KINGSTON FOSSIL PLANT
OPTION 2 - DRY ASH IN POND & GYPSUM ON PENINSULA
(WITHOUT BUFFER OPTION)

Project name	KIF/05093O2R1/FLY&BOT ASH
Engineer	DAN SMITH
Estimator	C. L. Toney
Labor rate table	KIF 40 2004
Equipment rate table	TVA Equipment
Project	Ash
Plant	KIF
Estimate #	05093O2R1
PCN #	KIF530
Requesting Engr	Dan Smith
Option	2
Revision	1
Phase	2
Estimate Type	Preliminary
Estimate Accuracy	+/- 20%
Est. Issue Date	01/21/2005
Funding Type	Capital
Unit	N

Notes

Dry ash in pond & gypsum on peninsula (Wet ash in dredge cell/Phase 1, and Phase2. Phase 3 not constructed. Gypsum on peninsula).

All cost are based in 2005 dollars. Additional notes are as follow;

(1) Closure costs not included.

(2) Liner is not required for this option.

(3) Bottom ash columns are subject to change with final design.

(4) Engineering (Incl TVA oversight, subcontracts, and geotechnical investigation) - Assumes 10% of construction cost.

(5) Assuming a disposal rate of 475,600 cy annually (including bottom and fly ash) & gypsum/ash generating 327,360 cy annually.

(6) Single phase power is assumed for pump installed for dredge cell seepage retrofit. 3-phase power is assumed not to be required.

