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APPENDIX E

RECOMMENDED ALTERNATIVE

APPENDIX E.1

PRESENT WORTH COST SUMMARY

Table E-1

Present Worth Cost Summary

Base Alternative Cost

Phase	Construction Contract	Escalation 0%	Contingency 25%	Engineering & Design 6%	Construction Management 8%	Total
1	$ 7,027,833	$ -	$ 1,756,958	527,087	$ 744,950	$ 10,056,829
2	$ 10,515,541	$ -	$ 2,628,885	788,666	$ 1,114,647	$ 15,047,739
3	$ 7,603,696	$ -	$ 1,900,924	570,277	$ 805,992	$ 10,880,889
Complete	$ 25,147,070	$ -	$ 6,286,768	$ 1,886,030	$ 2,665,589	$ 35,985,457

Disposal Cost

Phase	Construction Contract	Escalation 0%	Contingency 25%	Engineering & Design 6%	Construction Management 8%	Total
1	$ 2,123,908	$ -	$ 530,977	159,293	$ 225,134	$ 3,039,313
2	$ 4,468,520	$ -	$ 1,117,130	335,139	$ 473,663	$ 6,394,452
3	$ 2,961,816	$ -	$ 740,454	222,136	$ 313,952	$ 4,238,358
Complete	$ 9,554,244	$ -	$ 2,388,561	$ 716,568	$ 1,012,750	$ 13,672,123

Total Cost (Base Alternative and Disposal)

Phase	Construction Contract	Escalation 0%	Contingency 25%	Engineering & Design 6%	Construction Management 8%	Total
1	$ 9,151,741	$ -	$ 2,287,935	686,381	$ 970,085	$ 13,096,142
2	$ 14,984,061	$ -	$ 3,746,015	1,123,805	$ 1,588,310	$ 21,442,191
3	$ 10,565,512	$ -	$ 2,641,378	792,413	$ 1,119,944	$ 15,119,247
Complete	$ 34,701,314	$ -	$ 8,675,329	$ 2,602,599	$ 3,678,339	$ 49,657,580

APPENDIX E.2

RECOMMENDED REMOVAL ALTERNATIVE: PHASE I, LYMAN STREET TO TRANSECT 96

GE-Pittsfield EE/CA Recomm. Alt.
Roy F. Weston, Inc.
Phase I: Lyman to Transect 96

Designed By: Roy F. Weston Inc.
Estimated By: Dan Moretz (610) 701-3176

Prepared By: Roy F. Weston Inc.
West Chester, Pa

Preparation Date: 10/02/00
Effective Date of Pricing: 10/02/00

Sales Tax: 0.00%

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GE-Pittsfield Recommended Alternative

Dry excavation to meet cleanup criteria. For the segment of river from T64 to T96 and T168 to river diversion using sheetpiling. For the segment T96 to T168 river diversion by pumping through a piping bypass. See section 6.3 of EE/CA for written description of recommended alternative.

See section 5.3 of EE/CA report for written description of activities.

Project Information

Escalation	0.00%
Contingency	25.00%
Engineering and Design	6.00%
USACE Construction Management	8.00%

General Contractor

Contractor Management	10.00%
Field Overhead	6.00%
Home Office Overhead	15.00%
Profit	5.00%
Bond	0.00%

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		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10	Additional Bank		577,257	0	144,314	43,294	61,189	0	826,055	
20	Mobilization		1,032,345	0	258,086	77,426	109,429	0	1,477,286	
30	Install Sheetpi		1,125,590	0	281,398	84,419	119,313	0	1,610,719	
34	Dewatering of r		535,813	0	133,953	40,186	56,796	0	766,748	
40	Excavate & Tran		923,780	0	230,945	69,284	97,921	0	1,321,930	
42	Dewatering of E		423,394	0	105,848	31,755	44,880	0	605,876	
46	Sampling		73,206	0	18,302	5,490	7,760	0	104,758	
60	Restoration of		413,079	0	103,270	30,981	43,786	0	591,116	
62	Restoration of		1,923,368	0	480,842	144,253	203,877	0	2,752,340	
	GE-Pittsfield E	1.00 EA	7,027,833	0	1,756,958	527,087	744,950	0	10,056,829	10056829

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
10 Additional Bank		577,257	0	144,314	43,294	61,189	0	826,055	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	4,224	0	1,056	317	448	0	6,044	604.43
20.20 Setup Tempor		121,433	0	30,358	9,107	12,872	0	173,771	
20.30 Install Temp	5000.00 LF	32,594	0	8,148	2,445	3,455	0	46,642	9.33
20.32 Construct Te	12.00 EA	113,753	0	28,438	8,531	12,058	0	162,780	13565.00
20.34 Temporary De		103,176	0	25,794	7,738	10,937	0	147,645	
20.50 Erosion & Se		47,216	0	11,804	3,541	5,005	0	67,566	
20.60 Clearing		38,015	0	9,504	2,851	4,030	0	54,399	
20.70 Temporary Ac		229,798	0	57,450	17,235	24,359	0	328,842	
20.72 Maint. & Pro		201,528	0	50,382	15,115	21,362	0	288,386	
20.74 Exc. Seepage		92,523	0	23,131	6,939	9,807	0	132,401	
20.76 Truck Decon		48,086	0	12,021	3,606	5,097	0	68,811	
TOTAL Mobilization		1,032,345	0	258,086	77,426	109,429	0	1,477,286	
30 Install Sheetpi									
30.10 Install & Re	67200.00 SF	1,125,590	0	281,398	84,419	119,313	0	1,610,719	23.97
TOTAL Install Shee		1,125,590	0	281,398	84,419	119,313	0	1,610,719	
32 Pumping bypass									
34 Dewatering of r									
34.10 Dewatering o		110,861	0	27,715	8,315	11,751	0	158,642	
34.20 Setup/Teardo		36,324	0	9,081	2,724	3,850	0	51,980	
34.22 O & M of See		388,628	0	97,157	29,147	41,195	0	556,127	
TOTAL Dewatering o		535,813	0	133,953	40,186	56,796	0	766,748	
40 Excavate & Tran									
40.10 Excavate Bed	10616.00 CY	436,868	0	109,217	32,765	46,308	0	625,158	58.89
40.15 ALLOWANCE Do		12,460	0	3,115	935	1,321	0	17,831	
40.20 Excavate Ban	10589.00 CY	392,599	0	98,150	29,445	41,615	0	561,809	53.06
40.25 ALLOWANCE Do		6,230	0	1,558	467	660	0	8,915	
40.40 O & M Truck		75,624	0	18,906	5,672	8,016	0	108,217	
TOTAL Excavate & T		923,780	0	230,945	69,284	97,921	0	1,321,930	
42 Dewatering of E									
42.10 Manage Dryin	9.00 MO	173,851	0	43,463	13,039	18,428	0	248,781	27642.31

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
42.20 O & M WTS	9.00	MO	249,543	0	62,386	18,716	26,452	0	357,096	39677.29
TOTAL Dewatering o			423,394	0	105,848	31,755	44,880	0	605,876	
46 Sampling										
46.20 Characteriza			73,206	0	18,302	5,490	7,760	0	104,758	
TOTAL Sampling			73,206	0	18,302	5,490	7,760	0	104,758	
60 Restoration of										
60.10 Import/Place			394,705	0	98,676	29,603	41,839	0	564,823	
60.15 ALLOWANCE Do			18,374	0	4,593	1,378	1,948	0	26,293	
TOTAL Restoration			413,079	0	103,270	30,981	43,786	0	591,116	
62 Restoration of										
62.12 Import & Pla			371,219	0	92,805	27,841	39,349	0	531,214	
62.15 ALLOWANCE Do			9,187	0	2,297	689	974	0	13,146	
62.20 Restoration			1,542,962	0	385,741	115,722	163,554	0	2,207,979	
TOTAL Restoration			1,923,368	0	480,842	144,253	203,877	0	2,752,340	
TOTAL GE-Pittsfiel	1.00	EA	7,027,833	0	1,756,958	527,087	744,950	0	10,056,829	10056829

** PROJECT INDIRECT SUMMARY - Scope **

		QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10	Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20	Mobilization		733,228	73,323	48,393	128,242	49,159	0	1,032,345	
30	Install Sheetpi		799,456	79,946	52,764	139,825	53,600	0	1,125,590	
34	Dewatering of r		380,564	38,056	25,117	66,561	25,515	0	535,813	
40	Excavate & Tran		656,120	65,612	43,304	114,755	43,990	0	923,780	
42	Dewatering of E		300,718	30,072	19,847	52,595	20,162	0	423,394	
46	Sampling		51,995	5,200	3,432	9,094	3,486	0	73,206	
60	Restoration of		293,391	29,339	19,364	51,314	19,670	0	413,079	
62	Restoration of		1,366,082	136,608	90,161	238,928	91,589	0	1,923,368	
	GE-Pittsfield E	1.00 EA	4,991,554	499,155	329,443	873,023	334,659	0	7,027,833	7027833
	Contingency								1,756,958	
	SUBTOTAL								8,784,791	
	Engineering and Design								527,087	
	SUBTOTAL								9,311,878	
	USACE Construction Management								744,950	
	TOTAL INCL OWNER COSTS								10,056,829	

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
10 Additional Bank		410,000	41,000	27,060	71,709	27,488	0	577,257	
20 Mobilization									
20.10 Mobilize Equ	10.00 EA	3,000	300	198	525	201	0	4,224	422.38
20.20 Setup Tempor		86,248	8,625	5,692	15,085	5,783	0	121,433	
20.30 Install Temp	5000.00 LF	23,150	2,315	1,528	4,049	1,552	0	32,594	6.52
20.32 Construct Te	12.00 EA	80,793	8,079	5,332	14,131	5,417	0	113,753	9479.38
20.34 Temporary De		73,282	7,328	4,837	12,817	4,913	0	103,176	
20.50 Erosion & Se		33,535	3,354	2,213	5,865	2,248	0	47,216	
20.60 Clearing		27,000	2,700	1,782	4,722	1,810	0	38,015	
20.70 Temporary Ac		163,216	16,322	10,772	28,546	10,943	0	229,798	
20.72 Maint. & Pro		143,136	14,314	9,447	25,034	9,597	0	201,528	
20.74 Exc. Seepage		65,715	6,572	4,337	11,494	4,406	0	92,523	
20.76 Truck Decon		34,153	3,415	2,254	5,973	2,290	0	48,086	
TOTAL Mobilization		733,228	73,323	48,393	128,242	49,159	0	1,032,345	
30 Install Sheetpi									
30.10 Install & Re	67200.00 SF	799,456	79,946	52,764	139,825	53,600	0	1,125,590	16.75
TOTAL Install Shee		799,456	79,946	52,764	139,825	53,600	0	1,125,590	
32 Pumping bypass									
34 Dewatering of r									
34.10 Dewatering o		78,739	7,874	5,197	13,772	5,279	0	110,861	
34.20 Setup/Teardo		25,799	2,580	1,703	4,512	1,730	0	36,324	
34.22 O & M of See		276,025	27,603	18,218	48,277	18,506	0	388,628	
TOTAL Dewatering o		380,564	38,056	25,117	66,561	25,515	0	535,813	
40 Excavate & Tran									
40.10 Excavate Bed	10616.00 CY	310,288	31,029	20,479	54,269	20,803	0	436,868	41.15
40.15 ALLOWANCE Do		8,850	885	584	1,548	593	0	12,460	
40.20 Excavate Ban	10589.00 CY	278,845	27,885	18,404	48,770	18,695	0	392,599	37.08
40.25 ALLOWANCE Do		4,425	443	292	774	297	0	6,230	
40.40 O & M Truck		53,712	5,371	3,545	9,394	3,601	0	75,624	
TOTAL Excavate & T		656,120	65,612	43,304	114,755	43,990	0	923,780	
42 Dewatering of E									
42.10 Manage Dryin	9.00 MO	123,479	12,348	8,150	21,596	8,279	0	173,851	19316.78

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY	UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
42.20 O & M WTS	9.00	MO	177,239	17,724	11,698	30,999	11,883	0	249,543	27726.97
TOTAL Dewatering o			300,718	30,072	19,847	52,595	20,162	0	423,394	
46 Sampling										
46.20 Characteriza			51,995	5,200	3,432	9,094	3,486	0	73,206	
TOTAL Sampling			51,995	5,200	3,432	9,094	3,486	0	73,206	
60 Restoration of										
60.10 Import/Place			280,341	28,034	18,503	49,032	18,795	0	394,705	
60.15 ALLOWANCE Do			13,050	1,305	861	2,282	875	0	18,374	
TOTAL Restoration			293,391	29,339	19,364	51,314	19,670	0	413,079	
62 Restoration of										
62.12 Import & Pla			263,660	26,366	17,402	46,114	17,677	0	371,219	
62.15 ALLOWANCE Do			6,525	653	431	1,141	437	0	9,187	
62.20 Restoration			1,095,897	109,590	72,329	191,672	73,474	0	1,542,962	
TOTAL Restoration			1,366,082	136,608	90,161	238,928	91,589	0	1,923,368	
TOTAL GE-Pittsfiel	1.00	EA	4,991,554	499,155	329,443	873,023	334,659	0	7,027,833	7027833
Contingency									1,756,958	
SUBTOTAL									8,784,791	
Engineering and Design									527,087	
SUBTOTAL									9,311,878	
USACE Construction Management									744,950	
TOTAL INCL OWNER COSTS									10,056,829	

** PROJECT DIRECT SUMMARY - Scope **

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10	Additional Bank Sampling			0	0	0	0	410,000	410,000	
20	Mobilization			0	200,133	55,063	201,633	276,400	733,228	
30	Install Sheetpile			0	0	0	179,200	620,256	799,456	
34	Dewatering of river bed			0	101,151	3,650	230,503	45,260	380,564	
40	Excavate & Transport Sed./Soils			0	199,295	148,750	29,400	278,675	656,120	
42	Dewatering of Excavated Material			0	163,106	32,850	81,012	23,750	300,718	
46	Sampling			0	0	0	0	51,995	51,995	
60	Restoration of River Bed			0	62,095	104,400	126,896	0	293,391	
62	Restoration of River Bank			0	100,012	107,732	250,259	908,079	1,366,082	
TOTAL	GE-Pittsfield EE/CA Recomm. Alt.	1.00	EA	0	825,793	452,444	1098902	2614415	4,991,554	4991554
	Contractor Management								499,155	
	SUBTOTAL								5,490,709	
	Field Overhead								329,443	
	SUBTOTAL								5,820,151	
	Home Office Overhead								873,023	
	SUBTOTAL								6,693,174	
	Profit								334,659	
	TOTAL INCL INDIRECTS								7,027,833	
	Contingency								1,756,958	
	SUBTOTAL								8,784,791	
	Engineering and Design								527,087	
	SUBTOTAL								9,311,878	
	USACE Construction Management								744,950	
	TOTAL INCL OWNER COSTS								10,056,829	

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10 Additional Bank Sampling		0	0	0	0	410,000	410,000	
20 Mobilization								
20.10 Mobilize Equipment	10.00 EA	0	0	0	0	3,000	3,000	300.00
20.20 Setup Temporary Facilities		0	21,498	21,350	6,900	36,500	86,248	
20.30 Install Temporary Fence	5000.00 LF	0	0	0	0	23,150	23,150	4.63
20.32 Construct Temp. Dewatering Area	12.00 EA	0	38,079	24,100	18,614	0	80,793	6732.78
20.34 Temporary Dewatering Area WTS		0	6,786	2,788	63,708	0	73,282	
20.50 Erosion & Sedimentation Control		0	10,248	5,400	8,638	9,250	33,535	
20.60 Clearing		0	0	0	0	27,000	27,000	
20.70 Temporary Access Road		0	0	0	0	163,216	163,216	
20.72 Maint. & Protection of Traffic		0	113,136	0	30,000	0	143,136	
20.74 Exc. Seepage WTS (equip & matl)		0	0	0	65,715	0	65,715	
20.76 Truck Decon Facilites		0	10,385	1,425	8,058	14,285	34,153	
TOTAL Mobilization		0	200,133	55,063	201,633	276,400	733,228	
30 Install Sheetpile								
30.10 Install & Remove Sheetpile	67200.00 SF	0	0	0	179,200	620,256	799,456	11.90
TOTAL Install Sheetpile		0	0	0	179,200	620,256	799,456	
32 Pumping bypass at cobble reach								
34 Dewatering of river bed								
34.10 Dewatering of river bed		0	9,249	1,825	67,165	500	78,739	
34.20 Setup/Teardown Seepage WTS		0	14,474	1,825	2,000	7,500	25,799	
34.22 O & M of Seepage WTS		0	77,427	0	161,338	37,260	276,025	
TOTAL Dewatering of river bed		0	101,151	3,650	230,503	45,260	380,564	
40 Excavate & Transport Sed./Soils								
40.10 Excavate Bed Sediments	10616.00 CY	0	84,938	61,950	15,200	148,200	310,288	29.23
40.15 ALLOWANCE Down Time Bed Exc.		0	0	8,850	0	0	8,850	
40.20 Excavate Bank Soils	10589.00 CY	0	76,645	57,525	14,200	130,475	278,845	26.33
40.25 ALLOWANCE Down Time Bank Exc.		0	0	4,425	0	0	4,425	
40.40 O & M Truck Decon Facilities		0	37,712	16,000	0	0	53,712	
TOTAL Excavate & Transport Sed./Soils		0	199,295	148,750	29,400	278,675	656,120	
42 Dewatering of Excavated Material								
42.10 Manage Drying Area	9.00 MO	0	85,679	32,850	4,950	0	123,479	13719.84

