

94336.(file 94336A1)

TVA - FHP FHE ESTIMATING

Phase II Approval

rept:np95

KINGSTON FOSSIL PLANT**COAL YARD RUNOFF POND****.ALT 1 - ONE PUMPS & ONE PIPELINE.**

24-Sep-94

07:49 AM

EXECUTIVE SUMMARY

Location	T & L		Labor \$\$	Eqpt/Othr \$\$	Subcontr \$\$	Total Cost
	Material \$\$	Man-Hours				
A REMOVALS		432	7,552			7,552
COAL YARD SUMP	15,560	946	16,913			32,473
DX PUMPING ASSY	105,614	256	5,908			111,522
EARTHFILL	2,235	87	1,728	19		3,982
PIPE TO ASHPOND	22,768	1,347	25,069	5,562		53,399
STNLS STL PIPE	23,173	187	4,482			27,655
z0 ELECTRICAL	1,573	144	3,432	12		5,017
z1 HEAVY EQUIP				21,320		21,320
z1 TAGGED EQUIP				5,580		5,580
Construction Facilities		997	16,318	11,446	244	28,008
TOTAL DIRECT COST	170,921	4,392	81,398	43,937	244	296,499
Non-Manual Labor	(Phase 2 = 6,000 + Phase 3 = 19,900)					25,900
Total Contingency	(Phase 2 = 6,000 + Phase 3 = 17,400)					23,400
Partner Expnse/Charges(84E)	(Fee = 7,790 + Ins = 7,790)					15,580
TOTAL CONSTRUCTION						361,380
:: LESS Engineered Materials - (Phase 2 = 125,000 + 6,000 contingency)					>	131,000 <
TOTAL CONTRACT CONSTRUCTION						230,380
F&H Engineering						23,250
Plant Overhead Charges for Procurement & Handling of Capital Materials						12,000
Project Manager's Contingency						19,870
== TOTAL (PAB APPROVAL) COST ==						416,500

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KINGSTON FOSSIL PLANT

COAL YARD RUNOFF POND

.ALT 1 - ONE PUMPS & ONE PIPELINE.

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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	144.00		144	2,561			2,561.00	2,561
	Remove Pump House & Slab	1.0	ls	180.00		180	2,614			2,614.00	2,614
	Remove Pump Platform & Piping	1.0	ls	84.00		84	1,797			1,797.00	1,797
	subtotal A REMOVALS			0		432	7,552	0	0	0	7,552
COAL YARD SUMP											
	Excavate for sump	810.0	cy		0.13	108	1,845			2.28	1,845
	Backfill for sump	470.0	cy		0.27	128	2,187			4.65	2,187
	Backfill 1" crushed stone	340.0	C.Y.	3,443	0.12	40	652			12.04	4,095
	Formwork for slab & walls sump	1,792.0	sfca	3,665	0.20	358	6,327			5.56	9,992
	Reinforcing place walls, #3 #7	4.4	ton	2,160	16.00	70	1,531			638.86	3,691
	Pour concrete in place 3000psi	60.0	cy	3,900	2.67	160	2,610			108.50	6,510
	Welded shear conn 3/4"x4 -3/16"	24.0	ea	24	0.75	18	394			17.42	418
	3"x3"x5/16 steel angle A36	10.0	lf	40	0.60	6	131			17.10	171
	Str stl,wf,10' - 45's,w 14 x 26	50.0	lf	638	0.64	32	672			26.20	1,310
	Steel Plates 3/4"x1'-2"	6.0	ea	150	2.67	16	341			81.83	491
	1 - 1/2'x 3/16' Galv bar grating	125.0	sf	1,500	0.05	6	129			13.03	1,629
	4" PVC pipe sch 40	10.0	lf	40	0.40	4	94			13.40	134
	subtotal COAL YARD SUMP			15,560		946	16,913	0	0	0	32,473
DX PUMPING ASSY											
	::Polypropylene Sump 10'diax16'h	1.0	ea	> 18,000	< 40.00	40	848			18848.00	18,848
	::36' Polypropylene Suction pipe	1.0	ls	> 12,109	< 144.00	144	3,362			15471.00	15,471
	::6' Vert Cent 40hp pump w/mtr	1.0	ea	> 72,505	< 48.00	48	1,118			73623.00	73,623
	::Level control system	1.0	ea	> 3,000	< 24.00	24	580			3580.00	3,580
	subtotal DX PUMPING ASSY			105,614		256	5,908	0	0	0	111,522
EARTHFILL											