Report format

Sorted by 'Location/Activity/Outage Seq'
'Detail' summary

Location	Activity	Outage Seq	Description	Takeoff Quantity	Labor Productivity	Labor Quantity	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount
02	Ash In Pond												
		Capital											
			Erect Silt Fence	1,000.00 lf	0.069	68.57 mh	1,894	502	-	317	-	2.81	2,813
			Geotextile (Nonwoven) Erosion Protection Channel	4,300.00 sy	0.016	68.80 mh	1,963	5,772	-	175	-	1.84	7,911
			D50 9" Riprap	5,215.00 tn	0.320	1,668.80 mh	49,667	53,037	-	26,865	-	24.85	129,568
			3" Stone, 1' Thick To Prevent Erosion (Assume 105 pcf)	2,004.00 tn	0.096	192.38 mh	6,056	18,190	-	3,066	-	13.63	27,312
			Stg 1-6 CMP Mtl Spillway (1/2 of 48" Dia Riser Stand Pipe @ 128 Ft/Ea)	4.00 ea	166.084	664.33 mh	*20,450*	*20,198*	-	*2,795*	-	10,860.64	43,443
			Cut (Excavation For Placement Of 48" Dia Half-Round Pipe) 43 bcy	52.00 cy	0.400	20.80 mh	599	-	-	177	-	14.91	776
			Fill With 1032 CompactedCrushed Stone	93.00 tn	0.400	37.20 mh	1,107	804	-	599	-	26.99	2,510
			30" Diameter CMP Culvert	1,000.00 lf	0.600	600.00 mh	17,487	26,442	-	3,682	-	47.61	47,611
			Bedding For 30" CMP, 6" Thick	135.00 tn	0.500	67.50 mh	1,943	1,284	-	230	-	25.61	3,457
			30" Diameter CMP Stand Pipe (4Pipes @ 6 Stages w/30' Per Stage)	720.00 lf	0.750	540.00 mh	16,623	19,038	-	2,279	-	52.70	37,940
			D50 9" Riprap Outlet For Metal Spillway	53.00 tn	0.320	16.96 mh	505	539	-	273	-	24.85	1,317
			Galvanized Corrugated Metal Anti-Seep Collar	16.00 ea	16.000	256.00 mh	7,461	4,882	-	1,571	-	869.59	13,914
			Seed/Mulch Disturbed Areas	26.00 ac	-	-	-	-	64,619	-	-	2,485.34	64,619
			1032 Crushed Stone Base, 6" Depth	3,520.00 tn	0.120	422.40 mh	13,739	31,950	-	4,147	-	14.16	49,836
			1032 Roller Compacted Crushed Stone Base, 6" Depth	6,885.00 tn	0.120	826.20 mh	26,872	62,493	-	8,112	-	14.16	97,478
				1.00 lot	-	-	-	-	-	-	-	*0.00*	*0*
			Base Layers	573,650.00 cy	1,300.000	441.27 cd	1,068,579	-	-	891,223	-	3.42	1,959,802
			Compacted Fly Ash Base (Fill)	177,100.00 sy	28,111.100	6.30 cd	5,353	-	-	2,570	-	0.05	7,923
			Proofroll Subgrade	152,717.00 cy	1,300.000	117.47 cd	284,477	-	-	237,261	-	3.42	521,738
			2.5' Thick Bottom Ash Layer	30,543.00 cy	1,300.000	23.49 cd	56,895	-	-	47,452	-	3.42	104,346
			0.5' Thick Fly Ash Filter Layer	16,920.00 lf	-	-	-	-	347,537	-	-	20.54	347,537
			18" Dia Coarse Bottom Ash Drain Columns (haul 2 miles, 1,100 bcy)	177,100.00 sy	1,400.000	126.50 cd	74,304	-	-	20,645	-	0.54	94,949
			Roto Till Fly Ash Layer	*0.00 cy*	*1,300.000*	*0.00 cd*	*0*	-	-	*0*	-	*0.00*	*0*
			Bottom Ash Dike Fill	26,082.00 lf	0.070	1,825.74 mh	49,829	40,942	-	7,762	-	3.76	98,533
			4" Diameter Perforated PVC Pipe (Underdrains) SDR 17.5	1,160.00 cy	0.200	232.00 mh	6,678	-	-	1,972	-	7.46	8,650
			Trenching For The Drain System (4" Dia Underdrains), 966 bcy	22,960.00 cy	800.000	28.70 cd	14,128	-	-	14,930	-	1.27	29,058
			Strip Existing 1' Soil Cover (Phase 1 Expansion), 19,133 bcy	1,306.00 cy	0.200	261.20 mh	7,519	-	-	3,330	-	8.31	10,849
			Anchor Trench Cut	1,242.00 cy	0.320	397.44 mh	11,441	-	-	9,835	-	17.13	21,275
			Anchor Trench Fill & Compact	24,840.00 cy	1,300.000	18.95 cd	45,899	-	-	38,281	-	3.42	84,179
			2.0' Thick Bottom Ash Blanket Drain	12,320.00 cy	1,300.000	9.48 cd	22,949	-	-	19,140	-	3.42	42,090
			1.0' Thick Filter Drain Ash Layer	36,960.00 sy	0.050	1,848.00 mh	52,720	82,694	-	4,712	-	3.79	140,126
			Geomembrane	4,946.00 lf	0.200	989.20 mh	26,998	8,186	-	4,200	-	7.96	39,384
			Perforated Pipe ADS Drain Tube, 6" Diameter	4,121.00 sy	0.021	84.77 mh	2,418	8,344	-	288	-	2.68	11,051