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42.20 O & M WTS	9.00 MO	0	77,427	0	76,062	23,750	177,239	19693.22
TOTAL Dewatering of Excavated Material		0	163,106	32,850	81,012	23,750	300,718	
46 Sampling								
46.20 Characterization Sampling		0	0	0	0	51,995	51,995	
TOTAL Sampling		0	0	0	0	51,995	51,995	
60 Restoration of River Bed								
60.10 Import/Place River Bed Backfill		0	62,095	91,350	126,896	0	280,341	
60.15 ALLOWANCE Down Time Bed Backfill		0	0	13,050	0	0	13,050	
TOTAL Restoration of River Bed		0	62,095	104,400	126,896	0	293,391	
62 Restoration of River Bank								
62.12 Import & Place Fill Material		0	61,879	84,825	116,956	0	263,660	
62.15 ALLOWANCE Down Time Bank Backfil		0	0	6,525	0	0	6,525	
62.20 Restoration		0	38,133	16,382	133,302	908,079	1,095,897	
TOTAL Restoration of River Bank		0	100,012	107,732	250,259	908,079	1,366,082	
TOTAL GE-Pittsfield EE/CA Recomm. Alt.	1.00 EA	0	825,793	452,444	1098902	2614415	4,991,554	4991554
Contractor Management							499,155	
SUBTOTAL							5,490,709	
Field Overhead							329,443	
SUBTOTAL							5,820,151	
Home Office Overhead							873,023	
SUBTOTAL							6,693,174	
Profit							334,659	
TOTAL INCL INDIRECTS							7,027,833	
Contingency							1,756,958	
SUBTOTAL							8,784,791	
Engineering and Design							527,087	
SUBTOTAL							9,311,878	
USACE Construction Management							744,950	
TOTAL INCL OWNER COSTS							10,056,829	

	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
10. Additional Bank Sampling									
USR GC Additional Bank Sampling @ Depth			0.00	0.00	0.00	0.00	60000	60000.00	
	1.00	LS	0	0	0	0	60,000	60,000	60000.00
USR GC Appenix IX Sampling @ Depth			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Detailed Survey of River			0.00	0.00	0.00	0.00	100000	100000.00	
	1.00	LS	0	0	0	0	100,000	100,000	100000.00
USR GC Geotech Investigation & Anal.			0.00	0.00	0.00	0.00	150000	150000.00	
	1.00	LS	0	0	0	0	150,000	150,000	150000.00
TOTAL Additional Bank Sampling			0	0	0	0	410,000	410,000	

20.10. Mobilize Equipment	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20. Mobilization									
20.10. Mobilize Equipment									
Mobilize equipment									
Excavator	2								
Front End Loader	1								
Dozer	2								
Compactor	2								
Trencher	2								
Truck Crane	1								
TOTAL Mobilize Equipment	10.00	EA	0	0	0	0	3,000	3,000	300.00

20.20. Setup Temporary Facilities	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.20. Setup Temporary Facilities Setup Temporary Facilities includes setup of trailers, installation of temporary utilities, install construction entrance, etc.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	1.00	MO	0	0	7,500	0	0	7,500	7500.00
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	1.00	MO	0	0	3,650	0	0	3,650	3650.00
USR GC Office Trailer Rental			0.00	0.00	300.00	0.00	0.00	300.00	
	34.00	MO	0	0	10,200	0	0	10,200	300.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	352.00	HR	0	10,743	0	0	0	10,743	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	352.00	HR	0	8,297	0	0	0	8,297	23.57
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	40.00	HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	40.00	HR	0	1,234	0	0	0	1,234	30.85
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	22.00	DA	0	0	0	4,400	0	4,400	200.00
USR GC Misc. Electrical Materials			0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00	LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials			0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00	LS	0	0	0	0	2,500	2,500	2500.00
USR GC Office Trailer Utilities			0.00	0.00	0.00	0.00	1000.00	1000.00	
	34.00	MO	0	0	0	0	34,000	34,000	1000.00
TOTAL Setup Temporary Facilities			0	21,498	21,350	6,900	36,500	86,248	

20.30. Install Temporary Fence	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.30. Install Temporary Fence									
USR GC Temporary Fence			0.00	0.00	0.00	0.00	3.38	3.38	
MEANS Site Work and Landscape Cost Data 1999 Temporary fence page 118	5000.00	LF	0	0	0	0	16,900	16,900	3.38
USR GC Remove wood fence			0.00	0.00	0.00	0.00	1.25	1.25	
MEANS Site Work and Landscape Cost Data 1999 Remove wood fence page 29	5000.00	LF	0	0	0	0	6,250	6,250	1.25
TOTAL Install Temporary Fence	5000.00	LF	0	0	0	0	23,150	23,150	4.63

20.32. Construct Temp. Dewatering Area	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.32. Construct Temp. Dewatering Area Assume 12 areas 40'x 40' each with earthen berms, lined with PVC liner, layer of geotextile, layer of sand and layer of stone, precast concrete inlet used as sump.									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00	MO	0	0	7,300	0	0	7,300	3650.00
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00	MO	0	0	9,000	0	0	9,000	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	2.00	MO	0	0	7,800	0	0	7,800	3900.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	704.00	HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	704.00	HR	0	16,593	0	0	0	16,593	23.57
USR GC PVC Liner			0.00	0.00	0.00	0.60	0.00	0.60	
	4300.00	SY	0	0	0	2,580	0	2,580	0.60
USR GC Concrete Inlet 4'dia. 4' deep			0.00	0.00	0.00	315.00	0.00	315.00	
	12.00	EA	0	0	0	3,780	0	3,780	315.00
USR GC Concrete Inlet Cover			0.00	0.00	0.00	148.00	0.00	148.00	
	12.00	EA	0	0	0	1,776	0	1,776	148.00
USR GC Inlet Grate			0.00	0.00	0.00	214.00	0.00	214.00	
	12.00	EA	0	0	0	2,568	0	2,568	214.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
	240.00	CY	0	0	0	3,960	0	3,960	16.50
USR GC Sand			0.00	0.00	0.00	7.50	0.00	7.50	
	240.00	CY	0	0	0	1,800	0	1,800	7.50
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	430.00	CY	0	0	0	2,150	0	2,150	5.00
TOTAL Construct Temp. Dewatering Area	12.00	EA	0	38,079	24,100	18,614	0	80,793	6732.78

20.34. Temporary Dewatering Area WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.34. Temporary Dewatering Area WTS									
Temporary dewatering area water treatment system. One WTS for each dewatering area									
Assume treat 100 gpm using (1) modular tank, (4) bag filters, (1) dual bed carbon unit, one submersible pump and one effluent pump,									
PVC pipe and flexible hose.									
Assume discharge returns water into river.									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.25	MO	0	0	913	0	0	913	3650.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Carbon Units 100 gpm			0.00	0.00	0.00	13217.00	0.00	13217.00	
	1.00	EA	0	0	0	13,217	0	13,217	13217.00
USR GC Bag Filters			0.00	0.00	0.00	919.00	0.00	919.00	
	4.00	EA	0	0	0	3,676	0	3,676	919.00
USR GC ALLOWANCE PVC Pipe			0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00	LS	0	0	0	1,000	0	1,000	1000.00
USR GC ALLOWANCE Hose			0.00	0.00	0.00	1000.00	0.00	1000.00	
	1.00	LS	0	0	0	1,000	0	1,000	1000.00
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	5.00	DA	0	0	0	1,000	0	1,000	200.00
USR GC Misc. Electrical Materials			0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00	LS	0	0	0	7,500	0	7,500	7500.00
USR GC Misc. Plumbing Materials			0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00	LS	0	0	0	7,500	0	7,500	7500.00
USR GC Modular Tank			0.00	0.00	0.00	28815.00	0.00	28815.00	
	1.00	EA	0	0	0	28,815	0	28,815	28815.00
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	40.00	HR	0	1,225	0	0	0	1,225	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	40.00	HR	0	1,234	0	0	0	1,234	30.85
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	80.00	HR	0	1,886	0	0	0	1,886	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	80.00	HR	0	2,442	0	0	0	2,442	30.52

20.34. Temporary Dewatering Area WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL Temporary Dewatering Area WTS			0	6,786	2,788	63,708	0	73,282	

20.50. Erosion & Sedimentation Control	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.50. Erosion & Sedimentation Control									
20.50.10. Install Silt Fence									
MEANS Site Work and Landscape Cost Data 1999									
Silt Fence Installation pg 58 and Excavating, Utility Trench pg 52									
Trenching $0.54/lf									
Install silt fence $0.88/lf									
Backfill trench $0.43/lf									
TOTAL $1.85/lf									
TOTAL Install Silt Fence	5000.00	LF	0	0	0	0	9,250	9,250	1.85
20.50.30. Turbidity Barrier									
Turbidity Barrier									
Assume barriers placed across river every 100 lf, for entire EE/CA length.									
2500 lf / 1/100 lf = 25 barriers x 50 ft/barrier = 1250 lf									
USR GC Truck Crane			0.00	0.00	5400.00	0.00	0.00	5400.00	
	1.00	MO	0	0	5,400	0	0	5,400	5400.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	304.00	HR	0	7,165	0	0	0	7,165	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	101.00	HR	0	3,083	0	0	0	3,083	30.52
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	13.00	DA	0	0	0	2,600	0	2,600	200.00
USR GC Turbidity Barrier			0.00	0.00	0.00	4.83	0.00	4.83	
	1250.00	LF	0	0	0	6,038	0	6,038	4.83
TOTAL Turbidity Barrier	1250.00	LF	0	10,248	5,400	8,638	0	24,285	19.43
TOTAL Erosion & Sedimentation Control			0	10,248	5,400	8,638	9,250	33,535	

20.60. Clearing	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.60. Clearing									
20.60.10. Clearing									
MEANS Site Work and Landscape Cost Data 1999									
Cut & Chip medium, trees to 12" dia. pg 39									
TOTAL Clearing	5.00	AC	0	0	0	0	27,000	27,000	5400.00
TOTAL Clearing			0	0	0	0	27,000	27,000	

20.70. Temporary Access Road	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.70. Temporary Access Road									
20.70.10. Construct Temporary Access Road									
MEANS Site Work and Landscape Cost Data 1999									
Roads, gravel fill, no surfacing, 8" depth, pg 15									
Geotextile included in unit price, pg 57									
Temporary Road $5.60 /sy									
Geotextile $1.43 /sy									
Total $7.03 /sy									
TOTAL Construct Temporary Access Road	7230.00	SY	0	0	0	0	50,827	50,827	7.03
20.70.20. Remove Temporary Access Road									
MEANS Site Work and Landscape Cost Data 1999									
Pavement removal, bituminuous roads, 3" thick, pg 30									
Assume remove during excavation activities.									
TOTAL Remove Temporary Access Road	7230.00	SY	0	0	0	0	27,619	27,619	3.82
20.70.30. T & D of Access Road Materials									
Access road assume to be 8" thick and cover 21700 sy									
((7230 sy x 9 sf/sy x 0.67 ft) / 27 cf/cy) x 1.5 tn/cy = 2422 tn									
Assume able to dispose of material as landfill cover.									
Material loaded during removal activity.									
USR GC Trans Landfill Cover			0.00	0.00	0.00	0.00	20.00	20.00	
	2422.00	TN	0	0	0	0	48,440	48,440	20.00
USR GC Disposal Landfill Cover			0.00	0.00	0.00	0.00	15.00	15.00	
	2422.00	TN	0	0	0	0	36,330	36,330	15.00
TOTAL T & D of Access Road Materials			0	0	0	0	84,770	84,770	
TOTAL Temporary Access Road			0	0	0	0	163,216	163,216	

20.72. Maint. & Protection of Traffic	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.72. Maint. & Protection of Traffic									
Assume maintenance and protection of traffic full time during excavation and backfill activities, two flagmen full time.									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	4800.00	HR	0	113,136	0	0	0	113,136	23.57
USR GC Misc. Signage			0.00	0.00	0.00	300.00	0.00	300.00	
	100.00	EA	0	0	0	30,000	0	30,000	300.00
TOTAL Maint. & Protection of Traffic			0	113,136	0	30,000	0	143,136	

20.74. Exc. Seepage WTS (equip & matl)	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

20.74. Exc. Seepage WTS (equip & matl)

WTS for treatment of water seeping in bypassed cells after initial removal of bulk river water. Assume system to be 300 gpm and consist of frak tank, suction pump, bag filters, carbon units and misc. piping and accessories.

Assume setup at each sheetpiled cell along river, 18 setup/teardown events. Setup/teardown included in dewater river bed activity.

USR GC Bag Filters 160 gpm each		0.00	0.00	0.00	1266.00	0.00	1266.00	
	4.00 EA	0	0	0	5,064	0	5,064	1266.00
USR GC Carbon Units 100 gpm parallel		0.00	0.00	0.00	13217.00	0.00	13217.00	
	3.00 EA	0	0	0	39,651	0	39,651	13217.00
USR GC ALLOWANCE PVC Pipe		0.00	0.00	0.00	3000.00	0.00	3000.00	
	1.00 LS	0	0	0	3,000	0	3,000	3000.00
USR GC ALLOWANCE Hose		0.00	0.00	0.00	3000.00	0.00	3000.00	
	1.00 LS	0	0	0	3,000	0	3,000	3000.00
USR GC Misc. Electrical Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
USR GC Misc. Plumbing Materials		0.00	0.00	0.00	7500.00	0.00	7500.00	
	1.00 LS	0	0	0	7,500	0	7,500	7500.00
TOTAL Exc. Seepage WTS (equip & matl)		0	0	0	65,715	0	65,715	

20.76. Truck Decon Facilites	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.76. Truck Decon Facilites									
Truck decon facilties includes construction of pads.									
Assume decon pads constructed of asphalt with precast concrete inlets used as sumps.									
20.76.10. Construct Truck Decon Pads									
USR GC Backhoe			0.00	0.00	2850.00	0.00	0.00	2850.00	
	0.50	MO	0	0	1,425	0	0	1,425	2850.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	192.00	HR	0	4,525	0	0	0	4,525	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	192.00	HR	0	5,860	0	0	0	5,860	30.52
USR GC Concrete Inlet 4'dia. x 4' deep			0.00	0.00	0.00	315.00	0.00	315.00	
	6.00	EA	0	0	0	1,890	0	1,890	315.00
USR GC Concrete Inlet Cover			0.00	0.00	0.00	148.00	0.00	148.00	
	6.00	EA	0	0	0	888	0	888	148.00
USR GC PVC Liner			0.00	0.00	0.00	0.60	0.00	0.60	
	800.00	SY	0	0	0	480	0	480	0.60
USR GC 1000 gal HDPE Tank			0.00	0.00	0.00	800.00	0.00	800.00	
	6.00	EA	0	0	0	4,800	0	4,800	800.00
USR GC Asphalt Pads			0.00	0.00	0.00	0.00	14.76	14.76	
	800.00	SY	0	0	0	0	11,808	11,808	14.76
USR GC Asphalt Curbing			0.00	0.00	0.00	0.00	2.58	2.58	
MEANS Site Work and Landscape Cost Data 1999, pg 74	960.00	LF	0	0	0	0	2,477	2,477	2.58
TOTAL Construct Truck Decon Pads	6.00	EA	0	10,385	1,425	8,058	14,285	34,153	5692.18
TOTAL Truck Decon Facilites			0	10,385	1,425	8,058	14,285	34,153	
TOTAL Mobilization			0	200,133	55,063	201,633	276,400	733,228	

30.10. Install & Remove Sheetpile	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

30. Install Sheetpile

30.10. Install & Remove Sheetpile

Quotation from South Jersey Gas Project August, 1999.
Sheetpile river in 400' sections, each block assumed to be 40' wide by 400' long.

Assume 28' sheetpile height x 1600 total length = 44,800 sf
Assume use sheetpile (3) times.