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ATTACHMENT 1

Loc	Description	Quantity	Unit	Material \$	M-H/Unit	Man-Hours	Labor \$	Eqpt/Othr \$	Subcontr \$	Unit Cost	Total Cost
	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/figs & spts	80.0	lf	165	0.40	32	758		19	11.78	942
	subtotal EARTHFILL			2,235		87	1,728		19	0	3,982
	PIPE TO ASHPOND										
	Temporary dike @ coal yd sump	1.0	ls	160.00		160	2,454		562	3016.00	3,016
	Backfill sand around 10" pipe	620.0	cy	3,382	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	lf	> 18,270	< 0.11	480	11,207			7.02	29,477
	::10" Polyethylene Pipe figs 90d	2.0	ea	> 339	< 4.50	9	216			277.50	555
	::10" Polyethylene Pipe figs 45d	5.0	ea	> 385	< 4.50	23	540			185.00	925
	::10" Polyethylene Pipe flange	1.0	ea	> 97	< 4.50	5	108			205.00	205
	Rent polyethylene fusion welder	1.0	ls						5,000	5000.00	5,000
	::10" Polyethylene Pipe figs WYE	1.0	ea	> 295	< 6.00	6	144			439.00	439
	subtotal PIPE TO ASHPOND			22,768		1,347	25,069		5,562	0	53,399
	STNLS STL PIPE										
	Valve box 20"x14"x16"dp,plas	1.0	ea	200	16.00	16	388			588.00	588
	Valve box 20"x14"x8"dp,plas	1.0	ea	100	8.00	8	194			294.00	294
	10" SSteel 316 flange,150# SO	1.0	ea	700	6.00	6	145			845.00	845
	6" SSteel 316 flange,150# SO	1.0	ea	235	4.00	4	96			331.00	331
	6" SSteel 316 90deg sch 40	1.0	ea	375	9.00	9	217			592.00	592
	10" SSteel 316 45deg sch 40	2.0	ea	1,760	12.00	24	578			1169.00	2,338
	10x6" SS 316 reducer sch 40	1.0	ea	600	12.00	12	289			889.00	889
	10" SSteel 316 pipe sch 40	10.0	lf	1,420	1.00	10	233			165.30	1,653
	1" SSteel 316 pipe sch 40	10.0	lf	70	0.40	4	96			16.60	166
	1" socket 3000# 316 ss	1.0	ea	108	4.00	4	94			202.00	202
	1" socket 3000# 316ss 90deg	2.0	ea	100	4.00	8	189			144.50	289
	10"x1" threadolet 3000# 316 ss	1.0	ea	90	4.00	4	94			184.00	184
	1/2"plug hex head 316 ss	1.0	ea	15	1.00	1	24			39.00	39

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Loc	Description	Quantity	Unit	Material \$	M-H/Unit	Man-Hours	Labor \$	Eqpt/Othr \$	Subcontr \$	Unit Cost	Total Cost
	12" pipe sleeves, A53 cs, coated	100.0	lf	4,800	0.50	50	1,204			60.04	6,004
	10" ss check valve 150# flngd	1.0	ea	6,300	24.00	24	582			6,882.00	6,882
	1" ss gate valve 150#, threaded	1.0	ea	6,300	2.50	3	59			6,359.00	6,359
	subtotal STNLS STL PIPE			23,173		187	4,482	0	0		27,655
	Z0 ELECTRICAL										
	3/4" GRS conduit w/flgs & spts	30.0	lf	52	0.72	22	517		7	19.20	576
	1-1/2" GRS conduit w/flgs & spts	12.0	lf	35	0.80	10	230		1	22.17	266
	2" GRS conduit w/flgs & spts	30.0	lf	116	0.50	15	359		4	15.97	479
	3/4" flexible conduit, sealite	5.0	lf	18	1.20	6	145			32.60	163
	1" flexible conduit, sealite	10.0	lf	45	0.90	9	218			26.30	263
	2" flexible conduit, sealite	5.0	lf	53	1.80	9	218			54.20	271
	#10 -3/c PXMJ 600v P & C cable	100.0	lf	79	0.04	4	87			1.66	166
	#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	383			8.04	402
	Grnd.cdw/, #2 wire mobr frame	4.0	ea	40	2.00	8	186			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
	Compct, SheepFt, Rex 3-50	1.0	ea						2,800	2,800.00	2,800
	Bkhd/Ldr, 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	3.0	ea						4,050	1,350.00	4,050