			Geotextile For Underdrain	1,001.00 tn	0.150	150.15 mh	4,322	9,086	-	1,276	-	14.67	14,684
			#57 Stone For Outlet pipe Bedding (135 pcf)	1,236.00 lf	0.200	247.20 mh	6,747	2,046	-	1,050	-	7.96	9,842
			Solid Outlet Pipe ADS Drain 6" Diameter	250.00 tn	0.150	37.50 mh	1,079	2,269	-	319	-	14.67	3,667
			#57 Stone For Outlet pipe Bedding (135 pcf)	302.00 lf	0.200	60.40 mh	1,648	500	-	256	-	7.96	2,405
			6" Dia Non-Perf HDPE Corrugated Tubing Lateral Outlet Pipes (EL. 760)	10.00 tn	0.500	5.00 mh	144	95	-	17	-	25.61	256
			1081Crushed Stone, Bedding 6" Depth	1,512.00 lf	0.200	302.40 mh	8,253	2,503	-	1,284	-	7.96	12,040
			6" Dia Perforated HDPE Drain (EL. 760)	286.00 tn	0.500	143.00 mh	4,116	2,720	-	487	-	25.61	7,323
			1081Crushed Stone	1,176.00 sy	0.021	24.19 mh	690	2,381	-	82	-	2.68	3,154
			Geotextile Woven Monofilament	224.00 cy	0.200	44.80 mh	1,290	-	-	381	-	7.46	1,670
			Cut For Underdrain System	168.00 cy	0.250	42.00 mh	1,209	-	-	504	-	10.20	1,713
			Backfill For Underdrain System	1.00 ls	-	-	-	-	-	-	31,500	31,500.00	31,500
			Certification	1.00 ls	-	-	-	-	-	-	414,025	414,025.00	414,025
			Contingency @ 10%			*58,747.52 hrs*	*1,926,150*	*406,897*	*412,156*	*1,363,546*	*445,525*		*4,554,273*
			Capital			58,747.52 hrs	1,926,150	406,897	412,156	1,363,546	445,525		4,554,273
			Ash In Pond			*58,747.52 hrs*	*1,926,150*	*406,897*	*412,156*	*1,363,546*	*445,525*		*4,554,273*
			02										
03													
	Gypsum On Peninsula	Capital										*0.00*	*0*
				1.00 lot	-	-	-	-	-	-	-	3,941.32	354,719
			Clear And Grub	90.00 ac	72.000	6,480.00 mh	193,775	-	-	160,944	-	142.10	2,842
			Clear And Grub	20.00 ac	6.000	3.33 cd	1,958	-	-	884	-	1.25	161,618
			Disc Future Borrow Area (Assumed For Compacted Clay Material)	129,000.00 cy	0.020	2,580.00 mh	79,380	-	-	82,238	-	3.30	23,022
			Strip 1 ft Vegetation And Topsoil - Spoil At Stockpile	6,978.00 cy	1,200.000	5.82 cd	10,981	-	-	12,041	-	24.85	105,319
			Cut For Ditch (5,815 bcy)	4,239.00 tn	0.320	1,356.48 mh	40,371	43,111	-	21,837	-	0.51	3,583
			D50 9" Riprap	6,978.00 sy	-	-	-	-	3,583	-	-	1.19	8,280
			Seed Ditch	6,978.00 sy	0.012	83.74 mh	2,389	5,464	-	427	-	24.85	58,237
			Jute Matting	2,344.00 tn	0.320	750.08 mh	22,324	23,838	-	12,075	-	3.30	14,186
			Riprap D50 Size 9"	4,300.00 cy	1,200.000	3.58 cd	6,767	-	-	7,420	-	2.81	13,784
			Cut For Basin (3,582 bcy)	4,900.00 lf	0.069	335.99 mh	9,769	2,462	-	1,554	-	2,485.34	62,134
			Erect Silt Fence (Trench Bottom OF Fence, 10% Hay Bales)	25.00 ac	-	-	-	-	62,134	-	-	0.85	846
			Seed/Mulch Disturbed Areas	1,000.00 lf	0.020	20.00 mh	526	320	-	-	-	*0.00*	*0*
			Silt Fence	*1.00 lot*	-	-	-	-	-	-	-	513,500.00	513,500
			Disposal Facility Construction	1.00 ls	-	-	-	-	513,500	-	-	260,000.00	260,000
			Allowance For Karst Geologic Features	1.00 ls	-	-	-	-	260,000	-	-	2.39	5,724
			Wetland Mitigation Costs	2,400.00 cy	800.000	3.00 cd	3,199	-	-	2,525	-	2.24	6,189
			Cut For Stormwater Runoff Pond (2,000 bcy)	2,760.00 cy	383.333	7.20 cd	3,839	-	-	2,350	-	3.30	47,482
			Cleanout Stormwater Runoff Pond (2,300 bcy)	14,400.00 cy	1,904.000	7.56 cd	22,757	-	-	24,725	-	2.57	6,170
			Fill For Stormwater Runoff Pond (12,000 bcy)	2,400.00 cy	1,904.000	1.26 cd	3,052	-	-	3,118	-	2.24	1,345
			Bottom Ash (South Access Road)	600.00 cy	2,800.000	0.21 cd	645	-	-	701	-	2.50	1,501
			Cut And Fill Balance (500 bcy)	400.00 cy	1,904.000	0.21 cd	458	-	-	542	-	2.24	510,463
			Cut & Spoil Additional Material	227,663.00 cy	2,800.000	81.31 cd	244,656	-	-	265,808	-		
			Cut And Fill Balance (189,719 bcy)										

