

94336.(file 94336A5)

TVA - FHP FHE ESTIMATING

Phase II Approval

rept:np95

**KINGSTON FOSSIL PLANT**  
**COAL YARD RUNOFF POND - ALT 5**  
**SUBMERSIBLE PUMP & 1 PIPE (PVC)**

24-Sep-94

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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
PVC PIPE	794	32	790			1,584
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	7,257	131	17,656
<b>TOTAL DIRECT COST</b>	<b>65,084</b>	<b>2,960</b>	<b>55,191</b>	<b>35,894</b>	<b>131</b>	<b>156,301</b>
Non-Manual Labor						(Phase 2 = 3,600 + Phase 3 = 12,000) 15,600
Total Contingency						(Phase 2 = 2,562 + Phase 3 = 10,500) 13,062
Partner Expnse/Charges(84E)						(Fee = 5,200 + Ins = 5,200) 10,400
<b>TOTAL CONSTRUCTION</b>						<b>195,362</b>
:: LESS Engineered Materials - (Phase 2 = 50,738 + 2,562 contingency)						> 53,300 <
<b>TOTAL CONTRACT CONSTRUCTION</b>						<b>142,062</b>
F&H Engineering						23,250
Plant Overhead Charges for Procurement & Handling of Capital Materials						5,500
Project Manager's Contingency						11,188
<b>= TOTAL (PAB APPROVAL) COST ==</b>						<b>235,300</b>

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KINGSTON FOSSIL PLANT

COAL YARD RUNOFF POND - ALT 5  
1 SUBMERSIBLE PUMP & 1 PIPE (PVC)

24-Sep-94

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ATTACHMENT

Loc	Description	Quantity	Unit	M	H/Unit	Man-Hours	Labor \$\$	Eqpt/Ctrr	Subcontr \$\$	Unit Cost	Total Cost
<b>A REMOVALS</b>											
	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
	<b>subtotal A REMOVALS</b>					<b>272</b>	<b>4,723</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,723</b>
<b>COAL YARD SUMP</b>											
	Excavate for sump	620.0	cy		0.13	83	1,412			2.28	1,412
	Backfill for sump	596.0	cy		0.27	162	2,773			4.65	2,773
	Backfill 1" crushed stone	20.0	C.Y.		0.13	3	41			12.20	244
	Filter Fabric (non-woven)	100.0	sf		0.04	4	55			1.05	105
	<b>subtotal COAL YARD SUMP</b>					<b>252</b>	<b>4,281</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,534</b>
<b>DX PUMPING ASSY</b>											
	::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
	<b>subtotal DX PUMPING ASSY</b>					<b>203</b>	<b>4,681</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37,356</b>
<b>EARTHFILL</b>											
	Earth Fill & compaction	700.0	C.Y.		0.01	9	151			0.22	151
	Crushed Stone Pmp House Area	230.0	tn		2,070		0.20	46	819	12.56	2,889
	1"GRS conduit w/ftgs & spts	80.0	lf		165		0.40	32	758	11.78	942
	<b>subtotal EARTHFILL</b>					<b>87</b>	<b>1,728</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>3,982</b>

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COAL YARD RUNOFF POND - ALT 5

1 SUBMERSIBLE PUMP & 1 PIPE (PVC)

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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.cdwI, #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 prof 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
	<b>subtotal z0 ELECTRICAL</b>			<b>1,573</b>		<b>144</b>	<b>3,432</b>	<b>12</b>	<b>0</b>		<b>5,017</b>
	<b>z1 HEAVY EQUIP</b>										
	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
	Compot,SheepFL,ex 3-50	1.0	ea				2,800			2,800.00	2,800
	Bkho/L,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
	Sprnkt,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
	<b>subtotal z1 HEAVY EQUIP</b>			<b>0</b>		<b>0</b>	<b>19,070</b>	<b>0</b>	<b>0</b>		<b>19,070</b>
	<b>z1 TAGGED EQUIP</b>										
	Air Hoist(Tugger)1000 #	1.0	ea				750			750.00	750
	AirEqp, jkhr, to 70# paving bkr	2.0	ea				240			120.00	240
	CompEqp, Temper, 175lb,	2.0	ea				2,400			1,200.00	2,400
	Bndr,hydrI,condt/pipe,to 2"	1.0	ea				585			585.00	585

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<b>subtotal z1 TAGGED EQUIP</b>		0		0	0	0	0	3,975	0		3,975
<b>Construction Facilities</b>											
	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	2,960.0 sthr						2,013		0.68	2,013
	Portable Toilet Service	7.0 WKS							131	18.71	131
	Consumables & Expendables	2,960.0 cehr						2,409		0.81	2,409
	Demobilization	1.0 WKS.		64.00		64	927	121		1048.00	1,048
<b>subtotal Construction Facilities</b>		0		0	641	10,268	7,257	131			17,656

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	Total Contingency										15,600
	Partner Expenses/Charges (84E)										13,062
											10,400
<b>TOTAL CONSTRUCTION</b>											
											195,362
	LESS Engineered Materials - (Indicated by > <)										53,300 <
<b>TOTAL CONTRACT CONSTRUCTION</b>											
											142,062
	F&H Engineering - Phase 1										21,580
	F&H Engineering - Phase 2										1,670
	F&H Engineering - Phase 3										5,500
	Plant Overhead Charges for Procurement & Handling of Capital Materials										11,188
	Project Manager's Contingency										
<b>== TOTAL (PAB APPROVAL) COST ==</b>											<b>235,300</b>