LU, INC.

SPECIALTY CONTRACTOR

DATE: 02-06-01

TO: DON OLIVER / CHERIE MINGHINI W/TVA

PHONE # 423-751-6375 FAX # 423-751-7044

717-2042

FROM: DON McGHEE

NUMBER OF PAGES TRANSMITTED INCLUDING COVER PAGE: 4

SUBJECT: KINGSTON FOSSIL PLANT - SPILLWAY

COMMENTS: FENCE PROPOSAL

____ PLEASE NOTIFY SENDER UPON RECEIPT

Note: If any of the copies are illegible, or if you do not receiver the number of pages stated above, please contact the sender.

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LU, INC.

P.O. BOX 607 KINGSTON SPRINGS TN 37082 615-952-5501 FAX 615-952-9044

LU, INC.

SPECIALTY CONTRACTOR

PROPOSAL

TO: Tennessee Valley Authority
Kingston Fossil Plant
Kingston, TN.

Attn: Don Oliver

PROJECT: Remove & Re-Install Fence for Spillway
LOCATION: Kingston Fossil Plant
Kingston, TN.
BID DATE: 02-06-01

We are pleased to submit our quotation to you covering the following items on the above project. Our estimate of quantities are as follows:

Remove Existing Chain Link Fence & Re-Install Upon Spillway Construction

100 L.F. – 7' High Chain Link Fence w/ 3 Strands of Barbed Wire

Furnish New Posts, Tension Wire & Barbed Wire
Re-Use Fabric, Top Rail and Barbwire Arms

Proposal Includes: ✓ Materials ✓ Labor __ Applicable Taxes
Prices Per "TERMS AND CONDITIONS OF SALE" on Back or Attached **TOTAL PRICE $2,055.90**

Delivery Schedule 3 weeks (Required Notification Time to Have Materials & Crews on Site)

Our above price based on the following conditions:
All Lines, Grades, Stakes and Clearing of Fence Lines BY OTHERS.

Acceptance: Upon receipt of signed copy from buyer.
This proposal when accepted by Lu, Inc. with approved Credit becomes a contract between the two parties.

Customer's Signature _____ Date _____

Submitted By : Doug McWhorter

Date: 02-06-01

TERMS AND CONDITIONS OF SALE

1. APPLICABLE LAWS - Any contract resulting from this order will be subject to applicable state laws governing the Seller's Office from which this sale originates.

2. TITLE - If this order provides on the reverse side hereof that material is sold F.O.B. shipping point, even though transportation costs may be included in the price stipulated, title to the products shall pass to the Buyer upon delivery to the carrier at the point of shipment. Neither the Buyer or the consignee shall have the right to divert or reconsign any shipment to any destination other than specified in bill of lading without permission of the Seller.

3. WARRANTIES - The are no conditions or agreements not fully expressed herein. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION APPEARING ON THE FACE HEREOF, EXCEPT THE WARRANTY OF TITLE.

4 DELAYS - Seller shall not be liable for any delay in manufacturing, delivery, installation, or its performance hereunder due to fires, strikes, differences, with materials, transportation facilities, utilities, or other causes beyond our control.

5. CLAIMS - The products sold hereunder shall be subject to our standard manufacturing tolerances, variations and classifications. If material appear defective Buyer shall discontinue their use and notify Seller within 10 days after receipt of materials so that it may investigate. No claim will be allowed for labor or expense occasioned by the use of defective materials, nor will Seller be responsible for damages beyond the price of the defective material. Claims for errors, deficiencies or imperfections will not be entertained unless made within ten days after receipt of materials. Material shall not be returned for any reason except by permission of Seller in writing. The carriers are responsible for materials lost or damaged in transit. Seller shall not be liable for any cost or expense to buyer resulting from delays in transit or failure of the carrier to arrive at consignment location at a specific day or hour.

6. TECHNICAL ADVICE - Unless it shall have been expressly agreed there to in writing, the seller shall not be responsible for the results of any technical advice in connection with the design, installation or use of the products sold hereunder.

7 TAXES - Any taxes which Seller may be required through assessment or otherwise to pay or collect under any existing or future law upon or with respect to sale, purchase, delivery, transportation, storage, processing, use or consumption of any of the materials or service covered hereby, including taxes upon or measured by receipts from sales or services shall be for Buyer's account. Buyer shall promptly pay the amount thereof to Seller upon demand but may in lieu of such payment issue tax exemption certificates acceptable to the appropriate taxing authorities, or when appropriate pay appropriate taxing authorities.

8 SELLER'S OPTIONS - Buyer's failure to make payment when due on this or any other order in accordance with Seller's terms or if Seller than any doubt as to Buyer's responsibility shall entitle Seller to defer further shipments, or to bill and hold merchandise for Buyer's account, or to cancel this or other contracts or orders. Seller reserves the right to change terms of payment or fix a limit of credit at anytime during the execution of this order. Shipment deliveries and performance of work shall at all times be subject to the approval of Seller's Credit Department unless full payment is received with the order. Unless provided to the contrary on the face of Seller's obligation to perform here under shall cease at Seller's election if Seller is not permitted to complete performance within twelve months or length of contract from date hereof.

9. NON-WAIVER BY SELLER - Forbearance or failure of either party to enforce any right hereunder shall not affect, impair or waive any rights in case such default continues, or in case subsequent default occurs. The Buyer warrants that the seller's rights to the material, shown on the face hereon, shall not be jeopardized through any form of assignment without prior written agreement.

