

Tennessee Valley Authority
Regulatory Submittal for Kingston Fossil Plant

Documents submitted:

Construction of lateral expansion facilities – Phase 1 Work Plan

Date submitted

11/19/2009

Submitted to whom

Leo Francendese

Concurrence

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Not Applicable

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Date

11/24/09

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Date

11/30/09

consulted w/ TDEC

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WORK PLAN

CONSTRUCTION OF LATERAL EXPANSION FACILITIES-PHASE 1

1.0 Purpose of Work

This plan is to describe the work required to construct the facilities for the lateral expansion. The lateral expansion is a partially completed dredge cell located "within" the ash pond, west of the divider dike and adjacent to and east of Dike D. The expansion is partially filled with ash to an elevation of 760+/- . The dike is constructed to an elevation of 765+/- . Phase 1 work provides piping, a discharge weir and a intake facility. Future phases will provide facilities to create a "rim ditch system" configuration.

2.0 Design Components

The over flow from the lateral expansion discharges into a shallow channel along the base of Dike D and flows south westward into the ash pond, which discharges into the stilling pond. The discharge of the lateral expansion is to be relocated away from dike D and restructured into a broad crested weir to create a low flow rate and act as a skimmer, thereby enhancing the settling capacity of the expansion. The weir is to be constructed with ash and capped with stone underlain with a geotextile and located in the west dike. The weir is to be approximately 20' long with a crest elevation of 761.8. A flow rate of 4500 gpm will result in a 3" +/- head across the weir with a velocity of 1 foot per second.

The intake into the lateral expansion will be located near the north east corner and will be directed into a riprap check dam to dissipate the energy and prevent scouring. In addition, this maximizes the distance from intake to the discharge weir and will result in greater detention time. Note attached Sketch # SK-100 for the facilities noted above as well as the pipe routing from the ash pond to the lateral expansion

3.0 Construction Management

The construction will be accomplished by conventional methods utilizing excavators, trucks, and other associated equipment.

4.0 Schedule

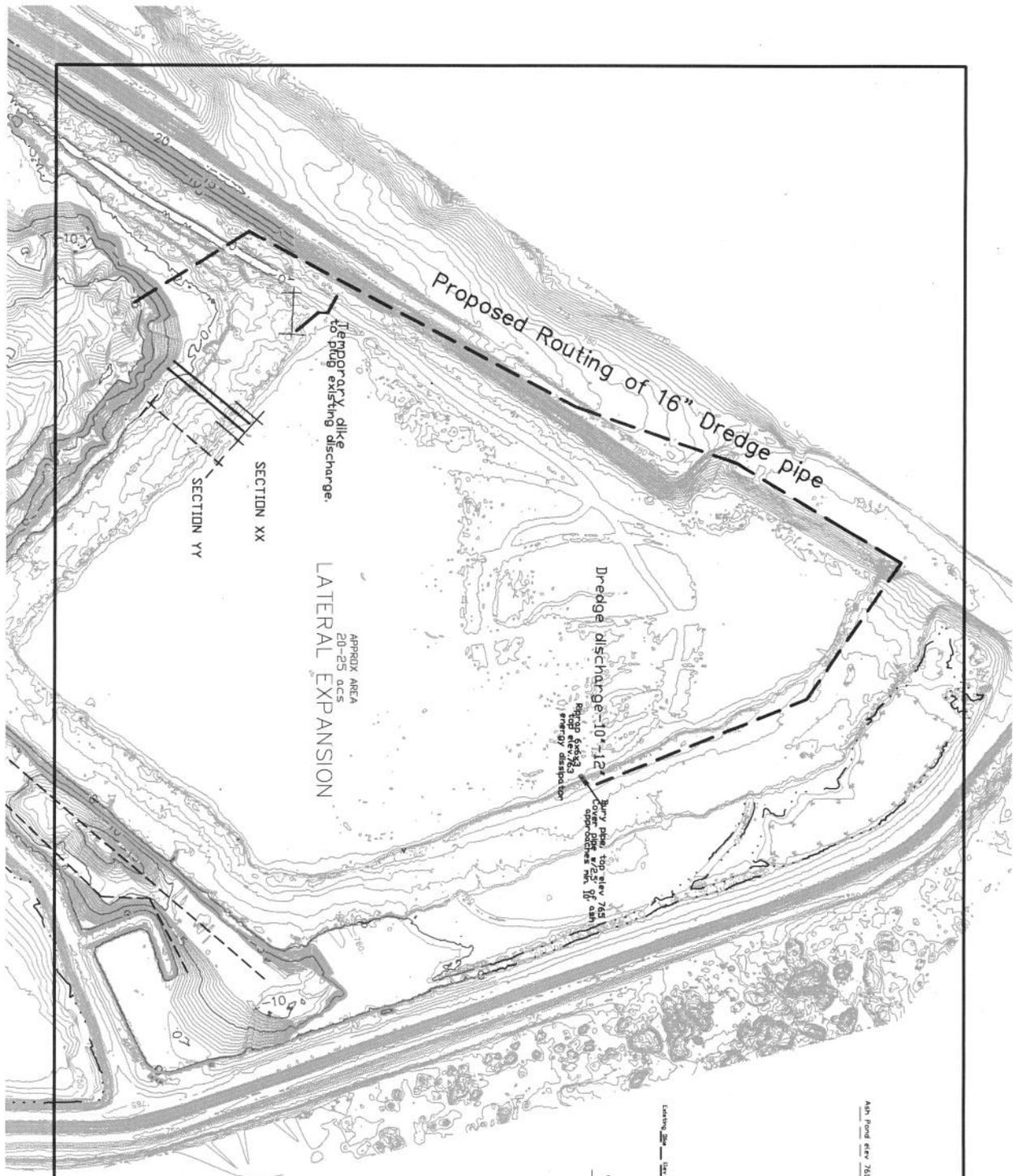
The work outlined above will be started by 11-30-09 and completed by 12-4-09.

5.0 Waste Management

No waste other than miscellaneous construction debris will be created.

6.0 Health and Safety

All construction activities will be done in accordance with site wide Health and Safety Plan. Work in close proximity of the Pond areas will be specifically addressed in the Job Safety Plan.



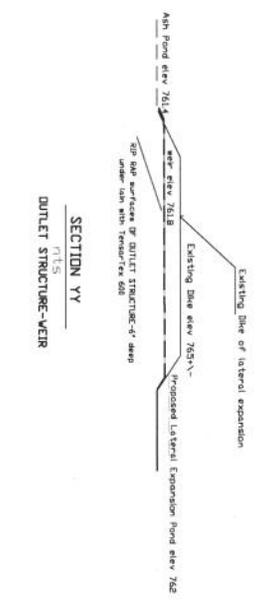
APPROX AREA
20-25 ACS
LATERAL EXPANSION

Temporary dike
to plug existing discharge

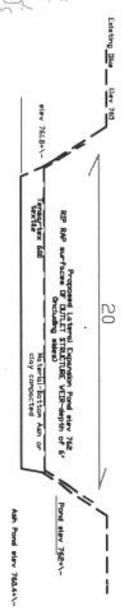
SECTION XX
SECTION YY

Proposed Routing of 16" Dredge pipe

Dredge discharge - 10" dia
Riprap 500' long
top elev 76.3
bury pipe 500' long
cover pipe 4" dia
dip 0.0000 per 10'



SECTION YY
FTS
OUTLET STRUCTURE-WEIR



SECTION XX
FTS
OUTLET STRUCTURE-WEIR

CONSTRUCTION OF LATERAL EXPANSION FACILITIES PHASE 1
SKETCH SK-100
RD 11-16-09