Cross sections assume reuse piles (3) times, 40' sides
2 ends x 40' each side x 28' depth = 2240 sf
# of setups 1600 lf / 400 sections = 4 + 1 = 5 setups
Total cross section sheetpile area required if do not reuse sheetpile
2240 sf x 5 setups x 2 sides = 22400 sf

Required quantity of sheetpile assuming install and remove 3X before requiring new sheetpile
44,800 sf + 22400 sf) / 3 uses = 22400 sf

Total sheetpile material quantity 22,400 sf
Total sheetpile installation and removal quantity = 67,200 sf

USR GC Sheet Pile Material		0.00	0.00	0.00	8.00	0.00	8.00	
	22400 SF	0	0	0	179,200	0	179,200	8.00
USR GC Sheet Pile Install (Subcontract)		0.00	0.00	0.00	0.00	6.00	6.00	
	67200 SF	0	0	0	0	403,200	403,200	6.00
USR GC Sheet Pile Remove (Subcontract)		0.00	0.00	0.00	0.00	3.23	3.23	
	67200 SF	0	0	0	0	217,056	217,056	3.23
TOTAL Install & Remove Sheetpile	67200 SF	0	0	0	179,200	620,256	799,456	11.90
TOTAL Install Sheetpile		0	0	0	179,200	620,256	799,456	

	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32. Pumping bypass at cobble reach									
TOTAL Pumping bypass at cobble reach			0	0	0	0	0	0	
34. Dewatering of river bed									
Dewater bypassed sheet pile cells.									
Assume 5 moves. Assume two days each move.									
34.10. Dewatering of river bed									
34.10.10. Setup, Maintain, & Teardown									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50	MO	0	0	1,825	0	0	1,825	3650.00
USR GC Godwin 8" Diesel Pump			0.00	0.00	0.00	59600.00	0.00	59600.00	
	1.00	EA	0	0	0	59,600	0	59,600	59600.00
USR GC Godwin Suction Hose 10 ft sect.			0.00	0.00	0.00	1413.00	0.00	1413.00	
	2.00	EA	0	0	0	2,826	0	2,826	1413.00
USR GC Godwin Discharge Hose $/lf			0.00	0.00	0.00	8.30	0.00	8.30	
	400.00	LF	0	0	0	3,320	0	3,320	8.30
USR GC Godwin Equipment Delivery			0.00	0.00	0.00	0.00	250.00	250.00	
	2.00	EA	0	0	0	0	500	500	250.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	171.00	HR	0	4,030	0	0	0	4,030	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	171.00	HR	0	5,219	0	0	0	5,219	30.52
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
	86.00	CY	0	0	0	1,419	0	1,419	16.50
TOTAL Setup, Maintain, & Teardown	14.00	MO	0	9,249	1,825	67,165	500	78,739	5624.24
TOTAL Dewatering of river bed			0	9,249	1,825	67,165	500	78,739	

34.20. Setup/Teardown Seepage WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.20. Setup/Teardown Seepage WTS									
Assume 5 setup/teardown events, two days each, total 10 days.									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50	MO	0	0	1,825	0	0	1,825	3650.00
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	10.00	DA	0	0	0	2,000	0	2,000	200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	171.00	HR	0	4,030	0	0	0	4,030	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	171.00	HR	0	5,219	0	0	0	5,219	30.52
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	85.00	HR	0	2,603	0	0	0	2,603	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	85.00	HR	0	2,622	0	0	0	2,622	30.85
USR GC Truck w/ Flatbed Trailer			0.00	0.00	0.00	0.00	750.00	750.00	
	10.00	DA	0	0	0	0	7,500	7,500	750.00
TOTAL Setup/Teardown Seepage WTS			0	14,474	1,825	2,000	7,500	25,799	

34.22. O & M of Seepage WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.22. O & M of Seepage WTS									
Electricity - ALLOWANCE $/mo assume $1500/mo									
Carbon - Assume one change per month 1760# x 6 units x 9 months = 95040#									
Bag Filter Bags - Assume 2 bags per filter per day x 4 filters x 1 shift x 9/12 years x 365 days/yr = 2190 bags.									
USR GC Frak Tank 21,000 gal (monthly)			0.00	0.00	0.00	1100.00	0.00	1100.00	
	27.00	MO	0	0	0	29,700	0	29,700	1100.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day. Operates pumping system and seepage WTS.	3285.00	HR	0	77,427	0	0	0	77,427	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	1.28	0.00	1.28	
	95040	LB	0	0	0	121,651	0	121,651	1.28
USR GC Bag Filter Bags			0.00	0.00	0.00	4.56	0.00	4.56	
	2190.00	EA	0	0	0	9,986	0	9,986	4.56
USR GC ALLOWANCE Elec Svs for WTS #2			0.00	0.00	0.00	0.00	1500.00	1500.00	
	9.00	MO	0	0	0	0	13,500	13,500	1500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	95040	LB	0	0	0	0	23,760	23,760	0.25
TOTAL O & M of Seepage WTS			0	77,427	0	161,338	37,260	276,025	
TOTAL Dewatering of river bed			0	101,151	3,650	230,503	45,260	380,564	

40.10. Excavate Bed Sediments	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40. Excavate & Transport Sed./Soils									
40.10. Excavate Bed Sediments									
Estimated duration to excavate 10,616 cy based on 125 cy per day = 76 days= 3.5 months									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	3.50	MO	0	0	26,250	0	0	26,250	7500.00
USR GC Dump Truck (2)			0.00	0.00	0.00	0.00	75.00	75.00	
	1216.00	HR	0	0	0	0	91,200	91,200	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	3.50	MO	0	0	35,700	0	0	35,700	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1216.00	HR	0	37,112	0	0	0	37,112	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1216.00	HR	0	28,661	0	0	0	28,661	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	76.00	DA	0	0	0	15,200	0	15,200	200.00
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	608.00	HR	0	19,164	0	0	0	19,164	31.52
USR GC Roll-Off Truck w/ Sludge Box (1)			0.00	0.00	0.00	0.00	750.00	750.00	
	76.00	DA	0	0	0	0	57,000	57,000	750.00
TOTAL Excavate Bed Sediments	10616	CY	0	84,938	61,950	15,200	148,200	310,288	29.23

40.15. ALLOWANCE Down Time Bed Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.15. ALLOWANCE Down Time Bed Exc.									
Assume down time 3.5 months x 10% (sheet pile areas) = .35 months, say 0.5 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.50	MO	0	0	3,750	0	0	3,750	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.50	MO	0	0	5,100	0	0	5,100	10200.00
TOTAL ALLOWANCE Down Time Bed Exc.			0	0	8,850	0	0	8,850	

40.20. Excavate Bank Soils	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.20. Excavate Bank Soils									
Estimated duration to excavate 10,589 cy based on 150 cy per day = 71 days= 3.2 months									
Includes removal of concrete and misc. structures along river bank.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	3.25	MO	0	0	24,375	0	0	24,375	7500.00
USR GC Dump Truck (3)			0.00	0.00	0.00	0.00	75.00	75.00	
	1629.00	HR	0	0	0	0	122,175	122,175	75.00
USR GC Excavator w/ Breaker			0.00	0.00	0.00	0.00	8300.00	8300.00	
	1.00	MO	0	0	0	0	8,300	8,300	8300.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	3.25	MO	0	0	33,150	0	0	33,150	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1086.00	HR	0	33,145	0	0	0	33,145	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1086.00	HR	0	25,597	0	0	0	25,597	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	71.00	DA	0	0	0	14,200	0	14,200	200.00
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	568.00	HR	0	17,903	0	0	0	17,903	31.52
TOTAL Excavate Bank Soils	10589	CY	0	76,645	57,525	14,200	130,475	278,845	26.33

40.25. ALLOWANCE Down Time Bank Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.25. ALLOWANCE Down Time Bank Exc.									
Assume down time 3.2 months x 5% = 0.16 months, say 0.25 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.25	MO	0	0	2,550	0	0	2,550	10200.00
TOTAL ALLOWANCE Down Time Bank Exc.			0	0	4,425	0	0	4,425	

40.40. O & M Truck Decon Facilities	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.40. O & M Truck Decon Facilities									
USR GC Pressure Washer			0.00	0.00	3000.00	0.00	0.00	3000.00	
ALLOWANCE	2.00	EA	0	0	6,000	0	0	6,000	3000.00
USR GC Trash Pump w/ Suct. & Disch. Hse			0.00	0.00	5000.00	0.00	0.00	5000.00	
ALLOWANCE	2.00	EA	0	0	10,000	0	0	10,000	5000.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1600.00	HR	0	37,712	0	0	0	37,712	23.57
TOTAL O & M Truck Decon Facilities			0	37,712	16,000	0	0	53,712	
TOTAL Excavate & Transport Sed./Soils			0	199,295	148,750	29,400	278,675	656,120	

42.10. Manage Drying Area	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42. Dewatering of Excavated Material									
42.10. Manage Drying Area									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	9.00	MO	0	0	32,850	0	0	32,850	3650.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1584.00	HR	0	48,344	0	0	0	48,344	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1584.00	HR	0	37,335	0	0	0	37,335	23.57
USR GC Silt Sack			0.00	0.00	0.00	25.00	0.00	25.00	
	198.00	EA	0	0	0	4,950	0	4,950	25.00
TOTAL Manage Drying Area	9.00	MO	0	85,679	32,850	4,950	0	123,479	13719.84

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42.20. O & M WTS									
Operation and Maintenance of water treatment system									
Electricity - ALLOWANCE $/mo assume $500/mo									
Carbon - Assume one change per month 1760# x 2 units x 9 months = 31680#									
Bag Filter Bags - Assume 4 bags per filter per shift x 4 filters x 1 shifts per day x .75 years x 365 days per year = 4380 bags									
Assume weekly sampling.									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day.	3285.00	HR	0	77,427	0	0	0	77,427	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	2.00	0.00	2.00	
	31680	LB	0	0	0	63,360	0	63,360	2.00
USR GC Bag Filter Bags			0.00	0.00	0.00	2.90	0.00	2.90	
	4380.00	EA	0	0	0	12,702	0	12,702	2.90
USR GC ALLOWANCE Elec Svc for WTS			0.00	0.00	0.00	0.00	500.00	500.00	
	9.00	MO	0	0	0	0	4,500	4,500	500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	31680	LB	0	0	0	0	7,920	7,920	0.25
USR GC Anal. TSS			0.00	0.00	0.00	0.00	30.00	30.00	
	39.00	EA	0	0	0	0	1,170	1,170	30.00
USR GC Anal. O & G			0.00	0.00	0.00	0.00	30.00	30.00	
	39.00	EA	0	0	0	0	1,170	1,170	30.00
USR GC Anal. Phenol			0.00	0.00	0.00	0.00	30.00	30.00	
	39.00	EA	0	0	0	0	1,170	1,170	30.00
USR GC Anal. Settable Solids			0.00	0.00	0.00	0.00	30.00	30.00	
	39.00	EA	0	0	0	0	1,170	1,170	30.00
USR GC Anal. PCBs			0.00	0.00	0.00	0.00	132.50	132.50	
	39.00	EA	0	0	0	0	5,168	5,168	132.50
USR GC Anal. Iron (total)			0.00	0.00	0.00	0.00	30.00	30.00	
	39.00	EA	0	0	0	0	1,170	1,170	30.00
USR GC Anal. pH			0.00	0.00	0.00	0.00	8.00	8.00	
	39.00	EA	0	0	0	0	312	312	8.00
USR GC Anal. Temp. (field measurement)			0.00	0.00	0.00	0.00	0.00	0.00	
	39.00	EA	0	0	0	0	0	0	0.00

42. Dewatering of Excavated Material

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL O & M WTS	9.00	MO	0	77,427	0	76,062	23,750	177,239	19693.22
TOTAL Dewatering of Excavated Material			0	163,106	32,850	81,012	23,750	300,718	

46.20. Characterization Sampling	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46. Sampling									
46.20. Characterization Sampling									
USR GC PCB Analysis (1/150 tn)			0.00	0.00	0.00	0.00	132.50	132.50	
	196.00	EA	0	0	0	0	25,970	25,970	132.50
USR GC TCLP Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	1095.00	1095.00	
	15.00	EA	0	0	0	0	16,425	16,425	1095.00
USR GC Dioxin Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	400.00	400.00	
	15.00	EA	0	0	0	0	6,000	6,000	400.00
USR GC RCRA Characteristics (1/2000 tn)			0.00	0.00	0.00	0.00	215.00	215.00	
	15.00	EA	0	0	0	0	3,225	3,225	215.00
USR GC pH (1/2000 tn)			0.00	0.00	0.00	0.00	15.00	15.00	
	15.00	EA	0	0	0	0	225	225	15.00
USR GC Moisture Content (1/2000 tn)			0.00	0.00	0.00	0.00	10.00	10.00	
	15.00	EA	0	0	0	0	150	150	10.00
TOTAL Characterization Sampling			0	0	0	0	51,995	51,995	
TOTAL Sampling			0	0	0	0	51,995	51,995	

60.10. Import/Place River Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60. Restoration of River Bed									
60.10. Import/Place River Bed Backfill									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	3.50	MO	0	0	15,750	0	0	15,750	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	3.50	MO	0	0	13,650	0	0	13,650	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	3.50	MO	0	0	26,250	0	0	26,250	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	3.50	MO	0	0	35,700	0	0	35,700	10200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1148.00	HR	0	27,058	0	0	0	27,058	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1148.00	HR	0	35,037	0	0	0	35,037	30.52
USR GC Misc. Daily Expenses			0.00	0.00	0.00	200.00	0.00	200.00	
	76.00	DA	0	0	0	15,200	0	15,200	200.00
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	2441.00	CY	0	0	0	12,205	0	12,205	5.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	1972.00	CY	0	0	0	32,538	0	32,538	16.50
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	3772.00	CY	0	0	0	66,953	0	66,953	17.75
TOTAL Import/Place River Bed Backfill			0	62,095	91,350	126,896	0	280,341	

60.15. ALLOWANCE Down Time Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60.15. ALLOWANCE Down Time Bed Backfill									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.50	MO	0	0	2,250	0	0	2,250	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	0.50	MO	0	0	1,950	0	0	1,950	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.50	MO	0	0	3,750	0	0	3,750	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.50	MO	0	0	5,100	0	0	5,100	10200.00
TOTAL ALLOWANCE Down Time Bed Backfill			0	0	13,050	0	0	13,050	
TOTAL Restoration of River Bed			0	62,095	104,400	126,896	0	293,391	

62.12. Import & Place Fill Material	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62. Restoration of River Bank									
62.12. Import & Place Fill Material									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	3.25	MO	0	0	14,625	0	0	14,625	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	3.25	MO	0	0	12,675	0	0	12,675	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	3.25	MO	0	0	24,375	0	0	24,375	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	3.25	MO	0	0	33,150	0	0	33,150	10200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1144.00	HR	0	26,964	0	0	0	26,964	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1144.00	HR	0	34,915	0	0	0	34,915	30.52
USR GC Misc. Daily Expenses			0.00	0.00	0.00	200.00	0.00	200.00	
	71.00	DA	0	0	0	14,200	0	14,200	200.00
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	5609.00	CY	0	0	0	28,045	0	28,045	5.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	1078.00	CY	0	0	0	17,787	0	17,787	16.50
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	3207.00	CY	0	0	0	56,924	0	56,924	17.75
TOTAL Import & Place Fill Material			0	61,879	84,825	116,956	0	263,660	

62.15. ALLOWANCE Down Time Bank Backfil	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.15. ALLOWANCE Down Time Bank Backfil									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.25	MO	0	0	1,125	0	0	1,125	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	0.25	MO	0	0	975	0	0	975	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.25	MO	0	0	2,550	0	0	2,550	10200.00
TOTAL ALLOWANCE Down Time Bank Backfil			0	0	6,525	0	0	6,525	

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.20. Restoration									
62.20.10. Revegetation									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67	MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67	MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	235.00	HR	0	5,539	0	0	0	5,539	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	235.00	HR	0	7,172	0	0	0	7,172	30.52
USR GC Coir Blanket			0.00	0.00	0.00	1.21	0.00	1.21	
	1995.00	SY	0	0	0	2,414	0	2,414	1.21
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	15962	SY	0	0	0	6,704	0	6,704	0.42
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
	1995.00	CY	0	0	0	35,411	0	35,411	17.75
USR GC Seeding			0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 127	51216	SF	0	0	0	0	2,561	2,561	0.05
USR GC Shrubs			0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3', pg 160 Planting, potted heavy or stoney soil, pg 130	816.00	EA	0	0	0	0	21,763	21,763	26.67
USR GC Trees			0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999 Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130	2049.00	EA	0	0	0	0	340,134	340,134	166.00
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999 Ground covers, vines and	336.00	EA	0	0	0	0	837	837	2.49

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
climbing plants, pg 175 Planting, plotted, 3" dia. pg 130									
TOTAL Revegetation	7583.00	SF	0	12,711	5,461	44,529	365,294	427,995	56.44
62.20.20. Bioengineering									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67	MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67	MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	235.00	HR	0	5,539	0	0	0	5,539	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	235.00	HR	0	7,172	0	0	0	7,172	30.52
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	2803.00	SY	0	0	0	1,177	0	1,177	0.42
USR GC Misc. Daily Material			0.00	0.00	0.00	200.00	0.00	200.00	
	15.00	DA	0	0	0	3,000	0	3,000	200.00
USR GC 3/4" Gravel MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	901.00	CY	0.00 0	0.00 0	0.00 0	16.50 14,867	0.00 0	16.50 14,867	16.50
USR GC Geogrid			0.00	0.00	0.00	0.40	0.00	0.40	
	3316.00	SY	0	0	0	1,326	0	1,326	0.40
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
	737.00	CY	0	0	0	13,082	0	13,082	17.75
USR GC Coir Blanket			0.00	0.00	0.00	1.21	0.00	1.21	
	18913	SY	0	0	0	22,885	0	22,885	1.21
USR GC Seeding MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	25226	SY	0.00 0	0.00 0	0.00 0	0.00 0	0.05 1,261	0.05 1,261	0.05
USR GC Shrubs MEANS Site Work and Landscape Cost Data 1999	737.00	EA	0.00 0	0.00 0	0.00 0	0.00 0	26.67 19,656	26.67 19,656	26.67

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
Shrubs, Cornus mas, 2' to 3' pg 160.									
USR GC Trees			0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	1009.00	EA	0	0	0	0	167,494	167,494	166.00
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	155.00	EA	0	0	0	0	386	386	2.49
TOTAL Bioengineering	66642	SF	0	12,711	5,461	56,337	188,797	263,305	3.95
62.20.30. Hard Structures									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67	MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67	MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	235.00	HR	0	5,539	0	0	0	5,539	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	235.00	HR	0	7,172	0	0	0	7,172	30.52
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	3650.00	SY	0	0	0	1,533	0	1,533	0.42
USR GC Misc. Daily Material			0.00	0.00	0.00	200.00	0.00	200.00	
	15.00	DA	0	0	0	3,000	0	3,000	200.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	1119.00	CY	0	0	0	18,464	0	18,464	16.50
USR GC 6" dia. PE Perf. Pipe			0.00	0.00	0.00	0.51	0.00	0.51	
	1467.00	LF	0	0	0	748	0	748	0.51

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC 6" dia. PE Pipe Cplg.		0.00	0.00	0.00	1.65	0.00	1.65	
	3.00 EA	0	0	0	5	0	5	1.65
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	7651.00 SY	0	0	0	3,060	0	3,060	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	242.00 CY	0	0	0	4,296	0	4,296	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	1100.00 SY	0	0	0	1,331	0	1,331	1.21
USR GC Concrete Foundation		0.00	0.00	0.00	0.00	168.00	168.00	
MEANS Site Work and Landscape Cost Data 1999 Concrete in place including forms and reinforcing, footings strip, 36" x 12", reinforced pg 207	215.00 CY	0	0	0	0	36,120	36,120	168.00
USR GC Interlock. Segmental Block Wall		0.00	0.00	0.00	0.00	12.05	12.05	
MEANS Site Work and Landscape Cost Data 1999 Retaining walls, segmental wall system, interlocking including installation, pg 59.	22954 SF	0	0	0	0	276,596	276,596	12.05
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	13050 SY	0	0	0	0	653	653	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3' pg 160.	421.00 EA	0	0	0	0	11,228	11,228	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	174.00 EA	0	0	0	0	28,884	28,884	166.00

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	204.00	EA	0	0	0	0	508	508	2.49
TOTAL Hard Structures	9900.00	SF	0	12,711	5,461	32,437	353,988	404,596	40.87
TOTAL Restoration			0	38,133	16,382	133,302	908,079	1,095,897	
TOTAL Restoration of River Bank			0	100,012	107,732	250,259	908,079	1,366,082	
TOTAL GE-Pittsfield EE/CA Recomm. Alt.	1.00	EA	0	825,793	452,444	1098902	2614415	4,991,554	4991554

APPENDIX E.3

RECOMMENDED REMOVAL ALTERNATIVE: PHASE II, TRANSECT 96 TO TRANSECT 168

GE-Pittsfield EE/CA Recomm. Alt.
Roy F. Weston, Inc.
Phase II: Transect 96 to 168

Designed By: Roy F. Weston Inc.
Estimated By: Dan Moretz (610) 701-3176

Prepared By: Roy F. Weston Inc.
West Chester, Pa

Preparation Date: 10/02/00
Effective Date of Pricing: 10/02/00

Sales Tax: 0.00%

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GE-Pittsfield Recommended Alternative

Dry excavation to meet cleanup criteria. For the segment of river from T64 to T96 and T168 to river diversion using sheetpiling. For the segment T96 to T168 river diversion by pumping through a piping bypass. See section 6.3 of EE/CA for written description of recommended alternative.

