

Appendix A – Permitting Milestones

Ash and Gypsum Permitting Milestones (1-18-05)

Facility	Final Site Selection (EA/JPT)	HydroGeo Report (RSOE)	10% Design Review (FES)	Part I Application (EA)	50% Design Review (FES)	Part II Application (FES/EA)	ARAP/404 Permit Application (FES/EA/RSO&E)	ARAP/404 Permit Issued (State/COE)	Permit Issued (State/COE)	100% Design Review (FES)	Begin Construction (HED)	End Construction (HED)	Date facility is needed (BPM/JPT)	Facility
BRF-FGD/BA	Complete	Complete	Complete	Complete	Complete	Complete	04-15-05	04-15-06	12-15-06	01-15-07	03-01-07	11-30-07	04-01-08	BRF-FGD/BA
BRF-FA	N/A	06-30-05	05-15-05	04-15-05	08-30-05	09-30-05	N/A	N/A	09-30-07	12-30-07	03-01-08	11-30-08	12-30-08*	BRF-FA
SHF**	Complete	08-15-05	Complete	N/A	09-15-05	10-15-05	N/A	N/A	10-15-07	11-15-07	12-15-07	03-15-08	06-01-07	SHF
ALF***	09-01-05	06-01-06	11-01-05	12-01-05	05-01-06	06-01-06	TBD	TBD	06-01-08	07-15-08	08-15-08	11-30-09	09-01-06	ALF
JSF	09-15-05	09-30-06	03-01-06	06-15-06	08-15-06	11-01-06	TBD	TBD	11-01-08	11-15-08	12-01-08	09-30-09	09-01-10	JSF
JOF****	11-01-05	05-15-06	02-01-06	03-15-06	06-15-06	07-15-06	TBD	TBD	07-15-08	08-15-08	10-01-08	09-15-09	11-01-07	JOF
KIF FGD/ASH	Complete	Complete	Complete	Complete	Complete	Complete	N/A	N/A	06-01-06	09-30-06	03-01-07	11-30-08	04-01-09	KIF FGD/ASH
KIF-FGD Peninsula	02-15-05	08-15-05	03-01-05	06-01-05	08-15-05	10-15-05	12-01-05	12-01-06	10-15-07	12-15-07	03-01-08	11-30-08	04-01-09	KIF-FGD Peninsula
COF Ash	Complete	N/A	Complete	N/A	03-01-06	N/A	N/A	N/A	N/A	06-01-06	10-01-06	09-30-07	12-01-07	COF Ash

*Assumes all Fly Ash is Dry Stacked (Dry Ash System Fixed)

**Assumes Geotechnical Drilling completed and data received by 05-01-05

***Assumes Preferred Greenfield site identified 03-01-05 & access allowed 90 days after site identification.

****Assumes Preferred Greenfield site identified 05-01-05 & access allowed 90 days after site identification.

Final Site Selection - Site is identified, TVA owned or optioned, and contains no fatal flaws