10. PATENTS - In the event products furnished hereunder are produced under special specifications of Buyer not customarily followed by Seller, Buyer agrees to have Seller harmless from patent infringements resulting from Seller's compliance with designs and / or specifications (Unless originating with Seller) now or hereafter forming a part of this contract.

11 CURRENCY - Unless otherwise provided on the face hereof all monetary values are considered to be in U.S.A. currency.

12. TERMS - FURNISH ONLY. 2% - 10 days; NET 30 Days: 18% interest per month on unpaid balance. ERECTED OR INSTALLED: Pay as you get paid, except retainage, see note 21, no deduction of any kind allowed.

13. BOND - Prices do not include bond premiums. Seller will allow 1/2% deduction from price to pay Seller's share of Bond.

14 DUES AND/OR DEDUCTION - None will Be acceptable or allowed.

15 TRAFFIC CONTROL - Buyer is to be responsible for any and all traffic control.

16. FUEL - Buyer is to assist Seller in obtaining fuel at the cheapest price.

17 CONCRETE - Buyer to assist Seller in obtaining prices and delivery.

18 CONTRACT TIME - If buyer used up the contract time and does not allow enough time to complete work, Seller will not be responsible for overtime and/or penalties.

19. MOBILIZATION - If this order includes erection or installation, Buyer shall notify Seller in writing 30 days before work to begin and Seller will begin work with dispatch, after receipt of such notice, provided the project is ready, with the understanding said work may be done with out interruption. It is understood no unusual conditions will be met in the work of erection or installation and Seller shall be paid for any expenses incident to additional work caused thereby. One (1) mobilization is included.

20 RETAINAGE - To be paid in full three (3) months after Seller has completed and Owner has accepted Seller's work regardless of whether Buyer has or has not received retainage from Owner for whatever reason, except it being the fault of Seller.

21 BUYER'S ACCEPTANCE - PRICES ARE FIRM FOR TEN(10) DAYS FROM DATE OF BID. TO PROTECT THE PRICES QUOTED BY SELLER, BUYER MAY ACCEPT, SUBJECT TO RECEIVING A CONTRACT AND WORK ORDER FROM BUYER'S OWNER BY NOTIFYING SELLER IN WRITING OF BUYER'S ACCEPTANCE; WITHIN (10) DAYS FROM DATE ON QUOTATION. In the event of a conflict between the Terms and Conditions contained herein and Buyer's purchase order, contract, subcontract, or any other communication, whether written or oral, these terms and conditions shall govern unless Seller shall have receiving prompt written specific objection there to from buyer and Seller must agree in writing to specific objections, otherwise these Terms and Conditions override everything and do not have to be signed by buyer. Seller signing of Buyer purchase order, contract, sub-contract, or any other communication does not relieve Buyer from these Terms and Conditions.

22 ACKNOWLEDGMENT - If seller had not received a reply to acknowledgment within twenty (20) days of the date of the acknowledgment then the customer has read, agrees, and approves, If acknowledgment is not correct, a reply to the acknowledgment must be made in writing within twenty (20) days from the date of the acknowledgment stating Buyers understanding. This does not mean that an acknowledgment is part of the contract unless forwarded to you by Seller.

23 CANCELLATION / MODIFICATION / RELEASE - Sale or contract cannot be canceled / modified, or releases held up by the Buyer after the order is in process except with the Seller's consent and subject to conditions then to be agreed upon which shall include protection of the Seller against any loss and / or cost incurred.

24 MODIFICATIONS - The Terms and Conditions of sale or contract shall not be modified unless evidence in writing, agreed to and signed by Seller.