See section 5.3 of EE/CA report for written description of activities.

Project Information	
Escalation	0.00%
Contingency	25.00%
Engineering and Design	6.00%
USACE Construction Management	8.00%

General Contractor	
Contractor Management	10.00%
Field Overhead	6.00%
Home Office Overhead	15.00%
Profit	5.00%
Bond	0.00%

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		QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
20	Mobilization			571,547	0	142,887	42,866	60,584	0	817,884	
32	Pumping bypass			3,497,695	0	874,424	262,327	370,756	0	5,005,202	
34	Dewatering of r			624,954	0	156,239	46,872	66,245	0	894,309	
40	Excavate & Tran			1,825,557	0	456,389	136,917	193,509	0	2,612,372	
42	Dewatering of E			720,458	0	180,115	54,034	76,369	0	1,030,975	
46	Sampling			152,959	0	38,240	11,472	16,214	0	218,885	
60	Restoration of			757,175	0	189,294	56,788	80,260	0	1,083,517	
62	Restoration of			2,365,195	0	591,299	177,390	250,711	0	3,384,595	
	GE-Pittsfield E	1.00	EA	10,515,541	0	2,628,885	788,666	1,114,647	0	15,047,739	15047739

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
20 Mobilization									
20.30 Install Temp	5000.00 LF	32,594	0	8,148	2,445	3,455	0	46,642	9.33
20.50 Erosion & Se		46,977	0	11,744	3,523	4,980	0	67,224	
20.60 Clearing		30,412	0	7,603	2,281	3,224	0	43,519	
20.70 Temporary Ac		229,798	0	57,450	17,235	24,359	0	328,842	
20.72 Maint. & Pro		231,766	0	57,941	17,382	24,567	0	331,657	
TOTAL Mobilization		571,547	0	142,887	42,866	60,584	0	817,884	
32 Pumping bypass									
32.10 Setup & Tear	3.00 EA	674,077	0	168,519	50,556	71,452	0	964,604	321534.75
32.15 Setup & Tear	3.00 EA	37,236	0	9,309	2,793	3,947	0	53,285	17761.60
32.20 Operate and	13.25 MO	2,786,382	0	696,596	208,979	295,357	0	3,987,313	300929.27
TOTAL Pumping bypa		3,497,695	0	874,424	262,327	370,756	0	5,005,202	
34 Dewatering of r									
34.10 Dewatering o		17,491	0	4,373	1,312	1,854	0	25,029	
34.20 Setup/Teardo		39,010	0	9,752	2,926	4,135	0	55,823	
34.22 O & M of See		568,454	0	142,113	42,634	60,256	0	813,458	
TOTAL Dewatering o		624,954	0	156,239	46,872	66,245	0	894,309	
40 Excavate & Tran									
40.10 Excavate Bed	20915.00 CY	852,567	0	213,142	63,943	90,372	0	1,220,023	58.33
40.15 ALLOWANCE Do		49,841	0	12,460	3,738	5,283	0	71,323	
40.20 Excavate Ban	23695.00 CY	839,398	0	209,850	62,955	88,976	0	1,201,179	50.69
40.25 ALLOWANCE Do		6,230	0	1,558	467	660	0	8,915	
40.40 O & M Truck		77,521	0	19,380	5,814	8,217	0	110,932	
TOTAL Excavate & T		1,825,557	0	456,389	136,917	193,509	0	2,612,372	
42 Dewatering of E									
42.10 Manage Dryin	13.25 MO	350,966	0	87,742	26,322	37,202	0	502,232	37904.33
42.20 O & M WTS	13.25 MO	369,492	0	92,373	27,712	39,166	0	528,743	39905.14
TOTAL Dewatering o		720,458	0	180,115	54,034	76,369	0	1,030,975	
46 Sampling									

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
46.20 Characteriza		152,959	0	38,240	11,472	16,214	0	218,885	
TOTAL Sampling		152,959	0	38,240	11,472	16,214	0	218,885	
60 Restoration of									
60.10 Import/Place		683,680	0	170,920	51,276	72,470	0	978,346	
60.15 ALLOWANCE Do		73,495	0	18,374	5,512	7,790	0	105,171	
TOTAL Restoration		757,175	0	189,294	56,788	80,260	0	1,083,517	
62 Restoration of									
62.12 Import & Pla		814,447	0	203,612	61,084	86,331	0	1,165,474	
62.15 ALLOWANCE Do		9,187	0	2,297	689	974	0	13,146	
62.20 Restoration		1,541,561	0	385,390	115,617	163,405	0	2,205,974	
TOTAL Restoration		2,365,195	0	591,299	177,390	250,711	0	3,384,595	
TOTAL GE-Pittsfiel	1.00 EA	10,515,541	0	2,628,885	788,666	1,114,647	0	15,047,739	15047739

** PROJECT INDIRECT SUMMARY - Scope **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
20 Mobilization		405,944	40,594	26,792	71,000	27,217	0	571,547	
32 Pumping bypass		2,484,256	248,426	163,961	434,496	166,557	0	3,497,695	
34 Dewatering of r		443,877	44,388	29,296	77,634	29,760	0	624,954	
40 Excavate & Tran		1,296,611	129,661	85,576	226,777	86,931	0	1,825,557	
42 Dewatering of E		511,709	51,171	33,773	89,498	34,308	0	720,458	
46 Sampling		108,640	10,864	7,170	19,001	7,284	0	152,959	
60 Restoration of		537,787	53,779	35,494	94,059	36,056	0	757,175	
62 Restoration of		1,679,892	167,989	110,873	293,813	112,628	0	2,365,195	
GE-Pittsfield E	1.00 EA	7,468,715	746,872	492,935	1,306,278	500,740	0	10,515,541	10515541
Contingency								2,628,885	
SUBTOTAL								13,144,426	
Engineering and Design								788,666	
SUBTOTAL								13,933,091	
USACE Construction Management								1,114,647	
TOTAL INCL OWNER COSTS								15,047,739	

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
20 Mobilization									
20.30 Install Temp	5000.00 LF	23,150	2,315	1,528	4,049	1,552	0	32,594	6.52
20.50 Erosion & Se		33,366	3,337	2,202	5,836	2,237	0	46,977	
20.60 Clearing		21,600	2,160	1,426	3,778	1,448	0	30,412	
20.70 Temporary Ac		163,216	16,322	10,772	28,546	10,943	0	229,798	
20.72 Maint. & Pro		164,613	16,461	10,864	28,791	11,036	0	231,766	
TOTAL Mobilization		405,944	40,594	26,792	71,000	27,217	0	571,547	
32 Pumping bypass									
32.10 Setup & Tear	3.00 EA	478,767	47,877	31,599	83,736	32,099	0	674,077	224692.35
32.15 Setup & Tear	3.00 EA	26,447	2,645	1,746	4,626	1,773	0	37,236	12412.02
32.20 Operate and	13.25 MO	1,979,042	197,904	130,617	346,134	132,685	0	2,786,382	210292.99
TOTAL Pumping bypa		2,484,256	248,426	163,961	434,496	166,557	0	3,497,695	
34 Dewatering of r									
34.10 Dewatering o		12,423	1,242	820	2,173	833	0	17,491	
34.20 Setup/Teardo		27,707	2,771	1,829	4,846	1,858	0	39,010	
34.22 O & M of See		403,747	40,375	26,647	70,615	27,069	0	568,454	
TOTAL Dewatering o		443,877	44,388	29,296	77,634	29,760	0	624,954	
40 Excavate & Tran									
40.10 Excavate Bed	20915.00 CY	605,540	60,554	39,966	105,909	40,598	0	852,567	40.76
40.15 ALLOWANCE Do		35,400	3,540	2,336	6,191	2,373	0	49,841	
40.20 Excavate Ban	23695.00 CY	596,187	59,619	39,348	104,273	39,971	0	839,398	35.43
40.25 ALLOWANCE Do		4,425	443	292	774	297	0	6,230	
40.40 O & M Truck		55,060	5,506	3,634	9,630	3,691	0	77,521	
TOTAL Excavate & T		1,296,611	129,661	85,576	226,777	86,931	0	1,825,557	
42 Dewatering of E									
42.10 Manage Dryin	13.25 MO	249,275	24,928	16,452	43,598	16,713	0	350,966	26488.00
42.20 O & M WTS	13.25 MO	262,434	26,243	17,321	45,900	17,595	0	369,492	27886.19
TOTAL Dewatering o		511,709	51,171	33,773	89,498	34,308	0	720,458	
46 Sampling									

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
46.20 Characteriza		108,640	10,864	7,170	19,001	7,284	0	152,959	
TOTAL Sampling		108,640	10,864	7,170	19,001	7,284	0	152,959	
60 Restoration of									
60.10 Import/Place		485,587	48,559	32,049	84,929	32,556	0	683,680	
60.15 ALLOWANCE Do		52,200	5,220	3,445	9,130	3,500	0	73,495	
TOTAL Restoration		537,787	53,779	35,494	94,059	36,056	0	757,175	
62 Restoration of									
62.12 Import & Pla		578,465	57,847	38,179	101,174	38,783	0	814,447	
62.15 ALLOWANCE Do		6,525	653	431	1,141	437	0	9,187	
62.20 Restoration		1,094,902	109,490	72,264	191,498	73,408	0	1,541,561	
TOTAL Restoration		1,679,892	167,989	110,873	293,813	112,628	0	2,365,195	
TOTAL GE-Pittsfiel	1.00 EA	7,468,715	746,872	492,935	1,306,278	500,740	0	10,515,541	10515541
Contingency								2,628,885	
SUBTOTAL								13,144,426	
Engineering and Design								788,666	
SUBTOTAL								13,933,091	
USACE Construction Management								1,114,647	
TOTAL INCL OWNER COSTS								15,047,739	

** PROJECT DIRECT SUMMARY - Scope **

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20	Mobilization			0	174,891	5,400	8,438	217,216	405,944	
32	Pumping bypass at cobble reach			0	233,851	1490693	657,008	102,705	2,484,256	
34	Dewatering of river bed			0	135,045	3,650	241,327	63,855	443,877	
40	Excavate & Transport Sed./Soils			0	396,261	278,775	59,600	561,975	1,296,611	
42	Dewatering of Excavated Material			0	241,749	115,863	119,254	34,844	511,709	
46	Sampling			0	0	0	0	108,640	108,640	
60	Restoration of River Bed			0	110,885	221,850	205,053	0	537,787	
62	Restoration of River Bank			0	171,249	205,525	395,358	907,760	1,679,892	
TOTAL	GE-Pittsfield EE/CA Recomm. Alt.	1.00	EA	0	1463930	2321755	1686036	1996994	7,468,715	7468715
	Contractor Management								746,872	
	SUBTOTAL								8,215,587	
	Field Overhead								492,935	
	SUBTOTAL								8,708,522	
	Home Office Overhead								1,306,278	
	SUBTOTAL								10,014,801	
	Profit								500,740	
	TOTAL INCL INDIRECTS								10,515,541	
	Contingency								2,628,885	
	SUBTOTAL								13,144,426	
	Engineering and Design								788,666	
	SUBTOTAL								13,933,091	
	USACE Construction Management								1,114,647	
	TOTAL INCL OWNER COSTS								15,047,739	

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20 Mobilization								
20.30 Install Temporary Fence	5000.00 LF	0	0	0	0	23,150	23,150	4.63
20.50 Erosion & Sedimentation Control		0	10,278	5,400	8,438	9,250	33,366	
20.60 Clearing		0	0	0	0	21,600	21,600	
20.70 Temporary Access Road		0	0	0	0	163,216	163,216	
20.72 Maint. & Protection of Traffic		0	164,613	0	0	0	164,613	
TOTAL Mobilization		0	174,891	5,400	8,438	217,216	405,944	
32 Pumping bypass at cobble reach								
32.10 Setup & Teardown Pumping System	3.00 EA	0	12,982	147,080	216,000	102,705	478,767	159588.87
32.15 Setup & Teardown Diversion Dams	3.00 EA	0	12,982	8,363	5,103	0	26,447	8815.70
32.20 Operate and Maintain Bypass Sys.	13.25 MO	0	207,887	1335250	435,905	0	1,979,042	149361.65
TOTAL Pumping bypass at cobble reach		0	233,851	1490693	657,008	102,705	2,484,256	
34 Dewatering of river bed								
34.10 Dewatering of river bed		0	9,195	1,825	1,403	0	12,423	
34.20 Setup/Teardown Seepage WTS		0	14,482	1,825	2,400	9,000	27,707	
34.22 O & M of Seepage WTS		0	111,368	0	237,524	54,855	403,747	
TOTAL Dewatering of river bed		0	135,045	3,650	241,327	63,855	443,877	
40 Excavate & Transport Sed./Soils								
40.10 Excavate Bed Sediments	20915.00 CY	0	172,390	115,050	28,000	290,100	605,540	28.95
40.15 ALLOWANCE Down Time Bed Exc.		0	0	35,400	0	0	35,400	
40.20 Excavate Bank Soils	23695.00 CY	0	168,812	123,900	31,600	271,875	596,187	25.16
40.25 ALLOWANCE Down Time Bank Exc.		0	0	4,425	0	0	4,425	
40.40 O & M Truck Decon Facilities		0	55,060	0	0	0	55,060	
TOTAL Excavate & Transport Sed./Soils		0	396,261	278,775	59,600	561,975	1,296,611	
42 Dewatering of Excavated Material								
42.10 Manage Drying Area	13.25 MO	0	126,138	115,863	7,275	0	249,275	18813.24
42.20 O & M WTS	13.25 MO	0	115,611	0	111,979	34,844	262,434	19806.31
TOTAL Dewatering of Excavated Material		0	241,749	115,863	119,254	34,844	511,709	
46 Sampling								

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46.20 Characterization Sampling		0	0	0	0	108,640	108,640	
TOTAL Sampling		0	0	0	0	108,640	108,640	
60 Restoration of River Bed								
60.10 Import/Place River Bed Backfill		0	110,885	169,650	205,053	0	485,587	
60.15 ALLOWANCE Down Time Bed Backfill		0	0	52,200	0	0	52,200	
TOTAL Restoration of River Bed		0	110,885	221,850	205,053	0	537,787	
62 Restoration of River Bank								
62.12 Import & Place Fill Material		0	133,278	182,700	262,488	0	578,465	
62.15 ALLOWANCE Down Time Bank Backfil		0	0	6,525	0	0	6,525	
62.20 Restoration		0	37,971	16,300	132,870	907,760	1,094,902	
TOTAL Restoration of River Bank		0	171,249	205,525	395,358	907,760	1,679,892	
TOTAL GE-Pittsfield EE/CA Recomm. Alt.	1.00 EA	0	1463930	2321755	1686036	1996994	7,468,715	7468715
Contractor Management							746,872	
SUBTOTAL							8,215,587	
Field Overhead							492,935	
SUBTOTAL							8,708,522	
Home Office Overhead							1,306,278	
SUBTOTAL							10,014,801	
Profit							500,740	
TOTAL INCL INDIRECTS							10,515,541	
Contingency							2,628,885	
SUBTOTAL							13,144,426	
Engineering and Design							788,666	
SUBTOTAL							13,933,091	
USACE Construction Management							1,114,647	
TOTAL INCL OWNER COSTS							15,047,739	

20. Mobilization

20.30. Install Temporary Fence	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20. Mobilization									
20.30. Install Temporary Fence									
USR GC Temporary Fence			0.00	0.00	0.00	0.00	3.38	3.38	
MEANS Site Work and Landscape Cost Data 1999 Temporary fence page 118	5000.00	LF	0	0	0	0	16,900	16,900	3.38
USR GC Remove wood fence			0.00	0.00	0.00	0.00	1.25	1.25	
MEANS Site Work and Landscape Cost Data 1999 Remove wood fence page 29	5000.00	LF	0	0	0	0	6,250	6,250	1.25
TOTAL Install Temporary Fence	5000.00	LF	0	0	0	0	23,150	23,150	4.63