10% Design - Conceptual design is complete

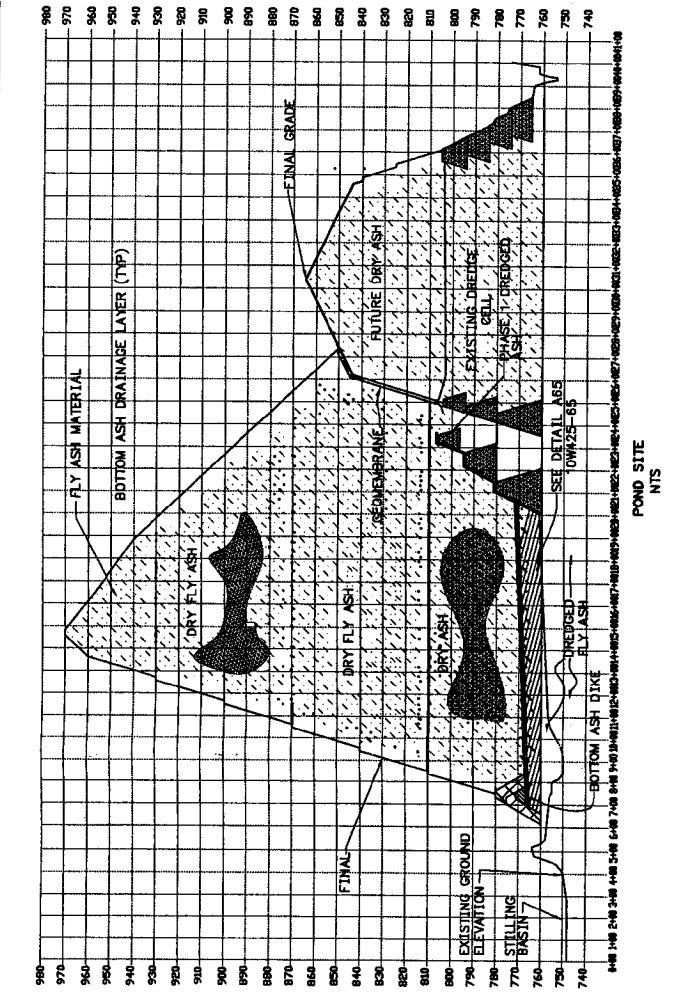
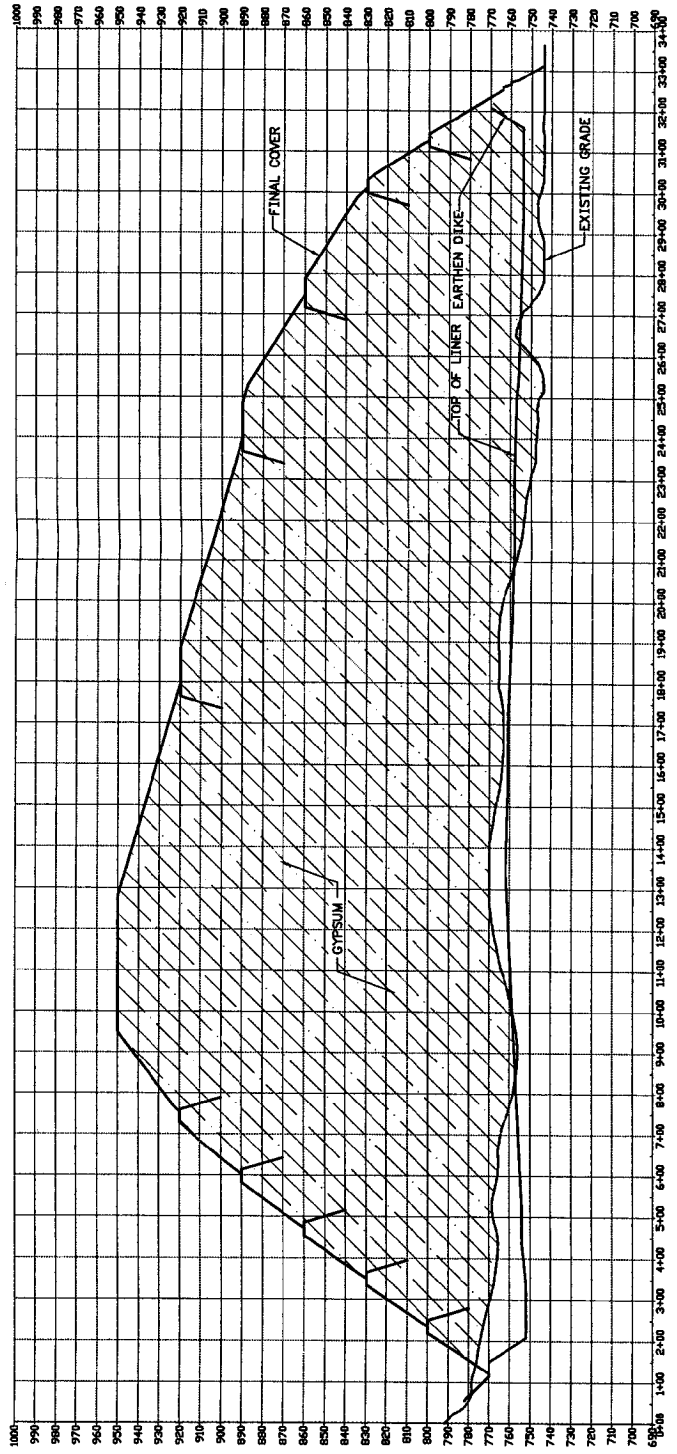
50% design - Permit and design drawings are complete, ready for final joint review, PE stamping and submission.

