

FOR	NAME	Larry Kesterson (X2663)	DATE	9/30/94
	ADDRESS		<input type="checkbox"/> Chatta	<input type="checkbox"/> M. S.
			<input type="checkbox"/> Knox	<input type="checkbox"/> Nor.
----- Fold here for return -----				
FROM	NAME	Jerry Glover	EXTENSION	6427
	ADDRESS	LP 26-C	<input checked="" type="checkbox"/> Chatta	<input type="checkbox"/> M. S.
			<input type="checkbox"/> Knox	<input type="checkbox"/> Nor.

MIF - Coal Yard Runoff Pond
 Cost Estimate Revisions

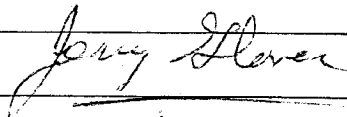
1. Attached is revised civil input to bring this up to a $\pm 10\%$ estimate.
2. Electrical (Ed Durham/Cheryl Karamidis) will supply you with info to provide a line item to provide for a light and electrical receptacle at the pump pump. Will include new transformer and structural support.
3. Electrical will supply you with quantities to do a separate estimate ^{stand} ~~alone~~ alone) for replacing power cable. This was outside the original scope and should include some electrical engineering input. Civil & mechanical should have no input for this.

TVA 45D (OS-9-80) INTEROFFICE MAILING SLIP

FOR	NAME	DATE
	ADDRESS	<input type="checkbox"/> Chatta <input type="checkbox"/> M. S. <input type="checkbox"/> Knox <input type="checkbox"/> Nor.
----- Fold here for return -----		
FROM	NAME	EXTENSION
	ADDRESS	<input type="checkbox"/> Chatta <input type="checkbox"/> M. S. <input type="checkbox"/> Knox <input type="checkbox"/> Nor.

4. There is still a problem with the proposed pump. With the existing cable there doesn't appear to be enough voltage to start this pump. Mechanical is checking this out.

5. There is a chance that we may have to increase the size of the sump in order to get the guide rails in. If so, I will give you a revised cost on the sump ASAP. This shouldn't change any other civil expenditures significantly.



 X6427

94336.(file 94336A4)

TVA - FHP FHE ESTIMATING

Phase II Approval

rept:np95

**KINGSTON FOSSIL PLANT
COAL YARD RUNOFF POND - ALT 4
ONE SUBMERSIBLE PUMP & ONE PIPE**

24-Sep-94

02:32 PM

EXECUTIVE SUMMARY

Location	T & L		Labor \$\$	Eqpt/Othr \$\$	Subcontr \$\$	Total Cost
	Material \$\$	Man-Hours				
A REMOVALS		272	4,723			4,723
COAL YARD SUMP	253	252	4,281			4,534
DX PUMPING ASSY	32,675	203	4,681			37,356
EARTHFILL	2,235	87	1,728	19		3,982
PIPE TO ASHPOND	27,557	1,333	25,291	5,562		58,410
STNLS STL PIPE	4,406	60	1,444			5,850
z0 ELECTRICAL	1,573	144	3,432	12		5,017
z1 HEAVY EQUIP				19,070		19,070
z1 TAGGED EQUIP				3,975		3,975
Construction Facilities		641	10,268	7,288	131	17,687
TOTAL DIRECT COST	68,697	2,987	55,846	35,926	131	160,600
Non-Manual Labor	(Phase 2 = 3,600 + Phase 3 = 12,200)					15,800
Total Contingency	(Phase 2 = 2,562 + Phase 3 = 11,000)					13,562
Partner Expnse/Charges(84E)	(Fee = 5,300 + Ins = 5,300)					10,600
TOTAL CONSTRUCTION						200,562
:: LESS Engineered Materials - (Phase 2 = 50,738 + 2,562 contingency)						> 53,300 <
TOTAL CONTRACT CONSTRUCTION						147,262
F&H Engineering						23,250
Plant Overhead Charges for Procurement & Handling of Capital Materials						5,500
Project Manager's Contingency						11,688
= TOTAL (PAB APPROVAL) COST ==						241,000