20.50. Erosion & Sedimentation Control	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.50. Erosion & Sedimentation Control									
20.50.10. Install Silt Fence									
MEANS Site Work and Landscape Cost Data 1999									
Silt Fence Installation pg 58 and Excavating, Utility Trench pg 52									
Trenching $0.54/lf									
Install silt fence $0.88/lf									
Backfill trench $0.43/lf									
TOTAL $1.85/lf									
TOTAL Install Silt Fence	5000.00	LF	0	0	0	0	9,250	9,250	1.85
20.50.30. Turbidity Barrier									
Turbidity Barrier									
Assume barriers placed across river every 100 lf, for entire EE/CA length.									
2500 lf / 1/100 lf = 25 barriers x 50 ft/barrier = 1250 lf									
USR GC Truck Crane			0.00	0.00	5400.00	0.00	0.00	5400.00	
	1.00	MO	0	0	5,400	0	0	5,400	5400.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	304.00	HR	0	7,165	0	0	0	7,165	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	102.00	HR	0	3,113	0	0	0	3,113	30.52
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	12.00	DA	0	0	0	2,400	0	2,400	200.00
USR GC Turbidity Barrier			0.00	0.00	0.00	4.83	0.00	4.83	
	1250.00	LF	0	0	0	6,038	0	6,038	4.83
TOTAL Turbidity Barrier	1250.00	LF	0	10,278	5,400	8,438	0	24,116	19.29
TOTAL Erosion & Sedimentation Control			0	10,278	5,400	8,438	9,250	33,366	

20.60. Clearing	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.60. Clearing									
20.60.10. Clearing									
MEANS Site Work and Landscape Cost Data 1999									
Cut & Chip medium, trees to 12" dia. pg 39									
TOTAL Clearing	4.00	AC	0	0	0	0	21,600	21,600	5400.00
TOTAL Clearing			0	0	0	0	21,600	21,600	

20.70. Temporary Access Road	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.70. Temporary Access Road									
20.70.10. Construct Temporary Access Road									
MEANS Site Work and Landscape Cost Data 1999									
Roads, gravel fill, no surfacing, 8" depth, pg 15									
Geotextile included in unit price, pg 57									
Temporary Road $5.60 /sy									
Geotextile $1.43 /sy									
Total $7.03 /sy									
TOTAL Construct Temporary Access Road	7230.00	SY	0	0	0	0	50,827	50,827	7.03
20.70.20. Remove Temporary Access Road									
MEANS Site Work and Landscape Cost Data 1999									
Pavement removal, bituminuous roads, 3" thick, pg 30									
Assume remove during excavation activities.									
TOTAL Remove Temporary Access Road	7230.00	SY	0	0	0	0	27,619	27,619	3.82
20.70.30. T & D of Access Road Materials									
Access road assume to be 8" thick and cover 21700 sy									
((7230 sy x 9 sf/sy x 0.67 ft) / 27 cf/cy) x 1.5 tn/cy = 2422 tn									
Assume able to dispose of material as landfill cover.									
Material loaded during removal activity.									
USR GC Trans Landfill Cover			0.00	0.00	0.00	0.00	20.00	20.00	
	2422.00	TN	0	0	0	0	48,440	48,440	20.00
USR GC Disposal Landfill Cover			0.00	0.00	0.00	0.00	15.00	15.00	
	2422.00	TN	0	0	0	0	36,330	36,330	15.00
TOTAL T & D of Access Road Materials			0	0	0	0	84,770	84,770	
TOTAL Temporary Access Road			0	0	0	0	163,216	163,216	

20.72. Maint. & Protection of Traffic	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.72. Maint. & Protection of Traffic									
Assume maintenance and protection of traffic full time during excavation and backfill activities, two flagmen full time.									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	6984.00	HR	0	164,613	0	0	0	164,613	23.57
TOTAL Maint. & Protection of Traffic			0	164,613	0	0	0	164,613	
TOTAL Mobilization			0	174,891	5,400	8,438	217,216	405,944	

32. Pumping bypass at cobble reach

32.10. Setup & Teardown Pumping System	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32. Pumping bypass at cobble reach									
32.10. Setup & Teardown Pumping System									
USR GC Godwin Pump Delivery			0.00	0.00	16150.00	0.00	0.00	16150.00	
	1.00	LS	0	0	16,150	0	0	16,150	16150.00
USR GC Pumps and Piping 1st Month Rent Godwin Quotation dated July 9, 1999.			0.00	0.00	121668	0.00	0.00	121667.50	
	1.00	MO	0	0	121,668	0	0	121,668	121667.50
USR GC Diesel Pump Enclosures			0.00	0.00	0.00	18000.00	0.00	18000.00	
	12.00	EA	0	0	0	216,000	0	216,000	18000.00
USR GC Truck Crane			0.00	0.00	435.00	0.00	0.00	435.00	
	15.00	DA	0	0	6,525	0	0	6,525	435.00
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.75	MO	0	0	2,738	0	0	2,738	3650.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	240.00	HR	0	5,657	0	0	0	5,657	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	240.00	HR	0	7,325	0	0	0	7,325	30.52
USR GC Godwin Pump Setup System Includes travel to site, labor, and service truck for assisting in setup of pump and piping system.			0.00	0.00	0.00	0.00	34235	34235.00	
	3.00	EA	0	0	0	0	102,705	102,705	34235.00
TOTAL Setup & Teardown Pumping System	3.00	EA	0	12,982	147,080	216,000	102,705	478,767	159588.87

32. Pumping bypass at cobble reach

32.15. Setup & Teardown Diversion Dams	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32.15. Setup & Teardown Diversion Dams Assume reuse gravel material.									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.75	MO	0	0	2,738	0	0	2,738	3650.00
USR GC Excavator			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.75	MO	0	0	5,625	0	0	5,625	7500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	240.00	HR	0	5,657	0	0	0	5,657	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	240.00	HR	0	7,325	0	0	0	7,325	30.52
USR GC PVC Liner			0.00	0.00	0.00	0.60	0.00	0.60	
	1380.00	SY	0	0	0	828	0	828	0.60
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
	100.00	CY	0	0	0	1,775	0	1,775	17.75
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	500.00	CY	0	0	0	2,500	0	2,500	5.00
TOTAL Setup & Teardown Diversion Dams	3.00	EA	0	12,982	8,363	5,103	0	26,447	8815.70

32.20. Operate and Maintain Bypass Sys.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
32.20. Operate and Maintain Bypass Sys. Assume operate for 9 months.									
USR GC Pumps and Piping after 1st month rental, monthly rate Godwin Quotation dated July 9, 1999.	12.25	MO	0.00 0	0.00 0	109000 1335250	0.00 0	0.00 0	109000.00 1,335,250	109000.00
USR GC Laborer Assume 24 hour/day operation	8820.00	HR	0.00 0	23.57 207,887	0.00 0	0.00 0	0.00 0	23.57 207,887	23.57
USR GC Fuel Assume use off-road vehicle diesel fuel.	660430	GL	0.00 0	0.00 0	0.00 0	0.65 429,280	0.00 0	0.65 429,280	0.65
USR GC Misc. Materials (monthly)	13.25	MO	0.00 0	0.00 0	0.00 0	500.00 6,625	0.00 0	500.00 6,625	500.00
TOTAL Operate and Maintain Bypass Sys.	13.25	MO	0	207,887	1335250	435,905	0	1,979,042	149361.65
TOTAL Pumping bypass at cobble reach			0	233,851	1490693	657,008	102,705	2,484,256	

34.10. Dewatering of river bed	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34. Dewatering of river bed									
Dewater bypassed sheet pile cells.									
Assume 6 moves. Assume two days each move									
34.10. Dewatering of river bed									
34.10.10. Setup, Maintain, & Teardown									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50	MO	0	0	1,825	0	0	1,825	3650.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	170.00	HR	0	4,007	0	0	0	4,007	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	170.00	HR	0	5,188	0	0	0	5,188	30.52
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
	85.00	CY	0	0	0	1,403	0	1,403	16.50
TOTAL Setup, Maintain, & Teardown	12.00	MO	0	9,195	1,825	1,403	0	12,423	1035.23
TOTAL Dewatering of river bed			0	9,195	1,825	1,403	0	12,423	

34.20. Setup/Teardown Seepage WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.20. Setup/Teardown Seepage WTS									
Assume 6 setup/teardown events, two days each, total 12 days.									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50	MO	0	0	1,825	0	0	1,825	3650.00
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	12.00	DA	0	0	0	2,400	0	2,400	200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	170.00	HR	0	4,007	0	0	0	4,007	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	170.00	HR	0	5,188	0	0	0	5,188	30.52
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	86.00	HR	0	2,633	0	0	0	2,633	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	86.00	HR	0	2,653	0	0	0	2,653	30.85
USR GC Truck w/ Flatbed Trailer			0.00	0.00	0.00	0.00	750.00	750.00	
	12.00	DA	0	0	0	0	9,000	9,000	750.00
TOTAL Setup/Teardown Seepage WTS			0	14,482	1,825	2,400	9,000	27,707	

34.22. O & M of Seepage WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.22. O & M of Seepage WTS									
Electricity - ALLOWANCE $/mo assume $1500/mo									
Carbon - Assume one change per month 1760# x 6 units x 13.25 months = 139920#									
Bag Filter Bags - Assume 2 bags per filter per day x 4 filters x 1 shift x 3 years x 365 days/yr = 3224 bags.									
USR GC Frak Tank 21,000 gal (monthly)			0.00	0.00	0.00	1100.00	0.00	1100.00	
	39.75	MO	0	0	0	43,725	0	43,725	1100.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day. Operates pumping system and seepage WTS.	4725.00	HR	0	111,368	0	0	0	111,368	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	1.28	0.00	1.28	
	139920	LB	0	0	0	179,098	0	179,098	1.28
USR GC Bag Filter Bags			0.00	0.00	0.00	4.56	0.00	4.56	
	3224.00	EA	0	0	0	14,701	0	14,701	4.56
USR GC ALLOWANCE Elec Svs for WTS #2			0.00	0.00	0.00	0.00	1500.00	1500.00	
	13.25	MO	0	0	0	0	19,875	19,875	1500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	139920	LB	0	0	0	0	34,980	34,980	0.25
TOTAL O & M of Seepage WTS			0	111,368	0	237,524	54,855	403,747	
TOTAL Dewatering of river bed			0	135,045	3,650	241,327	63,855	443,877	

40.10. Excavate Bed Sediments	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40. Excavate & Transport Sed./Soils									
40.10. Excavate Bed Sediments									
Estimated duration to excavate 20,915 cy based on 150 cy per = 140 days = 6.5 months									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	6.50	MO	0	0	48,750	0	0	48,750	7500.00
USR GC Dump Truck (2)			0.00	0.00	0.00	0.00	75.00	75.00	
	2468.00	HR	0	0	0	0	185,100	185,100	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	6.50	MO	0	0	66,300	0	0	66,300	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	2468.00	HR	0	75,323	0	0	0	75,323	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	2468.00	HR	0	58,171	0	0	0	58,171	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	140.00	DA	0	0	0	28,000	0	28,000	200.00
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	1234.00	HR	0	38,896	0	0	0	38,896	31.52
USR GC Roll-Off Truck w/ Sludge Box (1)			0.00	0.00	0.00	0.00	750.00	750.00	
	140.00	DA	0	0	0	0	105,000	105,000	750.00
TOTAL Excavate Bed Sediments	20915	CY	0	172,390	115,050	28,000	290,100	605,540	28.95

40.15. ALLOWANCE Down Time Bed Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.15. ALLOWANCE Down Time Bed Exc.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.00	MO	0	0	15,000	0	0	15,000	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	2.00	MO	0	0	20,400	0	0	20,400	10200.00
TOTAL ALLOWANCE Down Time Bed Exc.			0	0	35,400	0	0	35,400	

40.20. Excavate Bank Soils	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.20. Excavate Bank Soils									
Estimated duration to excavate 23,695 cy based on 150 cy per day = 158 days									
= 7.0 months									
Includes removal of concrete and misc. structures along river bank.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	7.00	MO	0	0	52,500	0	0	52,500	7500.00
USR GC Dump Truck (3)			0.00	0.00	0.00	0.00	75.00	75.00	
	3625.00	HR	0	0	0	0	271,875	271,875	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	7.00	MO	0	0	71,400	0	0	71,400	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	2417.00	HR	0	73,767	0	0	0	73,767	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	2417.00	HR	0	56,969	0	0	0	56,969	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	158.00	DA	0	0	0	31,600	0	31,600	200.00
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	1208.00	HR	0	38,076	0	0	0	38,076	31.52
TOTAL Excavate Bank Soils	23695	CY	0	168,812	123,900	31,600	271,875	596,187	25.16

40.25. ALLOWANCE Down Time Bank Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.25. ALLOWANCE Down Time Bank Exc.									
Assume down time 7 months x 5% = 0.35 months, say 0.25 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.25	MO	0	0	2,550	0	0	2,550	10200.00
TOTAL ALLOWANCE Down Time Bank Exc.			0	0	4,425	0	0	4,425	

40.40. O & M Truck Decon Facilities	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.40. O & M Truck Decon Facilities									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
13.25 mos x 22da/mo x 8= 6336	2336.00	HR	0	55,060	0	0	0	55,060	23.57
TOTAL O & M Truck Decon Facilities			0	55,060	0	0	0	55,060	
TOTAL Excavate & Transport Sed./Soils			0	396,261	278,775	59,600	561,975	1,296,611	

42.10. Manage Drying Area	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42. Dewatering of Excavated Material									
42.10. Manage Drying Area									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	13.25	MO	0	0	48,363	0	0	48,363	3650.00
USR GC Screen (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	9.00	MO	0	0	67,500	0	0	67,500	7500.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	2332.00	HR	0	71,173	0	0	0	71,173	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	2332.00	HR	0	54,965	0	0	0	54,965	23.57
USR GC Silt Sack			0.00	0.00	0.00	25.00	0.00	25.00	
	291.00	EA	0	0	0	7,275	0	7,275	25.00
TOTAL Manage Drying Area	13.25	MO	0	126,138	115,863	7,275	0	249,275	18813.24

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42.20. O & M WTS									
Operation and Maintenance of water treatment system									
Electricity - ALLOWANCE $/mo assume $500/mo									
Carbon - Assume one change per month 1760# x 2 units x 13.25 months = 46640#									
Bag Filter Bags - Assume 4 bags per filter per shift x 4 filters x 1 shifts per day = 6448									
Assume weekly sampling.									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day.	4905.00	HR	0	115,611	0	0	0	115,611	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	2.00	0.00	2.00	
	46640	LB	0	0	0	93,280	0	93,280	2.00
USR GC Bag Filter Bags			0.00	0.00	0.00	2.90	0.00	2.90	
	6448.00	EA	0	0	0	18,699	0	18,699	2.90
USR GC ALLOWANCE Elec Svc for WTS			0.00	0.00	0.00	0.00	500.00	500.00	
	13.25	MO	0	0	0	0	6,625	6,625	500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	46640	LB	0	0	0	0	11,660	11,660	0.25
USR GC Anal. TSS			0.00	0.00	0.00	0.00	30.00	30.00	
	57.00	EA	0	0	0	0	1,710	1,710	30.00
USR GC Anal. O & G			0.00	0.00	0.00	0.00	30.00	30.00	
	57.00	EA	0	0	0	0	1,710	1,710	30.00
USR GC Anal. Phenol			0.00	0.00	0.00	0.00	30.00	30.00	
	57.00	EA	0	0	0	0	1,710	1,710	30.00
USR GC Anal. Settable Solids			0.00	0.00	0.00	0.00	30.00	30.00	
	57.00	EA	0	0	0	0	1,710	1,710	30.00
USR GC Anal. PCBs			0.00	0.00	0.00	0.00	132.50	132.50	
	57.00	EA	0	0	0	0	7,553	7,553	132.50
USR GC Anal. Iron (total)			0.00	0.00	0.00	0.00	30.00	30.00	
	57.00	EA	0	0	0	0	1,710	1,710	30.00
USR GC Anal. pH			0.00	0.00	0.00	0.00	8.00	8.00	
	57.00	EA	0	0	0	0	456	456	8.00
USR GC Anal. Temp. (field measurement)			0.00	0.00	0.00	0.00	0.00	0.00	
	57.00	EA	0	0	0	0	0	0	0.00

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL O & M WTS	13.25	MO	0	115,611	0	111,979	34,844	262,434	19806.31
TOTAL Dewatering of Excavated Material			0	241,749	115,863	119,254	34,844	511,709	

46. Sampling

46.20. Characterization Sampling	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46. Sampling									
46.20. Characterization Sampling									
USR GC PCB Analysis (1/150 tn)			0.00	0.00	0.00	0.00	132.50	132.50	
	414.00	EA	0	0	0	0	54,855	54,855	132.50
USR GC TCLP Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	1095.00	1095.00	
	31.00	EA	0	0	0	0	33,945	33,945	1095.00
USR GC Dioxin Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	400.00	400.00	
	31.00	EA	0	0	0	0	12,400	12,400	400.00
USR GC RCRA Characteristics (1/2000 tn)			0.00	0.00	0.00	0.00	215.00	215.00	
	31.00	EA	0	0	0	0	6,665	6,665	215.00
USR GC pH (1/2000 tn)			0.00	0.00	0.00	0.00	15.00	15.00	
	31.00	EA	0	0	0	0	465	465	15.00
USR GC Moisture Content (1/2000 tn)			0.00	0.00	0.00	0.00	10.00	10.00	
	31.00	EA	0	0	0	0	310	310	10.00
TOTAL Characterization Sampling			0	0	0	0	108,640	108,640	
TOTAL Sampling			0	0	0	0	108,640	108,640	