Assumptions - No public opposition, NEPA proceeds concurrent with permitting, no marketing and no funding constraints

Notes - Definite dates of exhaustion of existing ash disposal capacity have not been determined at this time, dates given are best estimates provided by Fuels By-Product Management(BPBM); JOF's date of need is the expiration of TransAsh's permit; FGD dates of need were provided by the JPT.

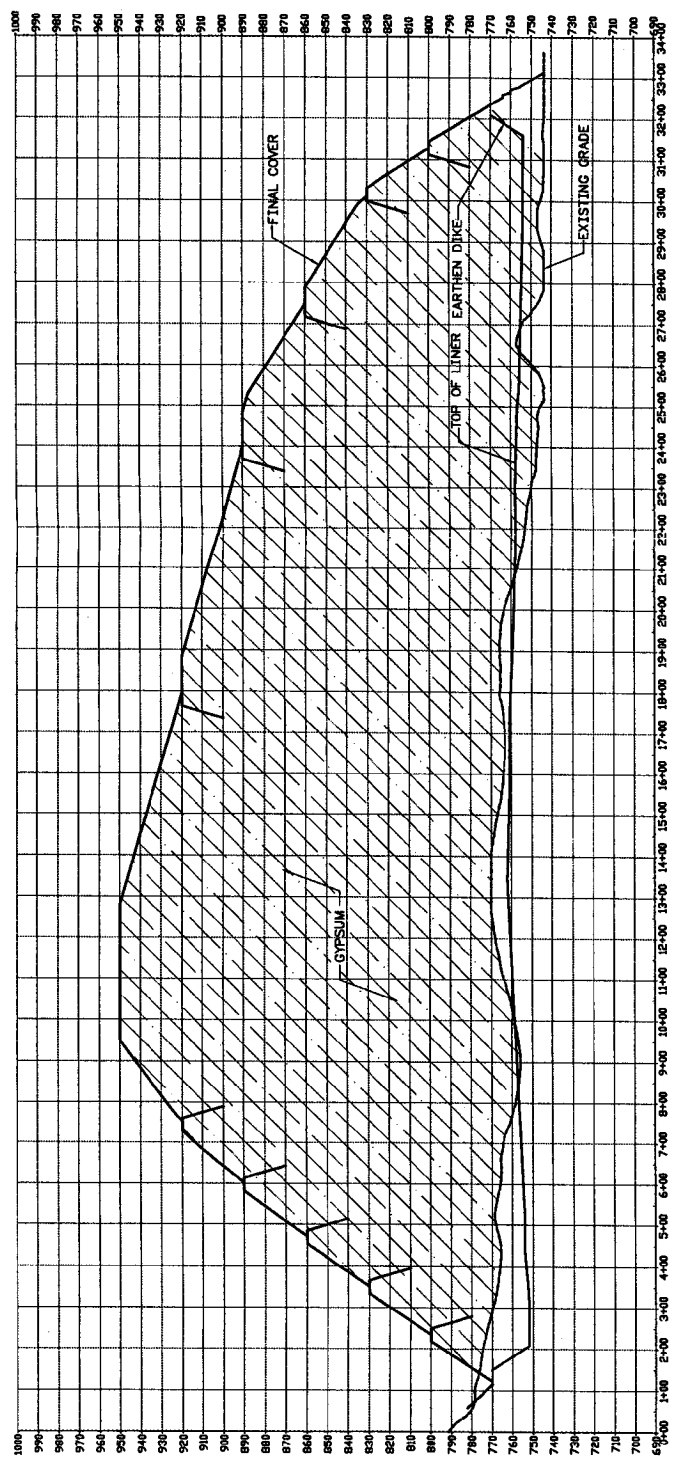
Appendix B – Cost Spreadsheets

KINGSTON SCOPE PACKAGE	
DRY ASH ONLY IN POND - GYPSUM ON PENINSULA	
OPTION 2	
THIS OPTION WILL CONSIDER IMMEDIATE DRY FLY ASH CONVERSION, DRY STACKING ASH IN THE POND, NO RETROFIT FOR SEEPAGE MITIGATION, AND SLICING GYPSUM MATERIAL TO THE PENINSULA. CLAY LINER COSTS ARE NOT INCLUDED.	
KINGSTON DECISION MATRIX	
FACTORS	DRY ASH ONLY IN POND - GYPSUM ON PENINSULA
OPTION #	OPTION 2
CAPACITY (CY)	11,500,000 ASH 6,550,000 GYPSUM (THROUGH 2029)
ULTIMATE CAPACITY (CY)	20,300,000 ASH 9,300,000 GYPSUM
TOTAL COSTS NPV (THROUGH 2029)	\$56,960,142
DATE OF IMPLEMENTATION	GYPSUM - 2009 DRY ASH - PRESENT
SUMMARY OF DECISION FACTORS	1. NO O&M COSTS IN POND 2. ADDS DISPOSAL CAPACITY TO PLANT 3. IMMEDIATE DRY ASH CONVERSION COST