94336 (file 94336A4)

TVA - FHP FHE ESTIMATING

Phase II Approval

rept:m95

KINGSTON FOSSIL PLANT

COAL YARD RUNOFF POND - ALT 4

ONE SUBMERSIBLE PUMP & ONE PIPE

24-Sep-94

02:29 PM

ATTACHMENT 1

Loc	Description	Quantity	Unit	Material \$	M-H/Unit	Man-Hours	Labor \$	Eqpt/Othr \$	Subcont \$	Unit Cost	Total Cost
A REMOVALS											
	Electrical Demolition	1.0 ls			24.00	24	580			580.00	580
	Remove Pump & Piping	1.0 ls			48.00	48	854			854.00	854
	Remove Pump House & Slab	1.0 ls			144.00	144	2,091			2,091.00	2,091
	Remove Pump Platform & Piping	1.0 ls			56.00	56	1,198			1,198.00	1,198
	subtotal A REMOVALS			0		272	4,723	0	0	0	4,723
	16' Long Metal or Wood Creeper 8'x12' <i>Identical to Station Post 2 EA</i>										
COAL YARD SUMP 8' Long Metal Fence Post 2 EA											
	Excavate for sump	636.5000	cy		0.13	83	1,412			2.28	1,412
	Backfill for sump	607.5000	cy		0.27	162	2,773			4.65	2,773
	Backfill 1" crushed stone	29	200 C.Y.		0.13	3	41			12.20	244
	Filler Fabric (non-woven)	50	1000 sf		0.04	4	55			1.05	105
	Wood Guard Post	4	EA								
	subtotal COAL YARD SUMP			253		252	4,281	0	0	0	4,534
	CONCRETE Pipe (6'x6'x2')										
	Reinforcing Steel	250	LBS								
DX PUMPING ASSY											
	Polyethylene Sump 5'dx16'h w/c	1.0 ea		7,500 <	40.00	40	848			8348.00	8,348
	36" Polyethylene Suction pipe	50.0 lf		1,200	1.33	67	1,553			55.06	2,753
	36" Polyethylene couplings	4.0 ea		112	6.00	24	582			173.50	694
	6" submersible 40hp pump w/mtr	1.0 ea		20,863 <	48.00	48	1,118			21981.00	21,981
	Level control system	1.0 ea		3,000 <	24.00	24	580			3580.00	3,580
	24" Polyethylene Pipe (21981/EA)										
	24" PE Couplings (2492/EA)										
	subtotal DX PUMPING ASSY			32,675		203	4,681	0	0	0	37,356
EARTH FILL											
	Earth Fill & compaction	700.0	C.Y.		0.01	9	151			0.22	151
	Crushed Stone Pmp House Area	230.0	tn		2,070	46	819			12.56	2,889
	1" GRS conduit w/ftgs & spits	80.0	lf		165	32	758		19	11.78	942
	Recept & 36" Pipe Inlet										
	subtotal EARTH FILL			2,235		87	1,728	19	0	0	3,982