Location	Activity	Outage Seq	Description	Takeoff Quantity	Labor Productivity	Labor Quantity	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount
		Capital											
			Cut & Spoil Select Cut For Future 1 Ft Clay Layer In Final Cover	145,001.00 cy	1,904.000	76.16 cd	166,178	-	-	196,528	-	2.50	362,707
			Crushed Stone Base (South Access Road)	2,900.00 tn	0.120	348.00 mh	11,319	26,323	-	3,417	-	14.16	41,058
			Crushed Stone Base (Permanent Parking Lot Paved Stone)	340.00 tn	0.120	40.80 mh	1,327	3,086	-	401	-	14.16	4,814
			Crushed Stone Base	1,400.00 tn	0.120	168.00 mh	5,464	12,707	-	1,650	-	14.16	19,821
			Riprap For Stormwater Runoff Pond	4,300.00 tn	0.200	860.00 mh	25,595	43,731	-	18,441	-	20.41	87,767
			Riprap For Ditch	23,500.00 tn	0.200	4,700.00 mh	139,881	238,995	-	100,781	-	20.41	479,657
			Ditch For Riprap (24' wide x 2' deep)	7,300.00 lf	0.044	320.03 mh	10,911	-	-	12,904	-	3.26	23,816
			Geotextile (If Riprap Is Used)	19,500.00 sy	0.015	292.50 mh	8,420	26,029	-	995	-	1.82	35,443
			New Fencing (Including Grounding)	200.00 lf	-	-	-	-	4,211	-	-	21.05	4,211
			Personnel Swinging Gate	1.00 ea	-	-	-	-	370	-	-	369.72	370
			Sliding Gate, 20 Ft Wide, With Motorized Operator	1.00 ea	-	-	-	-	17,459	-	-	17,459.00	17,459
			Pipe Bedding	20.00 tn	0.500	10.00 mh	288	199	-	34	-	26.03	521
			Perimeter Road Surfacing - Bottom Ash	2,400.00 cy	1,904.000	1.25 cd	3,052	-	-	3,118	-	2.57	6,170
			Perimeter Road Surfacing - Crushed Stone	2,900.00 tn	0.120	348.00 mh	11,319	26,323	-	3,417	-	14.16	41,058
			Drainage Layer (1 Ft Thick) For Liner (No. 57 Stone)	168,000.00 tn	0.096	16,128.00 mh	507,694	1,452,276	-	257,040	-	13.20	2,217,010
			Geotextile For Underdrain Pipe	5,700.00 sy	0.011	59.85 mh	1,723	7,608	-	203	-	1.67	9,535
			8" Dia. HDPE, SDR 17 Perforated Pipe	5,400.00 lf	0.200	1,280.00 mh	34,935	10,593	-	5,439	-	7.96	50,967
			Compacted Clay Liner, 6" Lifts (339,000 bcy)	405,800.00 cy	1,200.000	339.00 cd	1,020,046	-	-	1,108,239	-	5.23	2,128,285
			8" Dia. HDPE Standard Fittings	50.00 ea	0.200	10.00 mh	248	407	-	-	-	13.10	655
			Concrete Anchors For Underdrain Piping	85.00 ea	12.500	1,062.50 mh	34,373	10,157	-	2,778	-	556.58	47,309
			Proofroll Subgrade	70.00 ac	7.000	10.00 cd	8,497	-	-	4,080	-	179.67	12,577
			72 " Dia. CMP For Outlet Structure	6.00 lf	2.000	12.00 mh	337	1,851	-	70	-	376.24	2,257
			48 " Dia. CMP For Riser For Outlet Structure	7.00 lf	1.091	7.64 mh	214	936	-	45	-	170.64	1,195
			48 " Dia. CMP Outlet Pipe (Principle Spillway)	150.00 lf	0.620	93.00 mh	2,610	7,404	-	542	-	70.37	10,556
			Cut Holes In Riser	3.00 ea	1.000	3.00 mh	74	-	-	15	-	29.92	90
			Seed / Fertilize / Lime Future Borrow Area	20.00 ac	-	-	-	-	47,719	-	-	2,385.93	47,719
			Composite Concrete For Riser Base (Assume 7' x 7' x 2')	4.00 cy	10.000	40.00 mh	1,294	823	-	105	-	555.30	2,221
			Anti-Seep Collars (Assume Concrete)	7.00 ea	75.000	525.00 mh	16,984	5,076	-	1,373	-	3,347.60	23,433
			Contingency @ 15%	1.00 ls		-	-	-	-	-	1,175,868	1,175,868.00	1,175,868
			Capital			*81,685.91 hrs*	*2,659,631*	*1,949,718*	*908,975*	*2,320,799*	*1,175,868*		*9,014,991*
