January 29, 1994

D. A. Howard, BR 3D-C

KINGSTON FOSSIL PLANT - COAL YARD RUNOFF POND COST ESTIMATE

Please find attached the revised cost estimate for the Phase I study of the coal yard runoff pond. Note that the cost estimate is contingent upon Fossil Engineering Services performing the study. FES has proposed a start date of April 4. If you will require an earlier start date, we will have to ask Gilbert/Commonwealth to perform the study, and more money will likely be required.

Please call me at 7319 if you need additional information.

C. E. Bohac, BR 2G-C
Project Engineering

CEB

cc:
K. W. Burnett, LP 2G-C

C09 940128 001 Estimate No: 94126R1
CER No : KIF93-1218-PO
PCN : NA

TENNESSEE VALLEY AUTHORITY
FOSSIL & HYDRO PROJECTS
COST ESTIMATE/SCOPE OF WORK

TO : Those listed
FROM: Ronald W. Clevenger, Manager of Estimating, Engineering Services, SP 3F-C

Project: Kingston Fossil Plant

Feature: Coal Yard Runoff Pond

Requesting Organization: Project Management (D. A. Howard)

Purpose: To determine the cost and schedule for Phase I for PAB approval.

Description of Work to be Performed: Conduct tests for analysis of the Runoff Pond System capabilities. If modifications are required, recommend the necessary equipment and design changes necessary for the runoff pond to meet system requirements. Addition of Proj. Engr. hours and trips.

Phase:	Study I	Design & Long-Lead Procurement II	Implementation III	Total
Total Direct Cost:	$24,600	$	$	$24,600
Type of Estimate :	Detail			
Schedule:				
Start :	04/04/94	TBD	TBD	
Complete:	06/10/94	TBD	TBD	

Comments: *Excludes Partner expenses/charges/overheads (84E).
Joint Project Team Implemented? ___ Yes ___ No

Reference the following attachments:
Attachment 1 - Cost Estimate
Attachment 2 - Scope of Work

C. E. Bohac, BR 2B-C
D. A. Howard, BR 3D-C
RIMS, CST 13B-C

HEH Ronald W. Clevenger 1/28/94
Submitted by (Date)

Issue Date: JAN 28 1994

9662D

PHASE APPROVAL COST SUMMARY SHEET – FISCAL YEAR 1994

PROJECT: KINGSTON FOSSIL PLANT
FEATURE: COAL YARD RUNOFF POND
CER: KIF93-1218-P0

PHASE: I
PCN: N/A
ESTIMATE NO.: 94126

MAN-HOURS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	PDE	Total
FOSSIL ENGINEERING SERVICES														
Elec Sys Engg							100	100						200
I&C Sys Engg														0
Mech Aux Engg							60	30					3	93
Mech Sys Engg														0
Site Engg Svs				10			80	60						150
Structural Engg							16	16						32
HYDRO ENGINEERING SERVICES														
Small Proj / Inspections														0
Civil Engg														0
Elect Engg														0
Mech Engg														0
CLEAN AIR PROGRAM														
CUF FGD Project														0
OTHER														
Proj Engg Services							8	8						16
Estimating								30	30					60
														0
TOTAL MAN-HOURS	0	0	0	10	0	0	264	244	30	0	0	0	3	551
SITE VISITATION (# of site visits)							8	3						11

OTHER COSTS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	PDE	Total
Other Organizations / Services (Obj 25)														
														0
														0
														0
...onal Services (Obj 27)														
														0
														0

COST SUMMARY

Engineering

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	PDE	Total
OBJ 11 – Compensation	0	0	0	242	0	0	6,737	6,278	833	0	0	0	81	14,171
OBJ 12 – Benefits	0	0	0	104	0	0	2,890	2,693	357	0	0	0	35	6,079
OBJ 21 – Travel	0	0	0	0	0	0	1,680	630	0	0	0	0	0	2,310
– Misc	0	0	0	0	0	0	0	0	0	0	0	0	0	
OBJ 25 – Other Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OBJ 27 – Personal Svcs	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OBJ 98A – Contingency	0	0	0	54	0	0	993	898	110	0	0	0	(15)	2,040
TOTAL	0	0	0	400	0	0	12,300	10,500	1,300	0	0	0	100	24,600

Engineered Materials

OBJ 26 – Materials														0

Partner (Non-Manual)

OBJ 27 – Personal Services														0

Plant Support

OBJ 70 – Material Issues														0

KINGSTON FOSSIL PLANT

COAL YARD RUNOFF POND

1.0 BACKGROUND

Heavy rains have in the past caused flows to be by-passed around the coal yard drainage pond. The by-passed flows were reported as not complying with the NPDES permit for the pond. It is reported that the two existing pumps are not well suited for the system operating conditions and do not operate reliably.

2.0 PROJECT DEVELOPMENT

1) Provide a detailed scope statement for Phase I action. A suggested minimum list of items follows in section 3.0.
2) Provide a detailed cost estimate for Phase I.
3) Estimate expected duration for performing Phase I.
4) Phase I would begin in February 1994 or March 1994.
5) Identify possible constraints identified for performing this project in any Phase.

3.0 PHASE I SCOPE

1) Meet with plant and other interested personnel to discuss any additional information, verify scope, and review preliminary plans, proposed solutions, and expectations from the project.

2) A hydrologic analysis of the pond and existing pumping capacity will be performed in order to determine if the system will contain the 10-year 24-hour storm. Should it be determined that the system will not contain the above design storm, alternatives would be formulated and evaluated for containing the design storm. Should it be shown that the existing system is capable of containing the design storm, then alternatives for upgrading and improving the reliability of the system will be examined. Improving reliability will be examined by considering such additions as new pumps, new controls, electrical improvements, piping modifications, and other options as appropriate. The analysis of alternatives would result in the selection of a recommended alternative.

3) Determine the location, routing, and connection points of any additional piping, valves, and equipment to be installed.

4) Determine the drawings and documents which will require revising or preparing.

5) Develop and prepare a detailed engineering hours estimate and resource loaded

schedule for Phase II engineering.

6) Determine the possible impacts the rehabilitated system will have on any existing or remaining components in the system.

7) Review similar systems at other sites for possible information sharing.

8) Determine all possible state, federal, or local permits which will be required in the execution of this project.

9) Identify needed coordination with local, state, or federal agencies.

10) Provide a cost estimate to prepare the Phase II estimate and schedule for Phase III implementation.

11) Determine possible environmental issues to be addressed during any Phase.

12) Provide input to the Estimating Section, including identification of long lead procurement items to assist in preparation of the Phase II detailed estimate and Phase III preliminary estimate.

13) Develop and prepare a preliminary Phase III cost estimate.

4.0 PHASE I DELIVERABLES

1) Minutes of meetings documenting agreements made on actions to be taken, schedule, etc.

2) Memorandums, letters, and documents to the plant, engineering, Mod Svs, partners, etc.

3) List of local, state, and federal permits required.

4) Detailed hours estimate and schedule for Phase II engineering activities.

5) List of drawings and documents to be prepared or revised in Phase II.

6) A detailed cost estimate for Phase II and a preliminary estimate for Phase III.

7) Copy of all calculations performed.

8) Cost estimate from Mods Partner to prepare estimate and level IV schedule, and to participate in a constructability review in Phase II.

9) Conceptual drawings indicating the proposed alternative.

10) List of all alternatives considered with the evaluation of each alternative. The evaluation should include a conceptual cost estimate for each alternative.

11) List of all assumptions made.

12) Final project Phase I report.