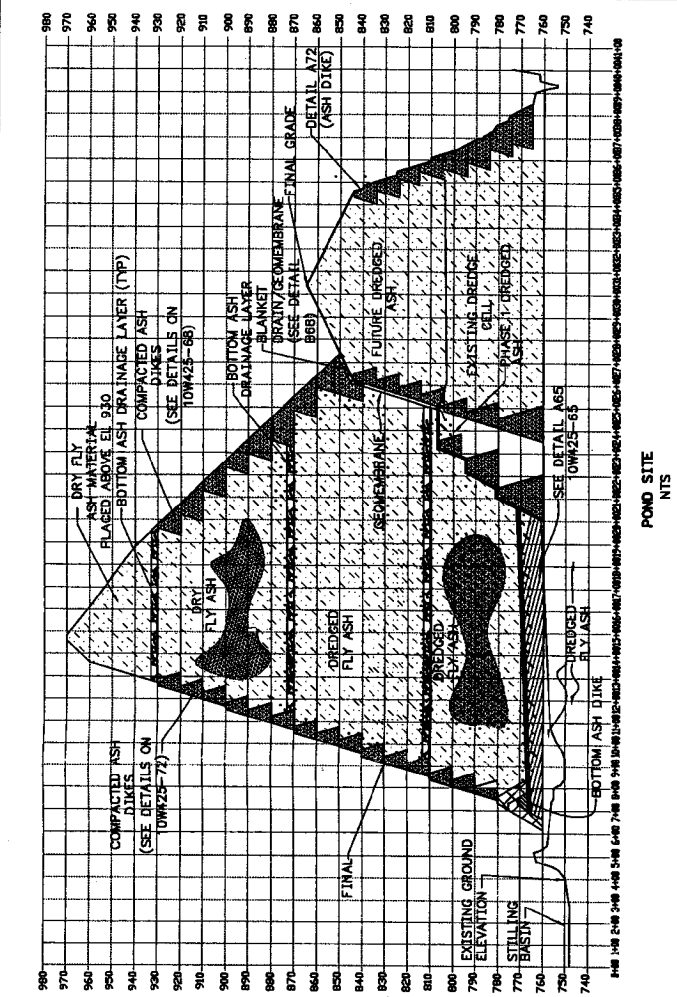


ITEM No.	DESCRIPTION	UNITS	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Escalated SubTotal	PRESENT WORTH of using Capital Dollars		
CAPITAL COSTS																															
2	Ash In Pond	Lump Sum																													
2A	Phase 2 Base Construction (Base Layers)	Lump Sum																													
3	Gypsum On Peninsula	Lump Sum																													
5	Miscellaneous	Lump Sum																													
5A	Dry Fly Ash Conversion	Lump Sum																													
6	Engineering / Geotech	Lump Sum																													
	Total Capital Costs		\$ 29,945,934	\$ -	\$ -	\$ 10,801,624	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,351,628	\$ 3,827,931	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 47,366,474	\$ -	\$ 38,447,448	
OPERATING COSTS																															
6	Dredge Cell Phase 1	Lump Sum	\$1,667,662	\$1,739,361	\$1,807,196	\$1,877,676	\$1,949,028	\$2,025,040	\$2,104,017	\$2,188,177	\$2,275,704	\$2,366,733	\$2,461,402	\$2,559,866	\$2,662,252																
14	Gypsum On Peninsula Disposal Cost	Lump Sum																													
20,22,23&24	Phase 2 Dry Ash (Initial Third Stage 3)	Lump Sum																													
17	O&M For Construction Of Disposal	Lump Sum	\$19,594	\$20,436	\$21,233	\$22,061	\$22,900	\$23,763	\$24,721	\$25,709	\$26,738	\$27,807	\$28,920	\$30,076	\$31,279	\$32,531	\$33,832	\$35,185	\$36,592	\$38,056	\$39,578	\$41,162	\$42,808	\$44,520	\$46,301	\$48,153	\$50,079	\$51,065	\$188,038	\$188,038	
	Total Operating Costs		\$ 1,687,245	\$ 1,769,797	\$ 1,828,429	\$ 1,899,738	\$ 2,184,874	\$ 2,270,084	\$ 2,368,617	\$ 2,482,962	\$ 2,651,080	\$ 2,883,124	\$ 2,789,249	\$ 2,869,618	\$ 2,889,097	\$ 3,004,661	\$ 3,124,648	\$ 3,249,842	\$ 3,375,835	\$ 3,515,029	\$ 3,655,630	\$ 3,801,865	\$ 3,953,929	\$ 4,112,887	\$ 4,276,570	\$ 4,447,633	\$ 4,624,538	\$ 4,808,989	\$ 500,989	\$ 500,989	
	Total Costs		\$ 31,633,179	\$ 1,769,797	\$ 1,828,429	\$ 12,001,361	\$ 2,184,874	\$ 2,270,084	\$ 2,368,617	\$ 2,482,962	\$ 2,651,080	\$ 2,883,124	\$ 5,150,874	\$ 6,388,909	\$ 5,440,231	\$ 5,440,231	\$ 2,889,097	\$ 3,004,661	\$ 3,124,648	\$ 3,249,842	\$ 3,375,835	\$ 3,515,029	\$ 3,655,630	\$ 3,801,865	\$ 3,953,929	\$ 4,112,887	\$ 4,276,570	\$ 4,447,633	\$ 122,492,538	\$ 65,960,142	
																											Present Worth of this Option	\$ 55,960,142			

