Tennessee Valley Authority
Regulatory Submittal for Kingston Fossil Plant

Documents submitted
Access Channel Construction and Debris Removal Operations Work Plan

Date submitted
5/29/2009

Submitted to whom
Leo Francendese, EPA

Concurrence

Received	Not Applicable	TVA
☒	☐	Anda Ray
☒	☐	Mike Scott
☐	☒	Kathryn Copeland
☐	☒	Cynthia Anderson
☐	☒	Dennis Yankee
☐	☒	David Stephenson
☐	☐	
☐	☐	
☐	☐	

Received	Not Applicable	Jacobs
☒	☐	John Moebes
☐	☒	Julie Pfeffer
☐	☒	Jack Howard
☐	☒	Donna Cueroni
☐	☒	Paul Clay
☐	☐	

Approvals

TVA Michael T Scott Date 5-29-09

EPA [illegible] Date 6-1-09

Concurrence from Paul Davis TDEC

cc:

- ☒ Anda Ray, TVA
- ☐ Mike Apple, TDEC
- ☒ Leo Francendese, EPA
- ☒ Mike Scott, TVA
- ☐ Saya Qualls, TDEC
- ☒ Dennis Yankee, TVA
- ☒ Kathryn Copeland, TVA
- ☐ Paul Schmierbach, TDEC
- ☐ Tom Welborn, EPA
- ☒ Cynthia Anderson, TVA
- ☐ Glen Pugh, TDEC
- ☐ Paul Sloan, TDEC
- ☒ John Moebes, Jacobs
- ☒ EDM
- ☐ Paul Davis, TDEC
- ☒ Julie Pfeffer, Jacobs
- ☐ David Stephenson, TVA
- ☒ Michelle Cagley, TVA
- ☒ Greg Signer, TVA
- ☒ KIF Incident Document Control
- ☒ Katie Kline
- ☒ Gretchen Wahl

Access Channel Construction and Debris Removal Operations Work Plan

1.0 Purpose

Hydraulic dredging of the ash is being severely impeded by the large amount of debris in the ash. The three dredges in operation are supported by debris removal barges with heavy equipment on board to remove trees and other objects from the dredge area. There is not enough draft to allow the debris removal operation to proceed in front of the dredges. Thus, when debris is encountered, the operators must raise the cutterhead and move to an alternate area. The debris removal barge moves in to remove the object and then the dredge operator moves back to dredge the skipped area. This constant shifting position is greatly impeding progress.

This work plan addresses mechanical dredging and debris removal to allow greater access into Segment 1, immediately east of Dike 2, such that hydraulic dredging productivity will be increased.

2.0 Design

There is no design document associated with this activity.

3.0 Construction

A barge mounted clamshell excavator will be used to cut an access channel approximately 60 feet wide and 10 feet below the water surface on the main river channel in a north to south fashion up the entire length of Segment 1. Debris and incidental ash will be pulled and loaded onto material barges that are fitted with 8" pipe to retain material and turbidity curtains. Ash removed to create the channel will be deposited in the material barge. Once the channel is established, dredging can proceed with the debris barges providing support from the front. Turbidity curtains will be deployed around the debris removal operations. Debris and ash will be off-loaded at the north barge off-loading station. Debris will be segregated at the station and transported to the debris processing station near the gypsum pond construction site. Any ash removed with the debris will be transported by truck to the ash processing area. Once the 60 ft channels is cut, a debris removal excavator barge may be used to supplement debris removal in other areas in Segment 1, using previously defined methods of collection of debris, ash, and turbidity curtains.

Attachment 1 provides visual aides to describe this operation. Best management practices to control turbidity during this operation include material control measures at the north barge off-loading station, localized turbidity control in the excavation/removal area, and water flow control in the area between the sand bar and Dike 2.

The north barge off-loading station will have rock berm on the south and west sides to contain off-loaded debris and ash. The eastern portion will be protected with barges and a floating silt barrier (5-6' deep).

Localized turbidity control will be managed with floating curtains in the work area. In addition, the ash plug itself will act as a baffle to minimize downstream flow of turbid water.

River water flow through the work area between the sand bar and Dike 2 will be controlled with a series of floating silt barriers (5-6' deep) to reduce water velocity through the work area and channel river flow into the silt barriers. A sketch of the proposed silt barrier layout is provided in Attachment 1.

4.0 Schedule

Construction of the access channel will begin on June 1, 2009 and should be complete in 4 weeks.

5.0 Waste Management

Incidental ash removed from the river with debris will be segregated and transported to the Ash processing and storage area. Debris generated will be segregated and transported to the Gypsum pond area for grinding/shredding.