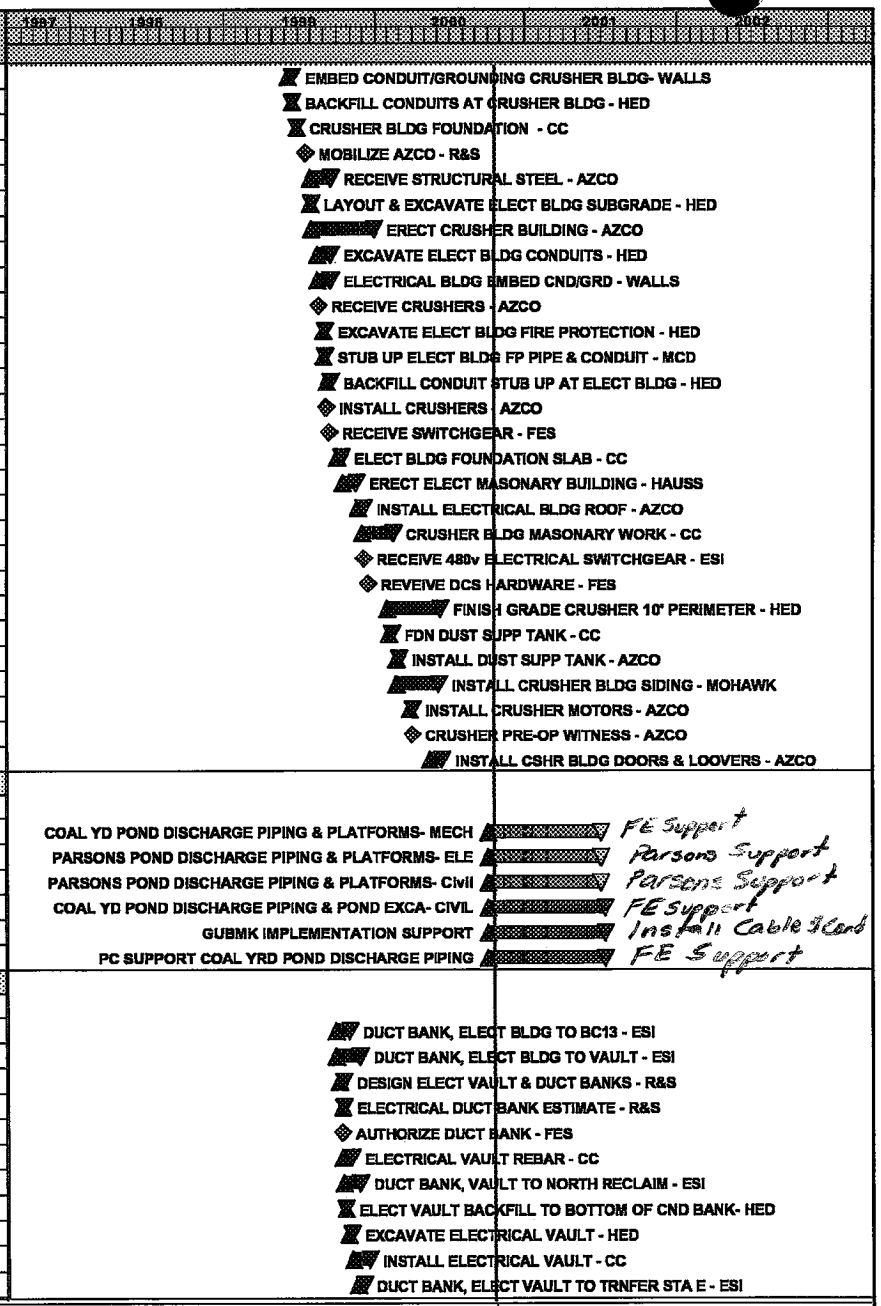
25. COLLECTIONS - Should Seller employ an attorney to enforce any of the provisions hereof, or to protect its interest in any matter arising under this contract or to collect damages for the breach of this contract, or to recover on the surety bond given by Buyer and his surety, jointly and severally agree to pay seller all reasonable cost, charges, expenses, and attorney's fee expended or incurred therein.

TVA - KINGSTON FOSSIL PLANT

ITEM #	DESCRIPTION	QTY	UNIT	TOTAL
130	FABRIC BANDS FOR "C" POST	100 EACH	@ 0.06 EA	= 6.00
131	HOG RINGS FOR TENSION WIRE	50 EACH	@ 0.01 EA	= 0.50
134	TIE WIRES 18GL FOR 1 5/8" RAIL	50 EACH	@ 0.03 EA	= 1.50
138	POST, LINE BARE TYPE "C"	10 EACH	@ 16.39 EA	= 163.90
151	WIRE, TENSION 7 GUAGE	100 L.F.	@ 0.05/L.F.	= 5.00
158	BARBED WIRE, GALVANIZED	1 ROLL	@ 59.21/ROLL	= 59.21
257	INSTALL COMPLETE 6' HIGH FENCE INCLUDING BARBED WIRE	100 L.F.	@ 9.77/L.F.	= 977.00
273	PER DIEM RATE FOR PERSONNEL AND TRAVEL	3 DAYS	@ 123.93 EA	= 371.79
275	REMOVAL OF EXISTING FENCE	100 L.F.	@ 4.71/L.F.	= 471.00