KINGSTON SCOPE PACKAGE	
WET ASH ONLY IN POND - GYPSUM ON PENINSULA	
OPTION 1	
THIS OPTION WILL CONSIDER PLACING WET ASH IN THE EXISTING POND, RETROFITTING DRAINS TO MITIGATE SEEPAGE IN THE EXISTING DREDGE CELL, AND SLICING GYPSUM MATERIAL TO THE PENINSULA AREA. CLAY LINER COSTS ARE NOT INCLUDED. NO DRY FLY ASH CONVERSION WITHIN STUDY PERIOD.	
KINGSTON DECISION MATRIX	
FACTORS	WET ASH ONLY IN POND - GYPSUM ON PENINSULA
OPTION #	OPTION 1
CAPACITY (CY)	11,500,000 ASH
(THROUGH 2029)	5,550,000 GYPSUM
ULTIMATE CAPACITY (CY)	20,300,000 ASH
(THROUGH 2029)	9,300,000 GYPSUM
TOTAL COSTS NPV	\$23,751,838
(THROUGH 2029)	
DATE OF IMPLEMENTATION	GYPSUM - 2009
SUMMARY OF DECISION FACTORS	WET ASH - PRESENT DRY ASH - BEYOND 2029
1. NO DRY ASH CONVERSION	
2. NO GCL COSTS IN POND	
3. ADDS DISPOSAL CAPACITY TO PLANT	



PENINSULA SITE
NTS



POND SITE
NTS

ITEM No.	DESCRIPTION	UNITS	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Escalated SubTotal	PRESENT WORTH of using Capital Dollars	
																														2005
CAPITAL COSTS																														
1	Install Drains For Swan Pond Road	Lump Sum	\$1,987,828																										\$1,987,828	\$1,987,828
2	Ash in Pond	Lump Sum	\$582,456																										\$582,456	\$582,456
2A	Phase 2 Base Construction (Base Layers)	Lump Sum												\$4,188,055																
3	Gypsum On Peninsula	Lump Sum	\$483,502											\$728,382															\$1,211,884	\$1,211,884
5	Miscellaneous	Lump Sum	\$808,829											\$757,529															\$1,566,358	\$1,566,358
6	Engineering / Geotech	Lump Sum																												
Total Capital Costs			\$ 3,862,415	\$ 10,708,308	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,737,100	\$ 4,926,584	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,222,489	\$ 13,121,882	
OPERATING COSTS																														
6	Dredge Cell Phase 1	Lump Sum	\$862,875	\$1,024,283	\$1,043,450	\$1,125,342	\$1,169,230	\$1,214,830	\$1,263,423	\$1,313,960	\$1,366,519	\$1,421,179	\$1,478,027	\$1,537,148															\$15,984,413	\$7,337,188
14	Gypsum On Peninsula Disposal Cost	Lump Sum				\$272,946	\$221,251	\$229,880	\$239,075	\$248,638	\$258,654	\$269,084	\$279,884	\$290,872	\$302,056	\$314,607	\$327,191	\$340,279	\$353,890	\$368,045	\$382,767	\$398,078	\$414,001	\$430,361	\$447,783	\$465,695	\$485,259	\$506,259	\$6,795,259	\$1,116,949
20,22,24,26	Phase 2 Wet Ash (Initial Thru Stage 3)	Lump Sum												\$1,384,725	\$1,450,514	\$1,508,896	\$1,568,976	\$1,631,631	\$1,696,896	\$1,764,772	\$1,835,363	\$1,908,778	\$1,985,129	\$2,064,534	\$2,147,115	\$2,233,000	\$23,189,668	\$1,987,801		
17	QA/QC For Construction Of Disposal	Lump Sum	\$19,564	\$20,436	\$21,233	\$22,061	\$22,900	\$23,759	\$24,721	\$25,706	\$26,726	\$27,807	\$28,920	\$30,076	\$31,279	\$32,531	\$33,832	\$35,185	\$36,592	\$38,058	\$39,578	\$41,162	\$42,808	\$44,520	\$46,301	\$48,153	\$50,079	\$814,056	\$188,038	
Total Operating Costs			\$ 982,473	\$ 1,024,719	\$ 1,064,683	\$ 1,106,206	\$ 1,149,481	\$ 1,194,274	\$ 1,241,274	\$ 1,290,431	\$ 1,341,628	\$ 1,394,924	\$ 1,451,379	\$ 1,510,954	\$ 1,573,699	\$ 1,640,572	\$ 1,711,633	\$ 1,786,951	\$ 1,866,682	\$ 1,950,892	\$ 2,040,642	\$ 2,135,996	\$ 2,237,522	\$ 2,345,292	\$ 2,459,382	\$ 2,581,860	\$ 2,714,774	\$ 46,785,698	\$ 10,829,977	
Total Costs			\$ 4,834,887	\$ 11,733,027	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 11,812,515	\$ 23,751,838	\$ 23,751,838