60. Restoration of River Bed

60.10. Import/Place River Bed Backfill	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60. Restoration of River Bed								
60.10. Import/Place River Bed Backfill								
Assume able to use screened and pressure washed stones for rip-rap.								
USR GC Dozer (monthly)		0.00	0.00	4500.00	0.00	0.00	4500.00	
	6.50 MO	0	0	29,250	0	0	29,250	4500.00
USR GC Compactor (monthly)		0.00	0.00	3900.00	0.00	0.00	3900.00	
	6.50 MO	0	0	25,350	0	0	25,350	3900.00
USR GC Excavator (monthly)		0.00	0.00	7500.00	0.00	0.00	7500.00	
	6.50 MO	0	0	48,750	0	0	48,750	7500.00
USR GC Excavator, Long Reach (monthly)		0.00	0.00	10200.00	0.00	0.00	10200.00	
	6.50 MO	0	0	66,300	0	0	66,300	10200.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	2050.00 HR	0	48,319	0	0	0	48,319	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	2050.00 HR	0	62,566	0	0	0	62,566	30.52
USR GC Misc. Daily Expenses		0.00	0.00	0.00	200.00	0.00	200.00	
	291.00 DA	0	0	0	58,200	0	58,200	200.00
USR GC Fill Material		0.00	0.00	0.00	5.00	0.00	5.00	
	4450.00 CY	0	0	0	22,250	0	22,250	5.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	3623.00 CY	0	0	0	59,780	0	59,780	16.50
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	3652.00 CY	0	0	0	64,823	0	64,823	17.75
TOTAL Import/Place River Bed Backfill		0	110,885	169,650	205,053	0	485,587	

60.15. ALLOWANCE Down Time Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60.15. ALLOWANCE Down Time Bed Backfill									
Assume down time 3.25 months x 30% (bypass excavation)= 0.975 months, say 1 month.									
Assume down time 11.5 months x 10% (sheet pile areas)= 1.15 months, say 1.25 months.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	2.00	MO	0	0	9,000	0	0	9,000	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	2.00	MO	0	0	7,800	0	0	7,800	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.00	MO	0	0	15,000	0	0	15,000	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	2.00	MO	0	0	20,400	0	0	20,400	10200.00
TOTAL ALLOWANCE Down Time Bed Backfill			0	0	52,200	0	0	52,200	
TOTAL Restoration of River Bed			0	110,885	221,850	205,053	0	537,787	

62.12. Import & Place Fill Material	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62. Restoration of River Bank									
62.12. Import & Place Fill Material									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	7.00	MO	0	0	31,500	0	0	31,500	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	7.00	MO	0	0	27,300	0	0	27,300	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	7.00	MO	0	0	52,500	0	0	52,500	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	7.00	MO	0	0	71,400	0	0	71,400	10200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	2464.00	HR	0	58,076	0	0	0	58,076	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	2464.00	HR	0	75,201	0	0	0	75,201	30.52
USR GC Misc. Daily Expenses			0.00	0.00	0.00	200.00	0.00	200.00	
	158.00	DA	0	0	0	31,600	0	31,600	200.00
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	22939	CY	0	0	0	114,695	0	114,695	5.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	1760.00	CY	0	0	0	29,040	0	29,040	16.50
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	4910.00	CY	0	0	0	87,153	0	87,153	17.75
TOTAL Import & Place Fill Material			0	133,278	182,700	262,488	0	578,465	

62.15. ALLOWANCE Down Time Bank Backfil	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.15. ALLOWANCE Down Time Bank Backfil									
Assume down time 7 months x 5% = 0.35 months, say 0.25 months.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.25	MO	0	0	1,125	0	0	1,125	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	0.25	MO	0	0	975	0	0	975	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.25	MO	0	0	2,550	0	0	2,550	10200.00
TOTAL ALLOWANCE Down Time Bank Backfil			0	0	6,525	0	0	6,525	

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.20. Restoration								
62.20.10. Revegetation								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.66 MO	0	0	2,409	0	0	2,409	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.66 MO	0	0	2,970	0	0	2,970	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	234.00 HR	0	5,515	0	0	0	5,515	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	234.00 HR	0	7,142	0	0	0	7,142	30.52
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	1996.00 SY	0	0	0	2,415	0	2,415	1.21
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	15962 SY	0	0	0	6,704	0	6,704	0.42
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	1996.00 CY	0	0	0	35,429	0	35,429	17.75
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 127	51216 SF	0	0	0	0	2,561	2,561	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3', pg 160 Planting, potted heavy or stoney soil, pg 130	817.00 EA	0	0	0	0	21,789	21,789	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999 Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130	2048.00 EA	0	0	0	0	339,968	339,968	166.00
USR GC Vines		0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999 Ground covers, vines and	335.00 EA	0	0	0	0	834	834	2.49

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
climbing plants, pg 175 Planting, plotted, 3" dia. pg 130								
TOTAL Revegetation	7584.00 SF	0	12,657	5,379	44,548	365,152	427,737	56.40
62.20.20. Bioengineering								
USR GC Front End Loader		0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67 MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer		0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67 MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer		0.00	23.57	0.00	0.00	0.00	23.57	
	234.00 HR	0	5,515	0	0	0	5,515	23.57
USR GC Operator		0.00	30.52	0.00	0.00	0.00	30.52	
	234.00 HR	0	7,142	0	0	0	7,142	30.52
USR GC Geotextile		0.00	0.00	0.00	0.42	0.00	0.42	
	2803.00 SY	0	0	0	1,177	0	1,177	0.42
USR GC Misc. Daily Material		0.00	0.00	0.00	200.00	0.00	200.00	
	14.00 DA	0	0	0	2,800	0	2,800	200.00
USR GC 3/4" Gravel		0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	900.00 CY	0	0	0	14,850	0	14,850	16.50
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	3316.00 SY	0	0	0	1,326	0	1,326	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	737.00 CY	0	0	0	13,082	0	13,082	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	18914 SY	0	0	0	22,886	0	22,886	1.21
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	25225 SY	0	0	0	0	1,261	1,261	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999	737.00 EA	0	0	0	0	19,656	19,656	26.67

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
Shrubs, Cornus mas, 2' to 3' pg 160.									
USR GC Trees			0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	1009.00	EA	0	0	0	0	167,494	167,494	166.00
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	156.00	EA	0	0	0	0	388	388	2.49
TOTAL Bioengineering	66641	SF	0	12,657	5,461	56,121	188,799	263,038	3.95
62.20.30. Hard Structures									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67	MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67	MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	234.00	HR	0	5,515	0	0	0	5,515	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	234.00	HR	0	7,142	0	0	0	7,142	30.52
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	3651.00	SY	0	0	0	1,533	0	1,533	0.42
USR GC Misc. Daily Material			0.00	0.00	0.00	200.00	0.00	200.00	
	14.00	DA	0	0	0	2,800	0	2,800	200.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	1118.00	CY	0	0	0	18,447	0	18,447	16.50
USR GC 6" dia. PE Perf. Pipe			0.00	0.00	0.00	0.51	0.00	0.51	
	1466.00	LF	0	0	0	748	0	748	0.51

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC 6" dia. PE Pipe Cplg.		0.00	0.00	0.00	1.65	0.00	1.65	
	2.00 EA	0	0	0	3	0	3	1.65
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	7652.00 SY	0	0	0	3,061	0	3,061	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	241.00 CY	0	0	0	4,278	0	4,278	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	1100.00 SY	0	0	0	1,331	0	1,331	1.21
USR GC Concrete Foundation		0.00	0.00	0.00	0.00	168.00	168.00	
MEANS Site Work and Landscape Cost Data 1999 Concrete in place including forms and reinforcing, footings strip, 36" x 12", reinforced pg 207	214.00 CY	0	0	0	0	35,952	35,952	168.00
USR GC Interlock. Segmental Block Wall		0.00	0.00	0.00	0.00	12.05	12.05	
MEANS Site Work and Landscape Cost Data 1999 Retaining walls, segmental wall system, interlocking including installation, pg 59.	22953 SF	0	0	0	0	276,584	276,584	12.05
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	13050 SY	0	0	0	0	653	653	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3' pg 160.	421.00 EA	0	0	0	0	11,228	11,228	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	174.00 EA	0	0	0	0	28,884	28,884	166.00

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	204.00	EA	0	0	0	0	508	508	2.49
TOTAL Hard Structures	9900.00	SF	0	12,657	5,461	32,201	353,808	404,127	40.82
TOTAL Restoration			0	37,971	16,300	132,870	907,760	1,094,902	
TOTAL Restoration of River Bank			0	171,249	205,525	395,358	907,760	1,679,892	
TOTAL GE-Pittsfield EE/CA Recomm. Alt.	1.00	EA	0	1463930	2321755	1686036	1996994	7,468,715	7468715

APPENDIX E.4

RECOMMENDED REMOVAL ALTERNATIVE: PHASE III, TRANSECT 168 TO CONFLUENCE

GE-Pittsfield EE/CA Recomm. Alt.
Roy F. Weston, Inc.
Phase III: Transect 168 to
Confluence

Designed By: Roy F. Weston Inc.
Estimated By: Dan Moretz (610) 701-3176

Prepared By: Roy F. Weston Inc.
West Chester, Pa

Preparation Date: 10/02/00
Effective Date of Pricing: 10/02/00

Sales Tax: 0.00%

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Release 5.30

GE-Pittsfield Recommended Alternative

Dry excavation to meet cleanup criteria. For the segment of river from T64 to T96 and T168 to river diversion using sheetpiling. For the segment T96 to T168 river diversion by pumping through a piping bypass. See section 6.3 of EE/CA for written description of recommended alternative.

See section 5.3 of EE/CA report for written description of activities.

Project Information	
Escalation	0.00%
Contingency	25.00%
Engineering and Design	6.00%
USACE Construction Management	8.00%

General Contractor	
Contractor Management	10.00%
Field Overhead	6.00%
Home Office Overhead	15.00%
Profit	5.00%
Bond	0.00%

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		QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
20	Mobilization		864,593	0	216,148	64,845	91,647	0	1,237,233	
30	Install Sheetpi		1,435,127	0	358,782	107,635	152,123	0	2,053,667	
34	Dewatering of r		648,033	0	162,008	48,602	68,692	0	927,336	
40	Excavate & Tran		1,293,994	0	323,499	97,050	137,163	0	1,851,706	
42	Dewatering of E		644,759	0	161,190	48,357	68,344	0	922,651	
46	Sampling		102,600	0	25,650	7,695	10,876	0	146,821	
60	Restoration of		506,634	0	126,659	37,998	53,703	0	724,994	
62	Restoration of		2,107,953	0	526,988	158,096	223,443	0	3,016,481	
	GE-Pittsfield E	1.00 EA	7,603,696	0	1,900,924	570,277	805,992	0	10,880,888	10880888

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
20 Mobilization									
20.30 Install Temp	5000.00 LF	32,594	0	8,148	2,445	3,455	0	46,642	9.33
20.50 Erosion & Se		43,414	0	10,854	3,256	4,602	0	62,126	
20.60 Clearing		38,015	0	9,504	2,851	4,030	0	54,399	
20.70 Temporary Ac		229,798	0	57,450	17,235	24,359	0	328,842	
20.72 Maint. & Pro		238,934	0	59,733	17,920	25,327	0	341,914	
20.90 Demobilizati		115,588	0	28,897	8,669	12,252	0	165,406	
20.92 Pavement Res	8000.00 SY	166,250	0	41,563	12,469	17,623	0	237,904	29.74
TOTAL Mobilization		864,593	0	216,148	64,845	91,647	0	1,237,233	
30 Install Sheetpi									
30.10 Install & Re	85680.00 SF	1,435,127	0	358,782	107,635	152,123	0	2,053,667	23.97
TOTAL Install Shee		1,435,127	0	358,782	107,635	152,123	0	2,053,667	
34 Dewatering of r									
34.10 Dewatering o		17,590	0	4,398	1,319	1,865	0	25,171	
34.20 Setup/Teardo		38,999	0	9,750	2,925	4,134	0	55,808	
34.22 O & M of See		591,444	0	147,861	44,358	62,693	0	846,357	
TOTAL Dewatering o		648,033	0	162,008	48,602	68,692	0	927,336	
40 Excavate & Tran									
40.10 Excavate Bed	13597.00 CY	626,069	0	156,517	46,955	66,363	0	895,904	65.89
40.15 ALLOWANCE Do		12,460	0	3,115	935	1,321	0	17,831	
40.20 Excavate Ban	12229.00 CY	569,591	0	142,398	42,719	60,377	0	815,084	66.65
40.25 ALLOWANCE Do		6,230	0	1,558	467	660	0	8,915	
40.40 O & M Truck		79,645	0	19,911	5,973	8,442	0	113,971	
TOTAL Excavate & T		1,293,994	0	323,499	97,050	137,163	0	1,851,706	
42 Dewatering of E									
42.10 Manage Dryin	13.75 MO	265,623	0	66,406	19,922	28,156	0	380,107	27644.14
42.20 O & M WTS	13.75 MO	379,136	0	94,784	28,435	40,188	0	542,544	39457.73
TOTAL Dewatering o		644,759	0	161,190	48,357	68,344	0	922,651	
46 Sampling									

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
46.20 Characteriza			102,600	0	25,650	7,695	10,876	0	146,821	
TOTAL Sampling			102,600	0	25,650	7,695	10,876	0	146,821	
60 Restoration of										
60.10 Import/Place			488,261	0	122,065	36,620	51,756	0	698,701	
60.15 ALLOWANCE Do			18,374	0	4,593	1,378	1,948	0	26,293	
TOTAL Restoration			506,634	0	126,659	37,998	53,703	0	724,994	
62 Restoration of										
62.12 Import & Pla			555,804	0	138,951	41,685	58,915	0	795,355	
62.15 ALLOWANCE Do			9,187	0	2,297	689	974	0	13,146	
62.20 Restoration			1,542,962	0	385,741	115,722	163,554	0	2,207,979	
TOTAL Restoration			2,107,953	0	526,988	158,096	223,443	0	3,016,481	
TOTAL GE-Pittsfiel	1.00	EA	7,603,696	0	1,900,924	570,277	805,992	0	10,880,888	10880888

** PROJECT INDIRECT SUMMARY - Scope **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
20 Mobilization		614,082	61,408	40,529	107,403	41,171	0	864,593	
30 Install Sheetpi		1,019,306	101,931	67,274	178,277	68,339	0	1,435,127	
34 Dewatering of r		460,269	46,027	30,378	80,501	30,859	0	648,033	
40 Excavate & Tran		919,066	91,907	60,658	160,745	61,619	0	1,293,994	
42 Dewatering of E		457,944	45,794	30,224	80,094	30,703	0	644,759	
46 Sampling		72,873	7,287	4,810	12,745	4,886	0	102,600	
60 Restoration of		359,840	35,984	23,749	62,936	24,125	0	506,634	
62 Restoration of		1,497,184	149,718	98,814	261,858	100,379	0	2,107,953	
GE-Pittsfield E	1.00 EA	5,400,563	540,056	356,437	944,558	362,081	0	7,603,696	7603696
Contingency								1,900,924	
SUBTOTAL								9,504,619	
Engineering and Design								570,277	
SUBTOTAL								10,074,897	
USACE Construction Management								805,992	
TOTAL INCL OWNER COSTS								10,880,888	

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
20 Mobilization									
20.30 Install Temp	5000.00 LF	23,150	2,315	1,528	4,049	1,552	0	32,594	6.52
20.50 Erosion & Se		30,835	3,084	2,035	5,393	2,067	0	43,414	
20.60 Clearing		27,000	2,700	1,782	4,722	1,810	0	38,015	
20.70 Temporary Ac		163,216	16,322	10,772	28,546	10,943	0	229,798	
20.72 Maint. & Pro		169,704	16,970	11,200	29,681	11,378	0	238,934	
20.90 Demobilizati		82,097	8,210	5,418	14,359	5,504	0	115,588	
20.92 Pavement Res	8000.00 SY	118,080	11,808	7,793	20,652	7,917	0	166,250	20.78
TOTAL Mobilization		614,082	61,408	40,529	107,403	41,171	0	864,593	
30 Install Sheetpi									
30.10 Install & Re	85680.00 SF	1,019,306	101,931	67,274	178,277	68,339	0	1,435,127	16.75
TOTAL Install Shee		1,019,306	101,931	67,274	178,277	68,339	0	1,435,127	
34 Dewatering of r									
34.10 Dewatering o		12,493	1,249	825	2,185	838	0	17,590	
34.20 Setup/Teardo		27,699	2,770	1,828	4,845	1,857	0	38,999	
34.22 O & M of See		420,076	42,008	27,725	73,471	28,164	0	591,444	
TOTAL Dewatering o		460,269	46,027	30,378	80,501	30,859	0	648,033	
40 Excavate & Tran									
40.10 Excavate Bed	13597.00 CY	444,668	44,467	29,348	77,773	29,813	0	626,069	46.04
40.15 ALLOWANCE Do		8,850	885	584	1,548	593	0	12,460	
40.20 Excavate Ban	12229.00 CY	404,555	40,455	26,701	70,757	27,123	0	569,591	46.58
40.25 ALLOWANCE Do		4,425	443	292	774	297	0	6,230	
40.40 O & M Truck		56,568	5,657	3,733	9,894	3,793	0	79,645	
TOTAL Excavate & T		919,066	91,907	60,658	160,745	61,619	0	1,293,994	
42 Dewatering of E									
42.10 Manage Dryin	13.75 MO	188,660	18,866	12,452	32,997	12,649	0	265,623	19318.06
42.20 O & M WTS	13.75 MO	269,283	26,928	17,773	47,098	18,054	0	379,136	27573.53
TOTAL Dewatering o		457,944	45,794	30,224	80,094	30,703	0	644,759	
46 Sampling									