TOTAL $ 2055.90

SEC	Activity ID	Forecast Start	Forecast Finish	Target	Rem Dur	% Comp	Resource ID	Budgtd Mhrs	Rmng Mhrs	SCDD
31	MOGCCB008	07JUN99A	15JUN99A		0	100		0.00	0.00	
31	MOGCCB033	15JUN99A	15JUN99A		0	100		0.00	0.00	
31	MOGCCB009	29JUN99A	29JUN99A	24MAY99	0	100		0.00	0.00	
31	MOGCCB010	19JUL99A			0	100		0.00	0.00	
31	MOGCCB011	28JUL99A	17SEP99A	03AUG99	0	100		0.00	0.00	
31	MOGCCB021	30JUL99A	02AUG99A	02JUL99	0	100		0.00	0.00	
31	MOGCCB012	04AUG99A	28DEC99A	13SEP99	0	100		0.00	0.00	
31	MOGCCB025	16AUG99A	17SEP99A	06JUL99	0	100		0.00	0.00	
31	MOGCCB026	16AUG99A	17SEP99A	27JUL99	0	100		0.00	0.00	
31	MOGCCB038	18AUG99A		13SEP99	0	100		0.00	0.00	
31	MOGCCB023	02SEP99A	02SEP99A	06JUL99	0	100		0.00	0.00	
31	MOGCCB024	02SEP99A	02SEP99A	07JUL99	0	100		0.00	0.00	
31	MOGCCB034	07SEP99A	17SEP99A	30JUL99	0	100		0.00	0.00	
31	MOGCCB013	09SEP99A		13SEP99	0	100		0.00	0.00	
31	MOGCCB035		13SEP99A	09SEP99	0	100		0.00	0.00	
31	MOGCCB022	30SEP99A	12OCT99A	10AUG99	0	100		0.00	0.00	
31	MOGCCB030	18OCT99A	17NOV99A	08SEP99	0	100		0.00	0.00	
31	MOGCCB042	22NOV99A	02DEC99A	10AUG99	0	100		0.00	0.00	
31	MOGCCB014	29NOV99A	16FEB00A	06DEC99	0	100		0.00	0.00	
31	MOGCCB041	08DEC99A		22SEP99	0	100		0.00	0.00	
31	MOGCCB015	18DEC99A		22SEP99	0	100		0.00	0.00	
31	MOGCCB027	31JAN00A	06JUN00A	09JUL99	0	100		0.00	0.00	
31	MOGCCB045	02FEB00A	11FEB00A	06DEC99	0	100		0.00	0.00	
31	MOGCCB046	22FEB00A	28FEB00A	06DEC99	0	100		0.00	0.00	
31	MOGCCB039	22FEB00A	05JUN00A	13SEP99	0	100		0.00	0.00	
31	MOGCCB040	27MAR00A	30MAR00A	10AUG99	0	100		0.00	0.00	
31	MOGCCB047		30MAR00A	10AUG99	0	100		0.00	0.00	
31	MOGCCB048	15MAY00A	09JUN00A	06DEC99	0	100		0.00	0.00	
KIF298CYP COAL YARD DISCHARGE PIPE										
Steve E. Brewster (751-3643)										
31	MOGCDP001	02OCT00A	29JUN01		178*	5	FDME	200.00	200.00	0014RV9
PA	MOGCDP001A	02OCT00A	29JUN01		178*	5	FPE	80.00	80.00	0014RVB
PA	MOGCDP001B	02OCT00A	29JUN01		178*	5	FPE	80.00	80.00	0014RVB
35	MOGCDP002	02OCT00A	13JUL01		187	0	FDCE	520.00	520.00	0014RV9
35	MOGCDP002A	02OCT00A	13JUL01		187	0		0.00	0.00	0014RVC
11	MOGCDP003	02OCT00A	13JUL01		187	0	TS2PC	60.00	60.00	0014RV9
ELECTRICAL SCHEDULE										
Steve E. Brewster (751-3643)										
31	MOGCEE012	27SEP99A	29OCT99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE007	27SEP99A	24NOV99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE001	08OCT99A	14OCT99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE002	12OCT99A	14OCT99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE003	14OCT99A		21JUN00	0	100		0.00	0.00	
31	MOGCEE004	14OCT99A	04NOV99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE008	18OCT99A	24NOV99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE011	19OCT99A	19OCT99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE005	27OCT99A	05NOV99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE006	08NOV99A	15DEC99A	21JUN00	0	100		0.00	0.00	
31	MOGCEE010	18NOV99A	01DEC99A	21JUN00	0	100		0.00	0.00	



Project Start	01OCT97
Project Finish	13JUL01
Data Date	15OCT00
Run Date	20OCT00

Early Bar
Progress Bar
Critical Activity

FHEN:K259

Sheet 2 of 13

TENNESSEE VALLEY AUTHORITY

FOSSIL ENGINEERING SCHEDULES

Layout-27

Date	Revision	Checked	Approved

KINGSTON FOSSIL PLANT
COAL UNLOADING AND BLENDING FACILITY
PCN KIF259
Current Phase : 2/3

		Project Budget ($1,000)					Actual Cost thru 9-22-00 ($1,000)					Forecast ($1,000)					Work Pkg	Short Code
		FY98	FY99	FY00	FY01	Total	FY98	FY99	FY00	FY01	Total	FY98	FY99	FY00	FY01	Total		
Ph 1																		
	Parsons			29	0	29			0	0	0			40	0	40	KIF259A-0100	0014RTT
	FE Electrical			5	0	5			0	0	0			0	0	0	KIF259A-0101	0014RTV
	FE Civil			8	0	8			2	0	2			2	0	2	KIF259A-0102	0014RTX
						0					0				0	0		
	Subtotal Ph 1			42	0	42			2	0	2			42	0	42		
Ph 2																		
	Parsons Design			15		15			1		1			1	3	4	KIF259B-0100	0014RTY
	FE Electrical Design			10		10			4		4			5		5	KIF259B-0101	0014RTZ
	FE Civil Design			10	5	15			7		7			8	0	8	KIF259B-0102	0014RV0
	Partner Estimate			7		7					0			0		0	KIF259B-0103	0014RV1
	Material Pipe			35		35					0			0		0	KIF259B-0104	0014RV3
	Material Cable & Conduit			15	24	39					0			0	0	0	KIF259B-0105	0014RV4
	Subtotal Ph 2			92	29	121			12	0	12			14	3	17		
Ph 3																		
	Parsons Support			5		5			0		0			0	5	5	KIF259C-0100	0014RV7
	FE Support			10	15	25					0			0	20	20	KIF259C-0101	0014RV9
	Parson's Support					0					0					0	KIF259C-0102	0014RVB
	Install Cable & Conduit				30	30			2		2			2	75	77	KIF259C-0103	0014RVC
	HED Install Pipe			160	20	180			134		134			134	25	159	KIF259C-0104	0014RVD
	HED Jack and Bore Sleeves				60	60					0				0	0	KIF259C-0105	0014RVF
	HED Excavate Pond				62	62			1		1			1	90	91	KIF259C-0106	0014RVG
	Pump Rental and Dredging			165		165			0		0			0		0	KIF259C-0107	0014RVH
	Subtotal Ph 3			340	187	527			137	0	137			137	215	352		
Total Coal Yard Run Off Pond Project				474	216	690	0	0	151	0	151	0	0	193	218	411		
Total Unloading Reclaim Facility		637	10,474	21,050		32,161	637	10,475	20,829		31,941	637	10,475	21,534	151	32,797		
Grand Total Unloader & CYROP		637	10,474	21,524	216	32,851	637	10,475	20,980	0	32,092	637	10,475	21,727	369	33,208		