KINGSTON FOSSIL PLANT ASH/GYPSUM DISPOSAL FACILITY

DESCRIPTION OF LINE ITEM CONTENTS IN TABLES

NOTE: The following Descriptions are Items of construction that are included in the capital cost for that Item. If an Item does not appear on the table, then that Item's costs is not required for that specific Option.

LINE ITEM 1, Install Drains for Swan Pond Road: Item includes installation of lateral drainage pipes at various elevations, PVC monitoring wells, pipe bollards, geotextiles, crushed stone, perforated underdrains, submersible pump station, 60' dia. precast catch basin, grout sealing and welding of storm drain pipes, new 24" and 36" storm drain pipes, anchor trenching, LLPDE geomembrane and sediment traps.

LINE ITEM 2, Ash in Pond: Item includes development costs for erosion control, silt fence, rip-rap, stone, spillway structures, 30" dia. CMP with bedding, seeding and mulching of disturbed areas. Includes costs for dredge cell cut, fly ash base, 2.5' thick bottom ash layer, 0.5' thick fly ash layer, 18" dia. coarse bottom ash drainage columns, tilling fly ash layer, bottom ash dike fill, perforated underdrains, geotextile fabric and stone, stripping 1' soil cover for Phase I expansion, anchor trenching, 2' bottom ash blanket drain, 1' thick filter drain ash layer, geomembrane, and solid outlet drainage pipes.

LINE ITEM 2A, Phase 2 Base Construction (Base Layers): Item includes costs for Phase 2 Base construction.

LINE ITEM 3, Gypsum on Peninsula: Item includes costs for clearing and grubbing, discing future borrow area, stripping topsoil, ditching, erosion control, silt fence, geotextile fabric, rip-rap, jute mat, cut for basins, seeding and mulching disturbed areas, allowances for Karst features, wetland mitigation, stormwater runoff ponds, bottom ash for access road, cutting and replacing 3' thick impermeable soil layer, crushed stone base for access roads and parking lots, fencing, gates, stormwater pipe and pipe bedding, underdrain piping, anchors, and geotextile, outlet structures, risers and outlet pipes, concrete for riser bases, and seed, fertilize and lime borrow areas.

LINE ITEM 4, Ash and gypsum in Pond: Item includes costs for erosion control, silt fence, rip-rap and geotextile fabric, 3' stone, 1' thick for erosion control, placement of half round 48" dia. culvert, 30" dia. CMP culvert, 30" dia. standpipes, anti seep collar, seeding and mulching disturbed areas, dredge cell cut, compacted fly ash base, proofroll subgrade, 2.5' thick bottom ash layer, 0.5' thick fly ash filter layer, 18" coarse bottom ash drainage columns, roto till fly ash layer, bottom ash dike fill, PVC underdrains, stripping

existing soil cover for Phase I expansion, trench cuts, geomembrane, backfilling and compacting trenches, 2' thick bottom ash blanket drain, 1' thick filter drain fly ash, solid outlet pipes, ditching, jute matting, seeding and mulching disturbed areas.

LINE ITEM 4A, Phase 2 Base Construction: Item includes costs for Phase 2 Base construction.

LINE ITEM 4B, Phase 3 Base Construction: Item includes costs for Phase 3 Base construction.

LINE ITEM 5, Miscellaneous: Item includes costs for mobilization, drug testing, and demobilization.

LINE ITEM 5A, Dry Fly Ash Conversion: Item includes costs for conversion of plant to dry fly ash production.

LINE ITEM 6, Engineering/Geotech: Item includes costs for additional engineering and geotechnical investigations.

Appendix C – Detailed Cost Sheets