**KINGSTON FOSSIL PLANT
COAL YARD RUNOFF POND - ALT 4
ONE SUBMERSIBLE PUMP & ONE PIPE**

Loc	Description	Quantity	Unit	M-H/Unit	Man-Hours	Labor \$\$	Eqpt/Ohr \$\$	Subcont \$	Unit Cost	Total Cost
PIPE TO ASHPOND										
	Temporary dike @ coal yd sump	1.0	ls	96.00	96	1,472	562		2034.00	2,034
	Backfill sand around 10' pipe	620.0	cy	0.33	205	3,047			10.37	6,429
	Excavate for 10' pipe trench	2,050.0	cy	0.11	219	3,639			1.78	3,639
	Backfill earth for 10' trench	1,430.0	cy	0.17	240	3,714			2.60	3,714
	::10' Polyethylene Pipe SDR 19	4,200.0	ft	> 0.11	480	11,207			7.02	29,477
	::10' Polyethylene Pipe fgs 90d	2.0	ea	> 4.50	9	216			272.00	544
	::10' Polyethylene Pipe fgs 45d	5.0	ea	> 4.50	23	540			185.00	925
	::10' Polyethylene Pipe flange	1.0	ea	> 4.50	5	108			205.00	205
	Rent polyethylene fusion welder	1.0	ls				5,000		5000.00	5,000
	::10' Polyethylene Pipe fgs WYE	1.0	ea	> 295	6	144			439.00	439
	12" pipe sleeves, A53 cs, coated	100.0	ft	0.50	50	1,204			60.04	6,004
	subtotal PIPE TO ASHPOND				1,333	25,291	5,562	0		58,410
	STNLS STL PIPE									
	6" dia SSteel 316 pipe sch 40	14.0	ft	1.30	18	440			107.21	1,501
	10" SSteel 316 flange, 150# SO	1.0	ea	6.00	6	145			845.00	845
	6" SSteel 316 flange, 150# SO	1.0	ea	4.00	4	96			331.00	331
	6" SSteel 316 90deg sch 40	1.0	ea	9.00	9	217			592.00	592
	10x6" SS 316 reducer sch 40	1.0	ea	12.00	12	289			889.00	889
	10" SSteel 316 pipe sch 40	10.0	ft	1.00	10	233			165.30	1,653
	1/2" plug hex head 316 ss	1.0	ea	1.00	1	24			39.00	39
	subtotal STNLS STL PIPE				60	1,444	0	0		5,850
	Z0 ELECTRICAL									
	3/4" GRS conduit w/ftgs & splts	30.0	ft	0.72	22	517	7		19.20	576
	1-1/2" GRS conduit w/ftgs & splts	12.0	ft	0.80	10	230	1		22.17	266
	2" GRS conduit w/ftgs & splts	30.0	ft	0.50	15	359	4		15.97	479
	3/4" flexible conduit, sealite	5.0	ft	1.20	6	145			32.60	163
	1" flexible conduit, sealite	10.0	ft	0.90	9	218			26.30	263
	2" flexible conduit, sealite	5.0	ft	1.80	9	218			54.20	271
	#10 -3/c PXMJ 600v P & C cable	100.0	ft	0.04	4	87			1.66	166

**KINGSTON FOSSIL PLANT
COAL YARD RUNOFF POND - ALT 4
ONE SUBMERSIBLE PUMP & ONE PIPE**

Loc	Description	Quantity	Unit	Material \$	M-H/Unit	Man-Hours	Labor \$	Eqpt/Othr \$	Subcont \$	Unit Cost	Total Cost
	#12-4/c PXMJ 600v P & C cable	40.0	lf	37	0.08	3	73			2.75	110
	#2/0-s/c PXJ-600v P & C cable	120.0	lf	228	0.08	9	221			3.74	449
	Cable Terminations	62.0	ea	62	0.40	25	600			10.68	662
	Bare copper wire stranded #2	50.0	lf	39	0.30	15	363			8.04	402
	Grnd.cdw/ #2 wfe mot frame	4.0	ea	40	2.00	8	196			59.00	236
	1" FD outlet box	1.0	ea	10	0.67	1	16			26.00	26
	Ground fault indicating, 15 amp	1.0	ea	40	1.00	1	24			64.00	64
	Cover plwthr proof nema 7-23	1.0	ea	19	1.00	1	24			43.00	43
	Safety hvy duty 600v 3p 60 a	1.0	ea	700	6.00	6	141			841.00	841
	subtotal z0 ELECTRICAL			1,573		144	3,432	12	0		5,017
	Z1 HEAVY EQUIP										
	AirComp, 250cfm	1.0	ea					250		250.00	250
	Trac,Crawl,Med,D5,100-110 hp	1.0	ea					2,700		2,700.00	2,700
	Trac,Crawl,Hvy,D8,270-300 hp	1.0	ea					1,750		1,750.00	1,750
	CompctSheepFt,Rex 3-50	1.0	ea					2,800		2,800.00	2,800
	Bkhol/dr, 1-1/4CYx17'x18"	2.0	ea					2,700		1,350.00	2,700
	TrkDmp, 4x2, Platform	1.0	ea					750		750.00	750
	TrkDmp,6x4,12-14CY, OnRd	2.0	ea					1,800		900.00	1,800
	Trk, Fuel, 4x2	1.0	ea					750		750.00	750
	Sprnkr,6x4, 2,000 Gal	1.0	ea					900		900.00	900
	Crn,RghTrn,21-25Tn,SwCb	1.0	ea					1,800		1,800.00	1,800
	Crn,RghTrn,41-50Tn,SwCb	1.0	ea					1,500		1,500.00	1,500
	Welder	1.0	ea					500		500.00	500
	Tugger, 2,000-2,500 lb	1.0	ea					870		870.00	870
	subtotal z1 HEAVY EQUIP			0		0	0	19,070	0		19,070
	Z1 TAGGED EQUIP										
	Air Hoist(Tugger)1000#	1.0	ea					750		750.00	750
	AirEqp,Jkhrm,to 70# paving bkr	2.0	ea					240		120.00	240
	CompEqp,Tamper,175lb,	2.0	ea					2,400		1,200.00	2,400
	Bndr,hydrf,endt/pipe,to 2"	1.0	ea					585		585.00	585