Cost Detail for Coal Yard Pond

KINGSTON FOSSIL PLANT
COAL UNLOADING AND BLENDING FACILITY
PCN KIF259
Current Phase : 2/3

COAL YARD RUN OFF POND

		Project Budget ($1,000)					Actual Cost thru May 00 ($1,000)					Forecast ($1,000)					Work Pkg	Short Code
		FY98	FY99	FY00	FY01	Total	FY98	FY99	FY00	FY01	Total	FY98	FY99	FY00	FY01	Total		
Ph 1																		
	Parsons			29	0	29			0	0	0			29	0	29	KIF259A-0100	0014RTT
	FE Electrical			5	0	5			0	0	0			5	0	5	KIF259A-0101	0014RTV
	FE Civil			8	0	8			0	0	0			8	0	8	KIF259A-0102	0014RTX
						0					0				0	0		
	Subtotal Ph 1			42	0	42			0	0	0			42	0	42		
Ph 2																		
	Parsons Design			15		15					0			15		15	KIF259B-0100	0014RTY
	FE Electrical Design			10		10					0			10		10	KIF259B-0101	0014RTZ
	FE Civil Design			10	5	15					0			10	5	15	KIF259B-0102	0014RV0
	Partner Estimate			7		7					0			7		7	KIF259B-0103	0014RV1
	~~[redacted] Pipe~~			35		35					0			27		27	KIF259B-0104	~~0014RV3~~
	Material Cable & Condult			15	24	39					0			15	24	39	KIF259B-0105	0014RV4
	Subtotal Ph 2			92	29	121			0	0	0			84	29	113		
Ph 3																		
	Parsons Support			5		5					0			5		5	KIF259C-0100	0014RV7
	FE Support			10	15	25					0			10	15	25	KIF259C-0101	0014RV9
	Parson's Support					0					0					0	KIF259C-0102	0014RVB
	Install Cable & Condult				30	30					0				30	30	KIF259C-0103	0014RVC
	HED Install Pipe			160	20	180					0			160	20	180	KIF259C-0104	0014RVD
	HED Jack and Bore Sleeves				60	60					0				60	60	KIF259C-0105	0014RVF
	HED Excavate Pond				62	62					0				62	62	KIF259C-0106	0014RVG
	Pump Rental and Dredging			165		165			0		0			165		165	KIF259C-0107	0014RVH
	Subtotal Ph 3			340	187	527			0	0	0			340	187	527		
Total Project				474	216	690	0	0	0	0	0	0	0	466	216	682		

Larry Radford will just use this SC for pipe installation

Fossil&Hydro
Engineering

CMM:

STEVE NEEDS A CURRENT STATUS OF MONEY (FORECAST) FOR FY 00 FOR THE COAL YARD POND.

THANKS

LYNN

HE NEEDS IT TODAY!