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
46.20 Characteriza		72,873	7,287	4,810	12,745	4,886	0	102,600	
TOTAL Sampling		72,873	7,287	4,810	12,745	4,886	0	102,600	
60 Restoration of									
60.10 Import/Place		346,790	34,679	22,888	60,654	23,251	0	488,261	
60.15 ALLOWANCE Do		13,050	1,305	861	2,282	875	0	18,374	
TOTAL Restoration		359,840	35,984	23,749	62,936	24,125	0	506,634	
62 Restoration of									
62.12 Import & Pla		394,762	39,476	26,054	69,044	26,467	0	555,804	
62.15 ALLOWANCE Do		6,525	653	431	1,141	437	0	9,187	
62.20 Restoration		1,095,897	109,590	72,329	191,672	73,474	0	1,542,962	
TOTAL Restoration		1,497,184	149,718	98,814	261,858	100,379	0	2,107,953	
TOTAL GE-Pittsfiel	1.00 EA	5,400,563	540,056	356,437	944,558	362,081	0	7,603,696	7603696
Contingency								1,900,924	
SUBTOTAL								9,504,619	
Engineering and Design								570,277	
SUBTOTAL								10,074,897	
USACE Construction Management								805,992	
TOTAL INCL OWNER COSTS								10,880,888	

** PROJECT DIRECT SUMMARY - Scope **

		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20	Mobilization			0	222,949	25,000	19,938	346,196	614,082	
30	Install Sheetpile			0	0	0	228,480	790,826	1,019,306	
34	Dewatering of river bed			0	140,395	3,650	250,299	65,925	460,269	
40	Excavate & Transport Sed./Soils			0	290,841	190,275	43,000	394,950	919,066	
42	Dewatering of Excavated Material			0	247,569	50,188	123,782	36,405	457,944	
46	Sampling			0	0	0	0	72,873	72,873	
60	Restoration of River Bed			0	88,708	143,550	127,582	0	359,840	
62	Restoration of River Bank			0	133,332	153,407	302,366	908,079	1,497,184	
TOTAL	GE-Pittsfield EE/CA Recomm. Alt.	1.00	EA	0	1123794	566,069	1095446	2615254	5,400,563	5400563
	Contractor Management								540,056	
	SUBTOTAL								5,940,619	
	Field Overhead								356,437	
	SUBTOTAL								6,297,056	
	Home Office Overhead								944,558	
	SUBTOTAL								7,241,615	
	Profit								362,081	
	TOTAL INCL INDIRECTS								7,603,696	
	Contingency								1,900,924	
	SUBTOTAL								9,504,619	
	Engineering and Design								570,277	
	SUBTOTAL								10,074,897	
	USACE Construction Management								805,992	
	TOTAL INCL OWNER COSTS								10,880,888	

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20 Mobilization								
20.30 Install Temporary Fence	5000.00 LF	0	0	0	0	23,150	23,150	4.63
20.50 Erosion & Sedimentation Control		0	10,248	2,700	8,638	9,250	30,835	
20.60 Clearing		0	0	0	0	27,000	27,000	
20.70 Temporary Access Road		0	0	0	0	163,216	163,216	
20.72 Maint. & Protection of Traffic		0	169,704	0	0	0	169,704	
20.90 Demobilization		0	42,997	22,300	11,300	5,500	82,097	
20.92 Pavement Restoration	8000.00 SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization		0	222,949	25,000	19,938	346,196	614,082	
30 Install Sheetpile								
30.10 Install & Remove Sheetpile	85680.00 SF	0	0	0	228,480	790,826	1,019,306	11.90
TOTAL Install Sheetpile		0	0	0	228,480	790,826	1,019,306	
34 Dewatering of river bed								
34.10 Dewatering of river bed		0	9,249	1,825	1,419	0	12,493	
34.20 Setup/Teardown Seepage WTS		0	14,474	1,825	2,400	9,000	27,699	
34.22 O & M of Seepage WTS		0	116,672	0	246,480	56,925	420,076	
TOTAL Dewatering of river bed		0	140,395	3,650	250,299	65,925	460,269	
40 Excavate & Transport Sed./Soils								
40.10 Excavate Bed Sediments	13597.00 CY	0	121,818	88,500	21,800	212,550	444,668	32.70
40.15 ALLOWANCE Down Time Bed Exc.		0	0	8,850	0	0	8,850	
40.20 Excavate Bank Soils	12229.00 CY	0	112,455	88,500	21,200	182,400	404,555	33.08
40.25 ALLOWANCE Down Time Bank Exc.		0	0	4,425	0	0	4,425	
40.40 O & M Truck Decon Facilities		0	56,568	0	0	0	56,568	
TOTAL Excavate & Transport Sed./Soils		0	290,841	190,275	43,000	394,950	919,066	
42 Dewatering of Excavated Material								
42.10 Manage Drying Area	13.75 MO	0	130,898	50,188	7,575	0	188,660	13720.75
42.20 O & M WTS	13.75 MO	0	116,672	0	116,207	36,405	269,283	19584.24
TOTAL Dewatering of Excavated Material		0	247,569	50,188	123,782	36,405	457,944	
46 Sampling								

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46.20 Characterization Sampling			0	0	0	0	72,873	72,873	
TOTAL Sampling			0	0	0	0	72,873	72,873	
60 Restoration of River Bed									
60.10 Import/Place River Bed Backfill			0	88,708	130,500	127,582	0	346,790	
60.15 ALLOWANCE Down Time Bed Backfill			0	0	13,050	0	0	13,050	
TOTAL Restoration of River Bed			0	88,708	143,550	127,582	0	359,840	
62 Restoration of River Bank									
62.12 Import & Place Fill Material			0	95,198	130,500	169,064	0	394,762	
62.15 ALLOWANCE Down Time Bank Backfil			0	0	6,525	0	0	6,525	
62.20 Restoration			0	38,133	16,382	133,302	908,079	1,095,897	
TOTAL Restoration of River Bank			0	133,332	153,407	302,366	908,079	1,497,184	
TOTAL GE-Pittsfield EE/CA Recomm. Alt.	1.00	EA	0	1123794	566,069	1095446	2615254	5,400,563	5400563
Contractor Management								540,056	
SUBTOTAL								5,940,619	
Field Overhead								356,437	
SUBTOTAL								6,297,056	
Home Office Overhead								944,558	
SUBTOTAL								7,241,615	
Profit								362,081	
TOTAL INCL INDIRECTS								7,603,696	
Contingency								1,900,924	
SUBTOTAL								9,504,619	
Engineering and Design								570,277	
SUBTOTAL								10,074,897	
USACE Construction Management								805,992	
TOTAL INCL OWNER COSTS								10,880,888	

20.30. Install Temporary Fence	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20. Mobilization									
20.30. Install Temporary Fence									
USR GC Temporary Fence			0.00	0.00	0.00	0.00	3.38	3.38	
MEANS Site Work and Landscape Cost Data 1999 Temporary fence page 118	5000.00	LF	0	0	0	0	16,900	16,900	3.38
USR GC Remove wood fence			0.00	0.00	0.00	0.00	1.25	1.25	
MEANS Site Work and Landscape Cost Data 1999 Remove wood fence page 29	5000.00	LF	0	0	0	0	6,250	6,250	1.25
TOTAL Install Temporary Fence	5000.00	LF	0	0	0	0	23,150	23,150	4.63

20.50. Erosion & Sedimentation Control	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.50. Erosion & Sedimentation Control									
20.50.10. Install Silt Fence									
MEANS Site Work and Landscape Cost Data 1999									
Silt Fence Installation pg 58 and Excavating, Utility Trench pg 52									
Trenching $0.54/lf									
Install silt fence $0.88/lf									
Backfill trench $0.43/lf									
TOTAL $1.85/lf									
TOTAL Install Silt Fence	5000.00	LF	0	0	0	0	9,250	9,250	1.85
20.50.30. Turbidity Barrier									
Turbidity Barrier									
Assume barriers placed across river every 100 lf, for entire EE/CA length.									
2500 lf / 1/100 lf = 25 barriers x 50 ft/barrier = 1250 lf									
USR GC Truck Crane			0.00	0.00	5400.00	0.00	0.00	5400.00	
	0.50	MO	0	0	2,700	0	0	2,700	5400.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	304.00	HR	0	7,165	0	0	0	7,165	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	101.00	HR	0	3,083	0	0	0	3,083	30.52
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	13.00	DA	0	0	0	2,600	0	2,600	200.00
USR GC Turbidity Barrier			0.00	0.00	0.00	4.83	0.00	4.83	
	1250.00	LF	0	0	0	6,038	0	6,038	4.83
TOTAL Turbidity Barrier	1250.00	LF	0	10,248	2,700	8,638	0	21,585	17.27
TOTAL Erosion & Sedimentation Control			0	10,248	2,700	8,638	9,250	30,835	

20.60. Clearing	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.60. Clearing									
20.60.10. Clearing									
MEANS Site Work and Landscape Cost Data 1999									
Cut & Chip medium, trees to 12" dia. pg 39									
TOTAL Clearing	5.00	AC	0	0	0	0	27,000	27,000	5400.00
TOTAL Clearing			0	0	0	0	27,000	27,000	

20.70. Temporary Access Road	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.70. Temporary Access Road									
20.70.10. Construct Temporary Access Road									
MEANS Site Work and Landscape Cost Data 1999									
Roads, gravel fill, no surfacing, 8" depth, pg 15									
Geotextile included in unit price, pg 57									
Temporary Road $5.60 /sy									
Geotextile $1.43 /sy									
Total $7.03 /sy									
TOTAL Construct Temporary Access Road	7230.00	SY	0	0	0	0	50,827	50,827	7.03
20.70.20. Remove Temporary Access Road									
MEANS Site Work and Landscape Cost Data 1999									
Pavement removal, bituminuous roads, 3" thick, pg 30									
Assume remove during excavation activities.									
TOTAL Remove Temporary Access Road	7230.00	SY	0	0	0	0	27,619	27,619	3.82
20.70.30. T & D of Access Road Materials									
Access road assume to be 8" thick and cover 21700 sy									
((7230 sy x 9 sf/sy x 0.67 ft) / 27 cf/cy) x 1.5 tn/cy = 2422 tn									
Assume able to dispose of material as landfill cover.									
Material loaded during removal activity.									
USR GC Trans Landfill Cover			0.00	0.00	0.00	0.00	20.00	20.00	
	2422.00	TN	0	0	0	0	48,440	48,440	20.00
USR GC Disposal Landfill Cover			0.00	0.00	0.00	0.00	15.00	15.00	
	2422.00	TN	0	0	0	0	36,330	36,330	15.00
TOTAL T & D of Access Road Materials			0	0	0	0	84,770	84,770	
TOTAL Temporary Access Road			0	0	0	0	163,216	163,216	

20.72. Maint. & Protection of Traffic	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.72. Maint. & Protection of Traffic									
Assume maintenance and protection of traffic full time during excavation									
and backfill activities, two flagmen full time.									
791 days x 12hr/day x 2 flagmen = 18984									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	7200.00	HR	0	169,704	0	0	0	169,704	23.57
TOTAL Maint. & Protection of Traffic			0	169,704	0	0	0	169,704	

20.90. Demobilization	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.90. Demobilization									
TOTAL Demobilize Equipment	10.00	EA	0	0	0	0	3,000	3,000	300.00
20.90.20. Teardown Temporary Facilities									
Teardown Temporary Facilities include removal of trailers, removal of temporary utilites, removal of construction entrance, etc.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	2.00	MO	0	0	15,000	0	0	15,000	7500.00
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	2.00	MO	0	0	7,300	0	0	7,300	3650.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	704.00	HR	0	21,486	0	0	0	21,486	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	704.00	HR	0	16,593	0	0	0	16,593	23.57
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	80.00	HR	0	2,450	0	0	0	2,450	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	80.00	HR	0	2,468	0	0	0	2,468	30.85
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	44.00	DA	0	0	0	8,800	0	8,800	200.00
USR GC Misc. Electrical Materials			0.00	0.00	0.00	2500.00	0.00	2500.00	
	1.00	LS	0	0	0	2,500	0	2,500	2500.00
USR GC Misc. Plumbing Materials			0.00	0.00	0.00	0.00	2500.00	2500.00	
	1.00	LS	0	0	0	0	2,500	2,500	2500.00
TOTAL Teardown Temporary Facilities			0	42,997	22,300	11,300	2,500	79,097	
TOTAL Demobilization			0	42,997	22,300	11,300	5,500	82,097	

20.92. Pavement Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
20.92. Pavement Restoration									
MEANS Site Work and Landscape Cost Data 1999, pg 71									
TOTAL Pavement Restoration	8000.00	SY	0	0	0	0	118,080	118,080	14.76
TOTAL Mobilization			0	222,949	25,000	19,938	346,196	614,082	

30.10. Install & Remove Sheetpile	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

30. Install Sheetpile

30.10. Install & Remove Sheetpile

Quotation from South Jersey Gas Project August, 1999.
Sheetpile river in 400' sections, each block assumed to be 40' wide by 400' long.

Sheetpile length of river except cobble reach section.
Total river length 7300 lf - by-pass pumping length 3600 lf Phase 1)1600lf) =2100. Assume 28' sheetpile height x 2100 total length = 58,800 sf
Assume use sheetpile (3) times.

Cross sections assume reuse piles (3) times, 40' sides
2 ends x 40' each side x 28' depth = 2240 sf
# of setups 2100 lf / 400 sections = 5 + 1 = 6 setups
Total cross section sheetpile area required if do not reuse sheetpile
2240 sf x 6 setups x 2 sides = 26880 sf

Required quantity of sheetpile assuming install and remove 3X before requiring new sheetpile
58,800 sf + 26880 sf) / 3 uses = 28560 sf

Total sheetpile material quantity 28,560 sf
Total sheetpile installation and removal quantity = 85,680 sf

USR GC Sheet Pile Material			0.00	0.00	0.00	8.00	0.00	8.00	
	28560	SF	0	0	0	228,480	0	228,480	8.00
USR GC Sheet Pile Install (Subcontract)			0.00	0.00	0.00	0.00	6.00	6.00	
	85680	SF	0	0	0	0	514,080	514,080	6.00
USR GC Sheet Pile Remove (Subcontract)			0.00	0.00	0.00	0.00	3.23	3.23	
	85680	SF	0	0	0	0	276,746	276,746	3.23
TOTAL Install & Remove Sheetpile	85680	SF	0	0	0	228,480	790,826	1,019,306	11.90
TOTAL Install Sheetpile			0	0	0	228,480	790,826	1,019,306	

34.10. Dewatering of river bed	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34. Dewatering of river bed									
Dewater bypassed sheet pile cells.									
Assume 6 moves. Assume two days each move.									
34.10. Dewatering of river bed									
34.10.10. Setup, Maintain, & Teardown									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50	MO	0	0	1,825	0	0	1,825	3650.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	171.00	HR	0	4,030	0	0	0	4,030	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	171.00	HR	0	5,219	0	0	0	5,219	30.52
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
	86.00	CY	0	0	0	1,419	0	1,419	16.50
TOTAL Setup, Maintain, & Teardown	14.00	MO	0	9,249	1,825	1,419	0	12,493	892.39
TOTAL Dewatering of river bed			0	9,249	1,825	1,419	0	12,493	

34.20. Setup/Teardown Seepage WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.20. Setup/Teardown Seepage WTS									
Assume 6 setup/teardown events, two days each, total 12 days.									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.50	MO	0	0	1,825	0	0	1,825	3650.00
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	12.00	DA	0	0	0	2,400	0	2,400	200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	171.00	HR	0	4,030	0	0	0	4,030	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	171.00	HR	0	5,219	0	0	0	5,219	30.52
USR GC Electrician			0.00	30.62	0.00	0.00	0.00	30.62	
	85.00	HR	0	2,603	0	0	0	2,603	30.62
USR GC Pipefitter			0.00	30.85	0.00	0.00	0.00	30.85	
	85.00	HR	0	2,622	0	0	0	2,622	30.85
USR GC Truck w/ Flatbed Trailer			0.00	0.00	0.00	0.00	750.00	750.00	
	12.00	DA	0	0	0	0	9,000	9,000	750.00
TOTAL Setup/Teardown Seepage WTS			0	14,474	1,825	2,400	9,000	27,699	

34.22. O & M of Seepage WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
34.22. O & M of Seepage WTS									
Electricity - ALLOWANCE $/mo assume $1500/mo									
Carbon - Assume one change per month 1760# x 6 units x 13.75 months = 145200#									
Bag Filter Bags - Assume 2 bags per filter per day x 4 filters x 1 shift x 13.75 months = 3344 bags.									
USR GC Frak Tank 21,000 gal (monthly)			0.00	0.00	0.00	1100.00	0.00	1100.00	
	41.25	MO	0	0	0	45,375	0	45,375	1100.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day. Operates pumping system and seepage WTS.	4950.00	HR	0	116,672	0	0	0	116,672	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	1.28	0.00	1.28	
	145200	LB	0	0	0	185,856	0	185,856	1.28
USR GC Bag Filter Bags			0.00	0.00	0.00	4.56	0.00	4.56	
	3344.00	EA	0	0	0	15,249	0	15,249	4.56
USR GC ALLOWANCE Elec Svs for WTS #2			0.00	0.00	0.00	0.00	1500.00	1500.00	
	13.75	MO	0	0	0	0	20,625	20,625	1500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	145200	LB	0	0	0	0	36,300	36,300	0.25
TOTAL O & M of Seepage WTS			0	116,672	0	246,480	56,925	420,076	
TOTAL Dewatering of river bed			0	140,395	3,650	250,299	65,925	460,269	