			Gypsum On Peninsula			81,685.91 hrs	2,659,631	1,949,718	908,975	2,320,799	1,175,868		9,014,991
			03			*81,685.91 hrs*	*2,659,631*	*1,949,718*	*908,975*	*2,320,799*	*1,175,868*		*9,014,991*
05													
	Miscellaneous												
		Capital				-	-	-	25,675,000	-	-	25,675,000.00	25,675,000
			Dry Fly Ash Conversion Capital Cost	1.00 ls								742,506.00	742,506
			Non Manual	1.00 ls	14,850.120	14,850.12 mh	*742,506*	-	-	-	-		
			Mobilize, Drug Test, Misc Other, & Demobiliza	1.00 ls	8,253.968	8,253.97 mh	254,800	-	-	137,200	0	392,000.00	392,000
			Contingency @ 10%	1.00 ls		-	-	-	-	-	2,680,951	2,680,951.00	2,680,951
			Capital			*23,104.09 hrs*	*997,306*		*25,675,000*	*137,200*	*2,680,951*		*29,490,457*
			Miscellaneous			23,104.09 hrs	997,306		25,675,000	137,200	2,680,951		29,490,457
			05			*23,104.09 hrs*	*997,306*		*25,675,000*	*137,200*	*2,680,951*		*29,490,457*
05													
	Drg Cell/P1 Opr Cost	O & M											
			Elv. 810 To Elv. 866	*1.00 lot*		-	-	-	-	-	-	*0.00*	*0*
			Dry Ash Stack	5,476,070.00 cy	1,100.000	4,978.25 cd	10,903,210	-	-	7,312,047	-	3.33	18,215,257
			Wet Dip And Stack Bottom Ash Only	678,848.00 cy	375.000	1,810.26 cd	531,659	-	-	1,264,903	-	2.65	1,796,563
			Disposal Life (Assume Dike & Dredge Ash)	*12.90 yr*		-	-	-	-	-	-	*0.00*	*0*
			Haul Distance (Round Trip)	*0.50 mile*		-	-	-	-	-	-	*0.00*	*0*
			O & M			*372,915.76 hrs*	*11,434,869*			*8,576,950*			*20,011,819*
			Drg Cell/P1 Opr Cost			372,915.76 hrs	11,434,869			8,576,950			20,011,819
	Engr/Geotech	Capital											
			Addition Geotechnical Investigation	1.00 ls		-	-	-	102,700	-	-	102,700.00	102,700
			Contingency @ 15%	1.00 ls		-	-	-	-	-	15,405	15,405.00	15,405
			Capital			*hrs*			*102,700*		*15,405*		*118,105*
			Engr/Geotech			hrs			102,700		15,405		118,105
			06			*372,915.76 hrs*	*11,434,869*		*102,700*	*8,576,950*	*15,405*		*20,129,924*
14													
	Gyp On Peninsula Cst	O & M											
			Cut For Underdrain System	4,407.00 cy	0.200	881.40 mh	25,372	-	-	7,492	-	7.46	32,864
			6" Dia Perforated HDPE Perimeter Underdrains	59,491.00 lf	0.200	11,898.20 mh	324,733	98,468	-	50,517	-	7.96	473,718
			Fill For Underdrain System	3,525.00 cy	0.250	881.25 mh	25,368	-	-	10,571	-	10.20	35,939
			1081 Crushed Stone, 6" Depth (110 pcf)	3,272.00 tn	0.150	490.80 mh	14,128	29,699	-	4,172	-	14.67	47,999
			Cut For Lateral Outlet Pipes	551.00 cy	0.200	110.20 mh	3,172	-	-	937	-	7.46	4,109
			6" Dia Non- Perforated HDPE Lateral Outlet Pipes	7,436.00 lf	0.200	1,487.20 mh	40,590	12,308	-	6,314	-	7.96	59,212
			Fill For Lateral Outlet Pipes	441.00 cy	0.250	110.25 mh	3,174	-	-	1,322	-	10.20	4,496
			1081 Crushed Stone, 6" Depth (110 pcf)	409.00 tn	0.150	61.35 mh	1,766	3,712	-	521	-	14.67	6,000
			Gypsum Disposal Stack (Wet Sluice)	*5,535,853.00 cy*		-	-	-	-	-	-	*0.00*	*0*
			Wet Cast Gypsum Gypsum Dike	1,011,347.00 cy	375.000	2,696.93 cd	792,065	-	-	1,884,452	-	2.65	2,676,517
			Cut Rim Ditches	114,575.00 cy	375.000	305.53 cd	89,733	-	-	213,489	-	2.65	303,221
			Life Of Gypsum Disposal Stack	*20.00 yrs*		-	-	-	-	-	-	*0.00*	*0*