Roy Carter
2832

KINGSTON FOSSIL PLANT

COAL UNLOADING AND BLENDING FACILITY

PCN KIF259

Current Phase : 2/3

		Project Budget ($1,000)				Actual Cost thru 7-26-00 ($1,000)				Forecast ($1,000)				Work Pkg	Short Code	
		FY98	FY99	FY00	Total	FY98	FY99	FY00	Total	FY98	FY99	FY00	Total			
Ph 1	Fossil Engg	125	64		189	125	64		189	125	64		189	KIF259A-0001	0011LJW	
	Roberts & Schaefer	9	5		14	9	5		14	9	5		14	KIF259A-0002	0011LJY	
	R&S - BC 5&6 Upgrade Study				0				0				0	KIF259A-0002	0011LJY	
	Mid-West Conveyor	22	2		24	22	2		24	22	2		24	KIF259A-0003	0011LJZ	
	Geotech Data - Law Engg	45	1		46	45	1		46	45	1		46	KIF259A-0004	0011LK0	
	Underground Locators	2			2	2			2	2			2	KIF259A-0004	0011LK0	
	Envir Impact Statement*	310			310	310			310	310			310	KIF259A-0005	0011LK1	
	Revise EIS	13	14		28	13	14		28	13	14		28	KIF259A-0005	0011LK1	
	Engg Study (PCN 4589)*	106			106	106			106	106			106	KIF259A-0006		
	TPS Power Supply Estimate	6	4		10	6	4	1	10	6	4	1	10	KIF259A-0001	000XJR3	
	Subtotal	637	91	0	728	637	92	1	729	637	91	1	729			
	Contingency	0			0	0			0	0			0	KIF259A-0010		
	Total	637	91	0	728	637	92	1	729	637	91	1	729			
Ph 2	Fossil Engg		300	10	310		300	12	312		300	15	315	KIF259B-0001	00134PN	
	Parsons		174	42	216		175	54	229		175	70	245	KIF259B-0002	00134PP	
	Law Engg		50		50		50		50		50		50	KIF259B-0003	00134XX	
	Plant Support		26		26		26		26		26		26	KIF259B-0004	00137TR	Z7104FL, 4RN
	Fire Protection - McDaniels		23	288	311		23	891	914		23	904	927	KIF259B-0005	Z7104Q4	
	GUBMK Estimate				0				0				0	KIF259B-0006		
	Facility Dsn/Mtl - R&S		2589	5891	8480		2589	5891	8480		2589	5891	8480	KIF259B-0010	00134PQ	
	Power Supply - TPS		334	315	649		334	268	602		334	268	602	KIF259B-0011	001370F	
	Transformer		349		349		349		349		349		349	KIF259B-0012	Z7104Q0	
	Switchgear		315		315		315		315		315		315	KIF259B-0012		
	DCS Hardware			227	227			195	195			275	275	KIF259B-0014	0013W9Y	
	Misc Electrical Equip				0				0				0	KIF259B-0015		
	Dust Suppression		115	61	176		115	52	167		115	61	176	KIF259B-0016	Z7104NQ	
	Track Scales				0				0				0	KIF259B-0017		
	Track Scale Building				0				0				0	KIF259B-0018		
	Sampling System Contract				0				0				0	KIF259B-0019		
	Subtotal	0	4275	6834	11109	0	4275	7363	11638	0	4276	7484	11760			
	Contingency				0				0				0	KIF259B-0030		
	Total	0	4,275	6,834	11,109	0	4,275	7,363	11,638	0	4,276	7,484	11,760			
Ph 3	Fossil Engg		25	239	264		25	423	448		25	450	475	KIF259C-0001	0013SSR	
	Plant Support		45	80	125		45	150	195		45	150	195	KIF259C-0002	0013KN9	
	Fire Protection - McDaniels			1117	1117			500	500			585	585	KIF259C-0003	0014110	
	GUBMK		197	130	327		197	69	266		197	85	282	KIF259C-0004	Z7104Q2	Z7104RT
	Site Excavation		1649	1462	3111		1649	1490	3139		1649	1490	3139	KIF259C-0010	0013JNS	
	Loop & Spur Track - Queen City			935	935			912	912			912	912	KIF259C-0012	00144P1	Z7200D0
	CWR- Norfork Southern			360	360			247	247			247	247	KIF259C-0012	00144P1	Z7200D0
	Install Rail Scales				0				0				0	KIF259C-0014		
	Install Med Volt Switchgear				0				0				0	KIF259C-0015		
	Electrical Testing - TPS				0				0				0	KIF259C-0015		
	Communications - IS			45	45			12	12			50	50	KIF259C-0016	0013ZGZ	
	Facility Demo - R&S							40				40	40	KIF259C-0018	0014NRG	
	Rail Demo - Queen City							243				243	243	KIF259C-0019	0014NRH	
	Facilty Constr/SPARES - R&S		4,192	9,848	14,040		4,192	10,125	14,317		4,192	10,125	14,317	KIF259C-0020	0013KQD	
	Move 10MVA Transformer				0				0				0			
	Security Gate															
	GUBMK - DUCT BANK				0				0			70	70	KIF259C-0040	0014V97	
	SIMS - SECURITY INSTALLATION				0				0			58	58	KIF259C-0041	0014V99	
	SAF TRAN - GATE CONTROLLER				0				0			57	57	KIF259C-0042	0014V9B	
	LU - FENCING				0				0				0	KIF259C-0043	0014V9C	
					0				0				0			
	Subtotal	0	6108	14216	20324	0	6108	14211	20036	0	6108	14562	20670			
	Credit for Demo of Equipment				0				0			-200		KIF259C-0030		
	Total	0	6,108	14,216	20,324	0	6,108	14,211	20,319	0	6,108	14,362	20,470			
Total Project		637	10,474	21,050	32,161	637	10,475	21,575	32,687	637	10,475	21,847	32,959			

Project Engineer: Steve Brewster (751-3643)
Project Cont[redacted]neer: Jeff Garrett (751-2003)

KIF259 Co[redacted]ding.xls
[redacted]/05/2000

Cost Detail for Coal Yard Pond

KINGSTON FOSSIL PLANT
COAL UNLOADING AND BLENDING FACILITY
PCN KIF259
Current Phase : 2/3

	Project Budget ($1,000)					Actual Cost thru 7-26-00 ($1,000)					Forecast ($1,000)					Work Pkg	Short Code
	FY98	FY99	FY00	FY01	Total	FY98	FY99	FY00	FY01	Total	FY98	FY99	FY00	FY01	Total		
Ph 1																	
Parsons			29	0	29			0	0	0			29	0	29	KIF259A-0100	0014RTT
FE Electrical			5	0	5			0	0	0			5	0	5	KIF259A-0101	0014RTV
FE Civil			8	0	8			2	0	2			8	0	8	KIF259A-0102	0014RTX
					0					0				0	0		
Subtotal Ph 1			42	0	42			2	0	2			42	0	42		
Ph 2																	
Parsons Design			15		15					0			15		15	KIF259B-0100	0014RTY
FE Electrical Design			10		10					0			10		10	KIF259B-0101	0014RTZ
FE Civil Design			10	5	15			1		1			10	5	15	KIF259B-0102	0014RV0
Partner Estimate			7		7					0			7		7	KIF259B-0103	0014RV1
Material Pipe			35		35					0			27		27	KIF259B-0104	0014RV3
Material Cable & Conduit			15	24	39					0			15	24	39	KIF259B-0105	0014RV4
Subtotal Ph 2			92	29	121			1	0	1			84	29	113		
Ph 3																	
Parsons Support			5		5					0			5		5	KIF259C-0100	0014RV7
FE Support			10	15	25					0			10	15	25	KIF259C-0101	0014RV9
Parson's Support					0					0					0	KIF259C-0102	0014RVB
Install Cable & Conduit				30	30					0				30	30	KIF259C-0103	0014RVC
HED Install Pipe			160	20	180					0			160	20	180	KIF259C-0104	0014RVD
HED Jack and Bore Sleeves				60	60					0				60	60	KIF259C-0105	0014RVF
HED Excavate Pond				62	62					0				62	62	KIF259C-0106	0014RVG
Pump Rental and Dredging			165		165			0		0			165		165	KIF259C-0107	0014RVH
Subtotal Ph 3			340	187	527			0	0	0			340	187	527		
Total Coal Yard Run Off Pond Project			474	216	690	0	0	3	0	3	0	0	466	216	682		
Total Unloading Reclaim Facility	637	10,474	21,050		32,161	637	10,475	21,575		32,687	637	10,475	21,847	0	32,959		
Grand Total Unloader & CYROP	637	10,474	21,524	216	32,851	637	10,475	21,578	0	32,690	637	10,475	22,313	216	33,641		