94336.(file 94336A4)

TVA - FHP FHE ESTIMATING

Phase II Approval

rept:n195

KINGSTON FOSSIL PLANT

COAL YARD RUNOFF POND - ALT 4

ONE SUBMERSIBLE PUMP & ONE PIPE

24-Sep-94

02:29 PM

ATTACHMENT 1

Loc	Description	Quantity	Unit	Material \$\$	M-H/Unit	Man-Hours	Labor \$\$	Eqpt/Othr \$\$	Subcont \$\$	Unit Cost	Total Cost
subtotal z1 TAGGED EQUIP											
		0		0		0	0	3,975	0		3,975
Construction Facilities											
	Mobilization	1.0 WKS.		192.00		192	2,876	243		3119.00	3,119
	Admin Time(Employee proc.etc.)	7.0 WKS.		7.00		49	1,042			148.86	1,042
	General Cleanup	7.0 WKS.		16.00		112	1,674	424		299.71	2,098
	Drinking Water	7.0 WKS.		8.00		56	937	774		244.43	1,711
	Hauling	7.0 WKS.		24.00		168	2,812	1,273		583.57	4,085
	Small Tool Dispense & Repair	2,988.0 cthr						2,032		0.68	2,032
	Portable Toilet Service	7.0 WKS							131	18.71	131
	Consumables & Expendables	2,988.0 ceftr						2,421		0.81	2,421
	Demobilization	1.0 WKS.		64.00		64	927	121		1048.00	1,048
subtotal Construction Facilities											
		0		0		641	10,268	7,288	131		17,687

94336 (file 94336A4)

TVA - FHP FHE ESTIMATING

Phase II Approval

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KINGSTON FOSSIL PLANT

COAL YARD RUNOFF POND - ALT 4

ONE SUBMERSIBLE PUMP & ONE PIPE

24-Sep-94

02:29 PM

ATTACHMENT 1

Loc	Description	Quantity	Unit	Material \$	M = H/Unit	Man-Hours	Labor \$	Eqpt/Othr \$	Subcont \$	Unit Cost	Total Cost
TOTAL DIRECT COST											
	Non-Manual Labor			68,697		2,987	55,846	35,926	131		160,600
	Total Contingency	(Phase 2 = 3,600 + Phase 3 = 12,200)									
	Partner Expenses/Charges (84E)	(Phase 2 = 2,562 + Phase 3 = 11,000)									
		(Fee = 5,300 + Insur = 5,300)									
TOTAL CONSTRUCTION											
	LESS Engineered Materials - (Indicated by > <)										200,562
											53,300 <
TOTAL CONTRACT CONSTRUCTION											
	F&H Engineering - Phase 1										147,262
	F&H Engineering - Phase 2										21,580
	F&H Engineering - Phase 3										1,670
	Plant Overhead Charges for Procurement & Handling of Capital Materials										5,500
	Project Manager's Contingency										11,688
== TOTAL (PAB APPROVAL) COST ==											241,000