Location	Activity	Outage Seq	Description	Takeoff Quantity	Labor Productivity	Labor Quantity	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount
						39,940.32 hrs	1,320,101	144,187		2,179,787			3,644,075
			Gyp On Peninsula Cst			39,940.32 hrs	1,320,101	144,187		2,179,787			3,644,075
			14			39,940.32 hrs	1,320,101	144,187		2,179,787			3,644,075
17													
	Ph 2 Base Construct												
		O & M											
			QA/QC For Construction Of Disposal Facility	1.00 ls		-	-	-	470,247	-	-	470,246.87	470,247
			O & M			hrs			470,247				470,247
			Ph 2 Base Construct			0.00 hrs	0	0	470,247	0			470,247
			17			0.00 hrs	0	0	470,247	0			470,247
20													
	Ph 2 Initial Constr												
		O & M											
			Dry Stack Ash Quantities	614,909.00 cy	1,100.000	559.01 cd	1,224,324	-	-	821,071	-	3.33	2,045,395
			Initial Construction Disposal Life (Assume Dry Ash Stack)	1.30 yrs		-	-	-	-	-	-	0.00	0
			O & M			40,248.59 hrs	1,224,324			821,071			2,045,395
			Ph 2 Initial Constr			40,248.59 hrs	1,224,324			821,071			2,045,395
			20			40,248.59 hrs	1,224,324			821,071			2,045,395
22													
	Ph 2 Operationl Cost												
		O & M											
			Stage 1 (3 To 1 Side Slopes)	1.00 lot		-	-	-	-	-	-	0.00	0
			Dry Stack Ash Quantities	1,589,685.00 cy	1,100.000	1,445.17 cd	3,165,166	-	-	2,122,663	-	3.33	5,287,829
			Stage 1 Disposal Life (Assume Dry Stack Area)	3.30 yrs		-	-	-	-	-	-	0.00	0
			Haul Distance (Round Trip)	0.50 mile		-	-	-	-	-	-	0.00	0
			O & M			104,052.11 hrs	3,165,166			2,122,663			5,287,829
			Ph 2 Operationl Cost			104,052.11 hrs	3,165,166			2,122,663			5,287,829
			22			104,052.11 hrs	3,165,166			2,122,663			5,287,829
23													
	Ph 2 Operationl Cost												
		O & M											
			Stage 2 (3 To 1 Side Slopes)	1.00 lot		-	-	-	-	-	-	0.00	0
			Dry Stack Ash Quantities	1,773,076.00 cy	1,100.000	1,611.89 cd	3,530,309	-	-	2,367,540	-	3.33	5,897,849
			Stage 2 Disposal Life (Assume Dry Stack Area)	3.70 yrs		-	-	-	-	-	-	0.00	0
			O & M			116,055.88 hrs	3,530,309			2,367,540			5,897,849
			Ph 2 Operationl Cost			116,055.88 hrs	3,530,309			2,367,540			5,897,849
			23			116,055.88 hrs	3,530,309			2,367,540			5,897,849
24													
	Ph 2 Operationl Cost												
		O & M											
			Stage 3 (3 To 1 Side Slopes)	1.00 lot		-	-	-	-	-	-	0.00	0
			Dry Stack Ash Quantities	1,572,022.00 cy	1,100.000	1,429.11 cd	3,129,998	-	-	2,099,078	-	3.33	5,229,076
			Stage 2 Disposal Life (Assume Dry Stack Area)	3.30 yrs		-	-	-	-	-	-	0.00	0
			O & M			102,895.99 hrs	3,129,998			2,099,078			5,229,076
			Ph 2 Operationl Cost			102,895.99 hrs	3,129,998			2,099,078			5,229,076
			24			102,895.99 hrs	3,129,998			2,099,078			5,229,076