Minghini, Cherie M.

From: Brewster, Steve E.
Sent: Tuesday, September 05, 2000 10:41 AM
To: Petty, Harold L.; Minghini, Cherie M.
Subject: FW: KIF Coal Run Off Pipe - Billing

Steve E. Brewster
Project Engineer

From: Jones, Sonja R.
Sent: Friday, August 25, 2000 1:34 PM
To: Brewster, Steve E.
Subject: KIF Coal Run Off Pipe - Billing

Steve:

Coal yard piping cost as follows:

Month:	Cost
July	$ 50,000.00
Aug.	$ 80,000.00
* Out of Scope Extra Sleeve Boring	$ 2,300.00

Remaing Work:

Remove Temp. dredge pipe line

Remove & cut up old pump plat form.

Thank you,
Larry Radford

PHASE 1 STUDY
KIF COAL YARD RUNOFF PIPING UPGRADE

PREPARED FOR:
TENNESSEE VALLEY AUTHORITY
PROJECT AND DISCIPLINE ENGINEERING
1101 MARKET STREET
CHATTANOOGA, TN 3740-2801

CHATTANOOGA, TN

PREPARED BY:
PARSONS ENERGY AND CHEMICAL GROUP, INC
633 CHESTNUT ST, SUITE 400
CHATTANOOGA, TN 37450

JUNE 30, 2000

CIVIL/STRUCTURAL PHASE II SCOPE OF WORK

1.1 Introduction

The purpose for this project is to study storm events to determine modifications necessary to prevent stormwater runoff from flooding the new coal live pile reclaim facility at the Kingston Fossil Plant (KIF). During construction of this facility, moderate (1.75 in within a 24 hr period) storm events caused flooding. Another purpose is to prepare a Phase 1 design for routing a new pipeline to discharge stormwater runoff to the ash dredge pond, located north of the powerhouse.

1.2 Coal Yard Runoff Force Main Piping Route

The proposed route for the pipeline is shown on SK-01. The length of the pipeline is approximately 3900 liner feet (lf). The route runs from the coal yard pond to the fly ash dredge pond located north of the powerhouse. A 25-ft minimum radius is specified for all bends to eliminate fittings. The piping is to be placed in a trench throughout most of its route, with approximately 600 ft routed above ground just prior to pipeline termination.

1.3 Coal Yard Runoff Force Main Piping

The pipe is to be high-density polyethylene (HDPE), SDR-17. Specifications for the pipe shall are as shown on SK-01. Piping will be butt-fusion welded. Because bend radii exceed the minimum required this diameter/SDR, fittings are not needed, and future clogging should be minimized. The phase 1 sketch (SK-01) also requires the use of underground warning tape so that future pipeline relocation can be accomplished.

1.4 Underground utility identification/relocation

Phase 1 engineering did not review underground utility drawings for possible interferences, nor was an underground survey conducted, due to the fast-track nature of this project. It is recommended that an underground survey be performed prior to piping installation.

1.5 Rationale for Design Storm Event

The following is a summary. For additional detail, see the "Kingston Fossil Plant Coal Yard Flood Analysis" prepared by Parsons, June 2000. Rainfall data from Station 0712 at KIF was recorded in 6 hr increments over 24-hr periods dating from October 1986 to April 2000. To determine the worst case precipitation event, the greatest consecutive-days total rainfall was identified. Using an Excel spreadsheet of rainfall data, the maximum rainfall over the following multi-day periods was determined: 2, 3, 5, 7, and 10. 10 days was chosen as the maximum time length because that represents the approximate time needed to dewater the coal yard area after a major storm event. In all cases, the smaller duration storm events were nested within the larger duration storm events. Rainfall from these events was modeled to determine the maximum

water surface elevation (wse) within the coal yard area produced by each storm event. In addition, a 10-yr 24-hr and a 100-yr 24-hr event were modeled.

During a site visit by Parsons, plant personnel discussed that flooding had occurred previously within the coal yard, and runoff (following the point of lowest elevation) was routed over a wide area. Parsons suggested construction of spillway along the existing road near an area where this runoff could be safely routed off-site. It was subsequently determined that the coal yard should be able to impound a 10-yr 24-hr storm event, and a 100-yr 24-hr event, but that larger storm events could discharge through the spillway. Because the spillway is located on an existing gravel perimeter road adjacent to the coal yard, the spillway will be surfaced with rip-rap and will have fairly flat side slopes to accommodate traffic.