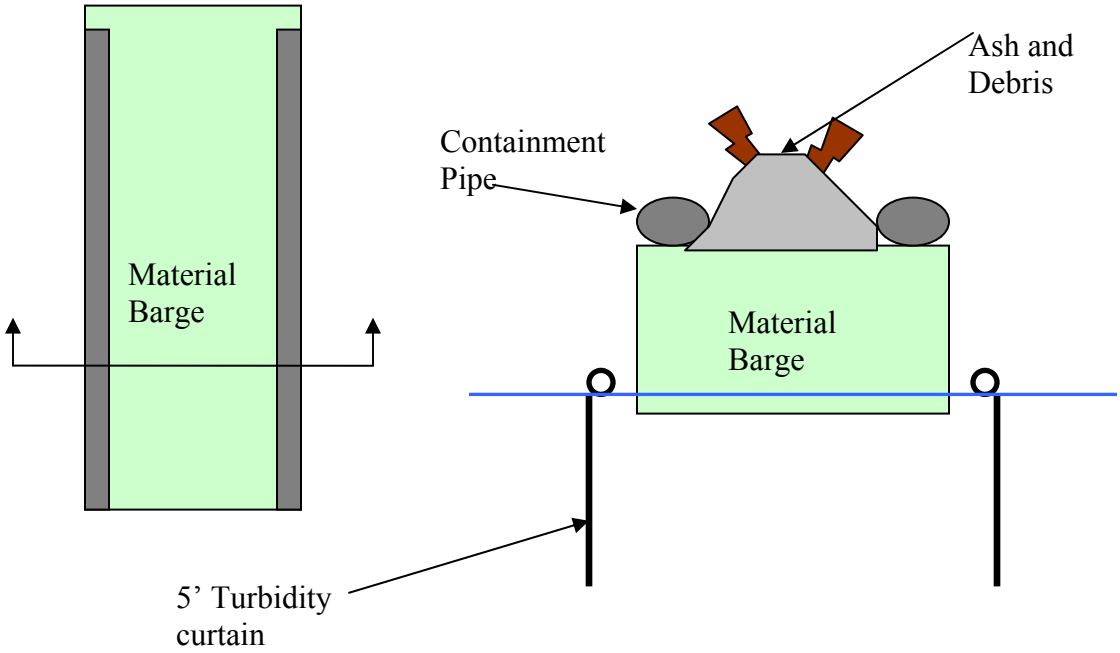
6.0 Health and Safety

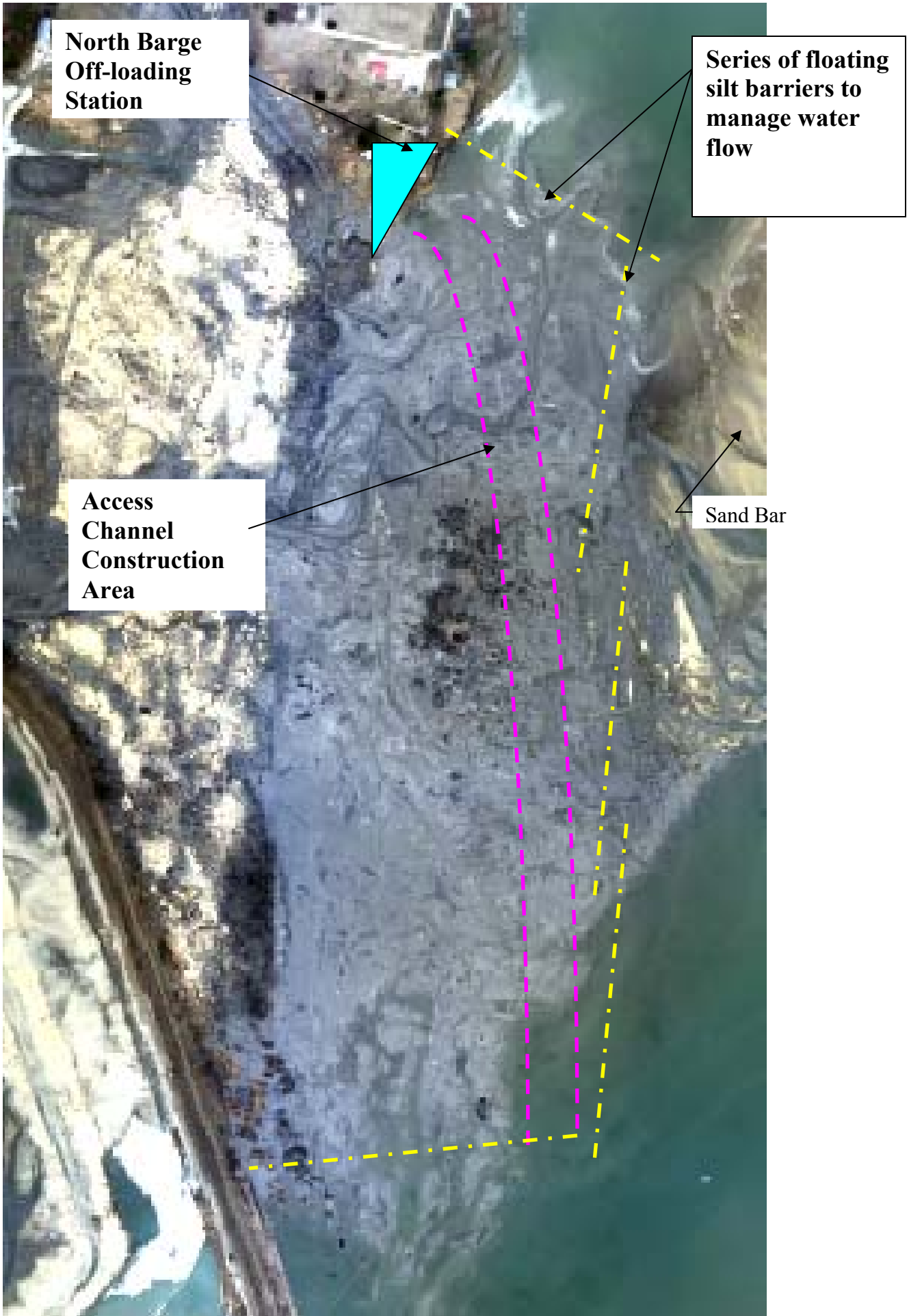
The activities in this work plan will follow the site-wide health and safety plan.

Attachment 1

Example photo of debris removal

Sketch of Material Barge




North Barge Off-loading Station
Series of floating silt barriers to manage water flow
Access Channel Construction Area
Sand Bar