May 17, 1994

K. W. Burnett, MR 3D-C

KINGSTON FOSSIL PLANT - COAL YARD RUNOFF POND - CER NO. KIF93-1218-PO
PHASE I ESTIMATE

Attached is Electrical Engineering Section's input for the Phase I Estimate on the above project. The following items are included:

- Electrical Scope for Phase II
- Assumptions
- Drawing List
- Bill of Material
- Electrical Manhours Estimate and Schedule of Activities for Phase II and Phase III
- Electrical Scope for Phase III

If you have any questions or require additional information, please contact Cheryl Kosmidis at extension 8668-C.

Lloyd J. Nero

Lloyd Nero
Manager, Electrical Engineering
LP 2G-C

CDK:cdk
Attachments

KINGSTON FOSSIL PLANT
COAL YARD RUNOFF POND - CER NO. KIF93-1218-PO
PROJECT DEVELOPMENT ESTIMATE

I. Electrical Scope for Phase II:

A. Examine the types and quantities of equipment required and the feasiblity of their use, and discuss these subjects with FES Civil and Mechanical disciplines and Kingston Fossil Plant representatives to insure we are satisfying the needs of the plant.

B. Travel to the plant to review existing equipment for replacement and verify which cables and conduits may be reused.

C. Prepare a conceptual estimate to perform an economic evaluation.

D. Determine which drawings and documents require revision or preparation.

E. Develop and prepare a detailed engineering manhours estimate and schedule for Phase II engineering and preliminary estimate for Phase III.

F. Participate in constructibility review.

II. Assumptions

A. No change in horsepower for the two sump pump motors (one of which will be a backup pump), currently assumed to be 40hp each.

B. A power analysis of the Kingston system will reveal that it is acceptable to power the proposed replacement pumps from the 480V Feeder Board in Hopper Building 2, which is the power source for the existing sump pumps.

C. No heat trace nor heating will be required.

D. Will splice onto existing power and control cables at the shed which houses the existing coal yard runoff pond sump pump motors.

E. Only one disconnect switch will be required for the new pumps.

III. Drawing List

25N707	480V Fdr. Bd. Outline & General Arrangement
25N737	480V Fdr. Bd. Connection Diagram
25N743	480V Single Line Diagram
25W800-?	Conduit & Grounding Sump Pump Area
25W854	Conduit & Grounding Hopper Bldg 2 Plans
25W855	Conduit & Grounding Hopper Bldg 2 Details
45C800 PLC-95	Cable & Conduit Schedules
45C800	Cable & Conduit Schedules

IV. Bill of Material

Item	Qty.	Unit	Description
1	1	EA	Outdoor Luminaire, Holophane Type PETL-100MV-12-545-ST.
2	12	FT	Conduit, 1-1/2", Iron.
3	80	FT	Conduit, 1", Iron.
4	10	FT	Conduit, 1", Flex.
5	5	FT	Conduit, 3/4", Flex.
6	30	FT	Conduit, 3/4", Iron.
7	30	FT	Conduit, 2", Iron.
8	5	FT	Conduit, 2", Flex.
9	100	FT	Cable, 3/C #10, 90°C, 600V, EPR/Hypalon Jacket.
10	40	FT	Cable, 4/C #12, 90°C, 600V, EPR/Hypalon Jacket.
11	120	FT	Cable, 1/C #2/0, 90°C, 600V, EPR/Hypalon Jacket.
12	50	FT	Ground Cable, 2 AWG, Bare Copper.
13	1	EA	120V GFI Receptacle, Duplex, 20A, Brown, Hubbell Catalog # GF-5362.
14	1	EA	120V GFI Receptacle Cover, Weatherproof, Crouse-Hinds Catalog # WLGF-FS.
15	1	EA	Safety Switch, 3 Wire, 60A, 600V, Square D Type H362RB.

V. Electrical Scope for Phase III

A. Field support during construction and start-up.

B. Incorporation of electrical as-builts into the TVA drawing system.

ENGINEERING COST INPUT SHEET

FISCAL YEAR: 94
PHASE: II

PROJECT: Kingston Fossil Plant
FEATURE: Coal Yard Sump Pump
CER: KIF93-1218-PO
PREPARED BY: CDK

PCN: XXX
ENGG SVCS GROUP: SELECT ONE

_x_ FOSSIL ENGINEERING SERVICES
___ HYDRO ENGINEERING SERVICES
___ PROJECT ENGINEERING SERVICES
___ CLEAN AIR PROGRAM
___ OTHER ORGANIZATION: _____
Est'g Proj Controls, etc.

MAN-HOURS

Section Name	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ELECTRICAL ENGINEERING										74	73	53	200*

TRAVEL: NO. OF PERSON TRIPS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
													2

OTHER DOLLARS (A/E Engineering Work, Est'd M-H's, Quote, Other Basis)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total

NOTES

Each trip represents one man-day.

* : ESS = 160 MHs; EP&C = 40 MHs

Approved by Lloyd F. Moro

Date MAY 17, 1994

ENGINEERING COST INPUT SHEET

FISCAL YEAR: 95
PHASE: III

PROJECT: Kingston Fossil Plant
FEATURE: Coal Yard Sump Pump
CER: KIF93-1218-PO
PREPARED BY: CDK

PCN: XXX
ENGG SVCS GROUP: SELECT ONE

x FOSSIL ENGINEERING SERVICES
___ HYDRO ENGINEERING SERVICES
___ PROJECT ENGINEERING SERVICES
___ CLEAN AIR PROGRAM
___ OTHER ORGANIZATION: _____
Est'g Proj Controls, etc.

MAN-HOURS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ELECTRICAL ENGINEERING													60*

Section Name

TRAVEL: NO. OF PERSON TRIPS

Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
												1

OTHER DOLLARS (A/E Engineering Work, Est'd M-H's, Quote, Other Basis)

Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total

NOTES

Each trip represents one man-day.

* Schedule to be determined.

Approved by Lloyd F. Nero

Date MAY 17, 1994