1.6 Results of Stormwater Modeling

The results of the calculations are based on certain assumptions. The coal yard is dry prior to a storm event, and the maximum wse prior to a storm event is 745. Reduction in storage volume due to accumulation of sediment was not considered. It was also assumed that the dewatering pumps do not start pumping until the end of the storm event.

Through modeling conducted for the calculations, it was concluded that the coal yard has sufficient volume with the addition of a spillway to prevent the wse from reaching el. 758 during the design storm. Enlargement of the existing coal yard area to the approximate size shown on the phase 1 sketch (SK-01), in concert with the construction of an emergency spillway with an elevation of 756, will prevent discharge during the 100 year 24 hour storm event.

1.7 Earthwork

As discussed above, excavation contours for the coal yard are shown on SK-01, and the volume is in Table 1. Additional excavation and backfill for construction of the pipeline are shown in Table 1.

1.8 Construction of New Spillway for Coalyard

The phase 1 sketches (SK-01 through SK-03) show details for construction of a spillway. The spillway is to be 50 ft wide with 10:1 side slopes, and surfaced with rip-rap underlain by geotextile.

1.9 Modifications to Fencing

The perimeter fence surrounding the coal yard will be modified as shown on SK-01 through Sk-03, to allow the spillway to function. Fence fabric must not extend within the spillway area as debris could cause blockage.

2 CIVIL/STRUCTURAL DESIGN CRITERIA AND SPECIFICATIONS

2.1 Civil Design Criteria

1. All utility crossings for railway shall be in accordance with *AREA Manual for Railway Engineering*, and Norfolk-Southern *Transportation Guidelines and Specifications for Design and Construction of Commercial Tracks.*

2.2 Civil Specifications

All work described herein for civil-related work will be performed in accordance with *TVA General Construction Specification T-1*, issued October 19.1981. Specifications are listed on Drawings SK-01, SK-02, and SK-03.

3 BILL OF MATERIAL

The Bill of Material is listed in Table 1.

TABLE 1

Item	Quantity	Units	Comments
Relocate existing survey monuments in coal yard			None required
Underground utility survey within Coalyard	1	LS	Recommend surveying areas where excavation is shown on sketches, unless site personnel have knowledge of underground utilities.
Underground utility survey for pipeline	1	LS	Assume start a sta 19+00 to Sta 39+00 @ 4 ft width. Acreage = 0.2 ac
HDPE Pipe 10 in nom dia SDR 17	3900	LF	ASTM D3350, cell classification 345444C, PE3408
18 in dia Casing pipe (Jack & Bore #1); min wall thickness = 0.313 in.	200	LF	Casing pipe shall have a minimum yield strength of 35,000 psi
18 in dia Casing pipe (Jack & Bore #2); min wall thickness = 0.313 in.	115	Lf	Casing pipe shall have a minimum yield strength of 35,000 psi
If single Jack and Bore is performed, the overall length =	340	LF	
Trench excavation (2 ft deep from station 0+00 to Sta 19+00 ±)	430	BCY	Assume trench width = 2 ft & 3 ft deep
Trench excavation (2 ft deep from Sta 19+00 to station 35+00 ±)	660	BCY	Assume trench width = 2 ft x 5.5 ft deep
Backfill (either sand or bottom ash up to 4 in above pipe (Sta 0+00 to Sta 19+00)	220	BCY	Assume one-half the trench excavation volume. Remaining backfill will utilize excavated mat'l
Backfill (either sand or bottom ash up to 4 in above pipe (Sta 19+00 to Sta 39+00)	270	BCY	Assume 40 % of excavation volume. Remainder of backfill shall be crushed stone or bottom ash.
Warning tape	3500	LF	Place above buried pipe for future identification

Item	Quantity	Units	Comments
Allowance for Utility relocation			By estimator
Earthwork (excavation in coalyard)	6,100	CY	Excavation in coalyard
Relocate existing electrical junction box	1	ea	
Supports for HDPE pipe (above ground)	60	ea	May be able to utilize some existing supports
Silt fence	700	LF	
Riprap	600	ton	
Geotextile beneath riprap	800	sy	

4 DRAWINGS FOR PHASE II

Three new drawings would be prepared for Phase II. SK-01 through SK-03 would be reviewed/checked and assigned TVA drawing numbers. It is not anticipated that any additional drawings (or revisions to existing drawings) would be needed for this project, because no new structures are involved.

5 PREPARATORY WORK NEEDED TO COMPLETE PHASE 2

The following items would need to be completed if a comprehensive Phase 2 effort is undertaken.

- Construction
- Underground utility survey

5.1 Phase II Engineering

It is estimated that Phase II engineering would require no more than approximately 60 hours, if no substantial comments are received on the Phase 1 sketches (SK-01 through SK-03). If Parsons is responsible for coordination of an underground survey, an additional 40 hours (total of 100 hours) would be required. If substantial changes in the design are needed, additional design hours would be required. Calculations were performed during Phase 1, and include all assumptions made regarding analysis of the various storm events studied.

6 PHASE III ENGINEERING

It is estimated that Phase III would require no more than 60 hours. This assumes that no design documents (drawing) revisions are needed.