Cell: 770.870.0007
Fax: 678.202-9501
www.geosyntec.com

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