Estimate Totals

Labor	29,387,853		939,646.174	hrs			
Material	2,500,802						
Subcontract	27,569,077						
Equipment	21,988,635		648,348.670	hrs			
Other	4,317,749						
	85,764,116	85,764,116					
Engineered Materials - Ph 2			100.000	%		C	
Adjustment - Engr Materials			(100.000)	%		C	
		85,764,116					
Environmental Costs			100.000	%		C	
Adjustment Environmental			(100.000)	%		C	
		85,764,116					
FPG Mech Engr - Phase 2	15,001		0.038	% @	42.00	A	357
FPG Elec Engr - Phase 2	15,001		0.038	% @	42.00	A	357
FPG Civil Engr - Phase 2	30,068		0.076	% @	42.00	A	716
Non-TVA Engr - Phase 2	534,058		0.789	% @	72.00	A	7,417
FPG Proj Cntrl Cost - Phase 2	979		0.002	% @	42.00	A	23
FPG Proj Cntrl Sched - Phase 2	2,936		0.007	% @	42.00	A	70
FPG Cost Estimating - Phase 2	979		0.002	% @	42.00	A	23
FPG Engr Records - Phase 2	979		0.002	% @	42.00	A	23
Engr Contgcy@15% - Phase	90,000		0.228	% @	42.00	A	2,143
	690,001	86,454,117					
Rounding	883					L	
	883	86,455,000					
	Total	*86,455,000*					