40.10. Excavate Bed Sediments	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40. Excavate & Transport Sed./Soils									
40.10. Excavate Bed Sediments									
Estimated duration to excavate 13,597 cy based on 125 cy per day= = 109 days = 5 months									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	5.00	MO	0	0	37,500	0	0	37,500	7500.00
USR GC Dump Truck (2)			0.00	0.00	0.00	0.00	75.00	75.00	
	1744.00	HR	0	0	0	0	130,800	130,800	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	5.00	MO	0	0	51,000	0	0	51,000	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1744.00	HR	0	53,227	0	0	0	53,227	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1744.00	HR	0	41,106	0	0	0	41,106	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	109.00	DA	0	0	0	21,800	0	21,800	200.00
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	872.00	HR	0	27,485	0	0	0	27,485	31.52
USR GC Roll-Off Truck w/ Sludge Box (1)			0.00	0.00	0.00	0.00	750.00	750.00	
	109.00	DA	0	0	0	0	81,750	81,750	750.00
TOTAL Excavate Bed Sediments	13597	CY	0	121,818	88,500	21,800	212,550	444,668	32.70

40.15. ALLOWANCE Down Time Bed Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.15. ALLOWANCE Down Time Bed Exc.									
Assume down time 5 months x 10% (sheet pile areas) = .5 months, say .5 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.50	MO	0	0	3,750	0	0	3,750	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.50	MO	0	0	5,100	0	0	5,100	10200.00
TOTAL ALLOWANCE Down Time Bed Exc.			0	0	8,850	0	0	8,850	

40.20. Excavate Bank Soils	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.20. Excavate Bank Soils									
Estimated duration to excavate 15,963 cy based on 150 cy per day = 106 days (5 months)									
Includes removal of concrete and misc. structures along river bank.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	5.00	MO	0	0	37,500	0	0	37,500	7500.00
USR GC Dump Truck (3)			0.00	0.00	0.00	0.00	75.00	75.00	
	2432.00	HR	0	0	0	0	182,400	182,400	75.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	5.00	MO	0	0	51,000	0	0	51,000	10200.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1621.00	HR	0	49,473	0	0	0	49,473	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1621.00	HR	0	38,207	0	0	0	38,207	23.57
USR GC Misc. Daily Materials			0.00	0.00	0.00	200.00	0.00	200.00	
	106.00	DA	0	0	0	21,200	0	21,200	200.00
USR GC Foreman			0.00	31.52	0.00	0.00	0.00	31.52	
	786.00	HR	0	24,775	0	0	0	24,775	31.52
TOTAL Excavate Bank Soils	12229	CY	0	112,455	88,500	21,200	182,400	404,555	33.08

40.25. ALLOWANCE Down Time Bank Exc.	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.25. ALLOWANCE Down Time Bank Exc.									
Assume down time 3.75 months x 5% = 0.19 months, say 0.25 months.									
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Excavator, Long Reach(monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.25	MO	0	0	2,550	0	0	2,550	10200.00
TOTAL ALLOWANCE Down Time Bank Exc.			0	0	4,425	0	0	4,425	

40.40. O & M Truck Decon Facilities	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
40.40. O & M Truck Decon Facilities									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	2400.00	HR	0	56,568	0	0	0	56,568	23.57
TOTAL O & M Truck Decon Facilities			0	56,568	0	0	0	56,568	
TOTAL Excavate & Transport Sed./Soils			0	290,841	190,275	43,000	394,950	919,066	

42.10. Manage Drying Area	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42. Dewatering of Excavated Material									
42.10. Manage Drying Area									
USR GC Front End Loader (monthly)			0.00	0.00	3650.00	0.00	0.00	3650.00	
	13.75	MO	0	0	50,188	0	0	50,188	3650.00
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	2420.00	HR	0	73,858	0	0	0	73,858	30.52
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	2420.00	HR	0	57,039	0	0	0	57,039	23.57
USR GC Silt Sack			0.00	0.00	0.00	25.00	0.00	25.00	
	303.00	EA	0	0	0	7,575	0	7,575	25.00
TOTAL Manage Drying Area	13.75	MO	0	130,898	50,188	7,575	0	188,660	13720.75

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
42.20. O & M WTS									
Operation and Maintenance of water treatment system									
Electricity - ALLOWANCE $/mo assume $500/mo									
Carbon - Assume one change per month 1760# x 2 units x 13.75 months = 48400#									
Bag Filter Bags - Assume 4 bags per filter per shift x 4 filters x 1 shifts per day x 1.04 years x 365 days per year = 6692 bags									
Assume weekly sampling.									
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
Assume operation 12 hours per day.	4950.00	HR	0	116,672	0	0	0	116,672	23.57
USR GC Carbon Replacement			0.00	0.00	0.00	2.00	0.00	2.00	
	48400	LB	0	0	0	96,800	0	96,800	2.00
USR GC Bag Filter Bags			0.00	0.00	0.00	2.90	0.00	2.90	
	6692.00	EA	0	0	0	19,407	0	19,407	2.90
USR GC ALLOWANCE Elec Svc for WTS			0.00	0.00	0.00	0.00	500.00	500.00	
	13.75	MO	0	0	0	0	6,875	6,875	500.00
USR GC Spent Carbon Removal & Disposal			0.00	0.00	0.00	0.00	0.25	0.25	
	48400	LB	0	0	0	0	12,100	12,100	0.25
USR GC Anal. TSS			0.00	0.00	0.00	0.00	30.00	30.00	
	60.00	EA	0	0	0	0	1,800	1,800	30.00
USR GC Anal. O & G			0.00	0.00	0.00	0.00	30.00	30.00	
	60.00	EA	0	0	0	0	1,800	1,800	30.00
USR GC Anal. Phenol			0.00	0.00	0.00	0.00	30.00	30.00	
	60.00	EA	0	0	0	0	1,800	1,800	30.00
USR GC Anal. Settable Solids			0.00	0.00	0.00	0.00	30.00	30.00	
	60.00	EA	0	0	0	0	1,800	1,800	30.00
USR GC Anal. PCBs			0.00	0.00	0.00	0.00	132.50	132.50	
	60.00	EA	0	0	0	0	7,950	7,950	132.50
USR GC Anal. Iron (total)			0.00	0.00	0.00	0.00	30.00	30.00	
	60.00	EA	0	0	0	0	1,800	1,800	30.00
USR GC Anal. pH			0.00	0.00	0.00	0.00	8.00	8.00	
	60.00	EA	0	0	0	0	480	480	8.00
USR GC Anal. Temp. (field measurement)			0.00	0.00	0.00	0.00	0.00	0.00	
	60.00	EA	0	0	0	0	0	0	0.00

42.20. O & M WTS	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
TOTAL O & M WTS	13.75	MO	0	116,672	0	116,207	36,405	269,283	19584.24
TOTAL Dewatering of Excavated Material			0	247,569	50,188	123,782	36,405	457,944	

46.20. Characterization Sampling	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
46. Sampling									
46.20. Characterization Sampling									
USR GC PCB Analysis (1/150 tn)			0.00	0.00	0.00	0.00	132.50	132.50	
	275.00	EA	0	0	0	0	36,438	36,438	132.50
USR GC TCLP Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	1095.00	1095.00	
	21.00	EA	0	0	0	0	22,995	22,995	1095.00
USR GC Dioxin Analysis (1/2000 tn)			0.00	0.00	0.00	0.00	400.00	400.00	
	21.00	EA	0	0	0	0	8,400	8,400	400.00
USR GC RCRA Characteristics (1/2000 tn)			0.00	0.00	0.00	0.00	215.00	215.00	
	21.00	EA	0	0	0	0	4,515	4,515	215.00
USR GC pH (1/2000 tn)			0.00	0.00	0.00	0.00	15.00	15.00	
	21.00	EA	0	0	0	0	315	315	15.00
USR GC Moisture Content (1/2000 tn)			0.00	0.00	0.00	0.00	10.00	10.00	
	21.00	EA	0	0	0	0	210	210	10.00
TOTAL Characterization Sampling			0	0	0	0	72,873	72,873	
TOTAL Sampling			0	0	0	0	72,873	72,873	

60.10. Import/Place River Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60. Restoration of River Bed									
60.10. Import/Place River Bed Backfill									
Assume able to use screened and pressure washed stones for rip-rap.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	5.00	MO	0	0	22,500	0	0	22,500	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	5.00	MO	0	0	19,500	0	0	19,500	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	5.00	MO	0	0	37,500	0	0	37,500	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	5.00	MO	0	0	51,000	0	0	51,000	10200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1640.00	HR	0	38,655	0	0	0	38,655	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1640.00	HR	0	50,053	0	0	0	50,053	30.52
USR GC Misc. Daily Expenses			0.00	0.00	0.00	200.00	0.00	200.00	
	109.00	DA	0	0	0	21,800	0	21,800	200.00
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	2598.00	CY	0	0	0	12,990	0	12,990	5.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	1850.00	CY	0	0	0	30,525	0	30,525	16.50
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	3508.00	CY	0	0	0	62,267	0	62,267	17.75
TOTAL Import/Place River Bed Backfill			0	88,708	130,500	127,582	0	346,790	

60.15. ALLOWANCE Down Time Bed Backfill	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
60.15. ALLOWANCE Down Time Bed Backfill									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.50	MO	0	0	2,250	0	0	2,250	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	0.50	MO	0	0	1,950	0	0	1,950	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.50	MO	0	0	3,750	0	0	3,750	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.50	MO	0	0	5,100	0	0	5,100	10200.00
TOTAL ALLOWANCE Down Time Bed Backfill			0	0	13,050	0	0	13,050	
TOTAL Restoration of River Bed			0	88,708	143,550	127,582	0	359,840	

62.12. Import & Place Fill Material	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62. Restoration of River Bank									
62.12. Import & Place Fill Material									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	5.00	MO	0	0	22,500	0	0	22,500	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	5.00	MO	0	0	19,500	0	0	19,500	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	5.00	MO	0	0	37,500	0	0	37,500	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	5.00	MO	0	0	51,000	0	0	51,000	10200.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	1760.00	HR	0	41,483	0	0	0	41,483	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	1760.00	HR	0	53,715	0	0	0	53,715	30.52
USR GC Misc. Daily Expenses			0.00	0.00	0.00	200.00	0.00	200.00	
	106.00	DA	0	0	0	21,200	0	21,200	200.00
USR GC Fill Material			0.00	0.00	0.00	5.00	0.00	5.00	
	7598.00	CY	0	0	0	37,990	0	37,990	5.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 stone, 3/4" to 1/2" plus 10 miles transportation, pg 205	1575.00	CY	0	0	0	25,988	0	25,988	16.50
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
MEANS Site Work and Landscape Cost Data 1999 Rip-Rap, random broken stone pg 60	4726.00	CY	0	0	0	83,887	0	83,887	17.75
TOTAL Import & Place Fill Material			0	95,198	130,500	169,064	0	394,762	

62.15. ALLOWANCE Down Time Bank Backfil	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.15. ALLOWANCE Down Time Bank Backfil									
Assume down time 3.25 months x 5% = 0.19 months, say 0.25 months.									
USR GC Dozer (monthly)			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.25	MO	0	0	1,125	0	0	1,125	4500.00
USR GC Compactor (monthly)			0.00	0.00	3900.00	0.00	0.00	3900.00	
	0.25	MO	0	0	975	0	0	975	3900.00
USR GC Excavator (monthly)			0.00	0.00	7500.00	0.00	0.00	7500.00	
	0.25	MO	0	0	1,875	0	0	1,875	7500.00
USR GC Excavator, Long Reach (monthly)			0.00	0.00	10200.00	0.00	0.00	10200.00	
	0.25	MO	0	0	2,550	0	0	2,550	10200.00
TOTAL ALLOWANCE Down Time Bank Backfil			0	0	6,525	0	0	6,525	

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
62.20. Restoration									
62.20.10. Revegetation									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67	MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67	MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	235.00	HR	0	5,539	0	0	0	5,539	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	235.00	HR	0	7,172	0	0	0	7,172	30.52
USR GC Coir Blanket			0.00	0.00	0.00	1.21	0.00	1.21	
	1995.00	SY	0	0	0	2,414	0	2,414	1.21
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	15962	SY	0	0	0	6,704	0	6,704	0.42
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
	1995.00	CY	0	0	0	35,411	0	35,411	17.75
USR GC Seeding			0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 127	51216	SF	0	0	0	0	2,561	2,561	0.05
USR GC Shrubs			0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3', pg 160 Planting, potted heavy or stoney soil, pg 130	816.00	EA	0	0	0	0	21,763	21,763	26.67
USR GC Trees			0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999 Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball, backhoe pg 130	2049.00	EA	0	0	0	0	340,134	340,134	166.00
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data 1999 Ground covers, vines and	336.00	EA	0	0	0	0	837	837	2.49

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
climbing plants, pg 175 Planting, plotted, 3" dia. pg 130									
TOTAL Revegetation	7583.00	SF	0	12,711	5,461	44,529	365,294	427,995	56.44
62.20.20. Bioengineering									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67	MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67	MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	235.00	HR	0	5,539	0	0	0	5,539	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	235.00	HR	0	7,172	0	0	0	7,172	30.52
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	2803.00	SY	0	0	0	1,177	0	1,177	0.42
USR GC Misc. Daily Material			0.00	0.00	0.00	200.00	0.00	200.00	
	15.00	DA	0	0	0	3,000	0	3,000	200.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	901.00	CY	0	0	0	14,867	0	14,867	16.50
USR GC Geogrid			0.00	0.00	0.00	0.40	0.00	0.40	
	3316.00	SY	0	0	0	1,326	0	1,326	0.40
USR GC Rip-Rap			0.00	0.00	0.00	17.75	0.00	17.75	
	737.00	CY	0	0	0	13,082	0	13,082	17.75
USR GC Coir Blanket			0.00	0.00	0.00	1.21	0.00	1.21	
	18913	SY	0	0	0	22,885	0	22,885	1.21
USR GC Seeding			0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	25226	SY	0	0	0	0	1,261	1,261	0.05
USR GC Shrubs			0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999	737.00	EA	0	0	0	0	19,656	19,656	26.67

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
Shrubs, Cornus mas, 2' to 3' pg 160.									
USR GC Trees			0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	1009.00	EA	0	0	0	0	167,494	167,494	166.00
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	155.00	EA	0	0	0	0	386	386	2.49
TOTAL Bioengineering	66642	SF	0	12,711	5,461	56,337	188,797	263,305	3.95
62.20.30. Hard Structures									
USR GC Front End Loader			0.00	0.00	3650.00	0.00	0.00	3650.00	
	0.67	MO	0	0	2,446	0	0	2,446	3650.00
USR GC Dozer			0.00	0.00	4500.00	0.00	0.00	4500.00	
	0.67	MO	0	0	3,015	0	0	3,015	4500.00
USR GC Laborer			0.00	23.57	0.00	0.00	0.00	23.57	
	235.00	HR	0	5,539	0	0	0	5,539	23.57
USR GC Operator			0.00	30.52	0.00	0.00	0.00	30.52	
	235.00	HR	0	7,172	0	0	0	7,172	30.52
USR GC Geotextile			0.00	0.00	0.00	0.42	0.00	0.42	
	3650.00	SY	0	0	0	1,533	0	1,533	0.42
USR GC Misc. Daily Material			0.00	0.00	0.00	200.00	0.00	200.00	
	15.00	DA	0	0	0	3,000	0	3,000	200.00
USR GC 3/4" Gravel			0.00	0.00	0.00	16.50	0.00	16.50	
MEANS Site Work and Landscape Cost Data 1999 Stone, 3/4" to 1/2" plus 10 miles transportation, pg 205.	1119.00	CY	0	0	0	18,464	0	18,464	16.50
USR GC 6" dia. PE Perf. Pipe			0.00	0.00	0.00	0.51	0.00	0.51	
	1467.00	LF	0	0	0	748	0	748	0.51

62.20. Restoration	QUANTY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC 6" dia. PE Pipe Cplg.		0.00	0.00	0.00	1.65	0.00	1.65	
	3.00 EA	0	0	0	5	0	5	1.65
USR GC Geogrid		0.00	0.00	0.00	0.40	0.00	0.40	
	7651.00 SY	0	0	0	3,060	0	3,060	0.40
USR GC Rip-Rap		0.00	0.00	0.00	17.75	0.00	17.75	
	242.00 CY	0	0	0	4,296	0	4,296	17.75
USR GC Coir Blanket		0.00	0.00	0.00	1.21	0.00	1.21	
	1100.00 SY	0	0	0	1,331	0	1,331	1.21
USR GC Concrete Foundation		0.00	0.00	0.00	0.00	168.00	168.00	
MEANS Site Work and Landscape Cost Data 1999 Concrete in place including forms and reinforcing, footings strip, 36" x 12", reinforced pg 207	215.00 CY	0	0	0	0	36,120	36,120	168.00
USR GC Interlock. Segmental Block Wall		0.00	0.00	0.00	0.00	12.05	12.05	
MEANS Site Work and Landscape Cost Data 1999 Retaining walls, segmental wall system, interlocking including installation, pg 59.	22954 SF	0	0	0	0	276,596	276,596	12.05
USR GC Seeding		0.00	0.00	0.00	0.00	0.05	0.05	
MEANS Site Work and Landscape Cost Data 1999 Rye fine textured hydro or air seeding pg 71.	13050 SY	0	0	0	0	653	653	0.05
USR GC Shrubs		0.00	0.00	0.00	0.00	26.67	26.67	
MEANS Site Work and Landscape Cost Data 1999 Shrubs, Cornus mas, 2' to 3' pg 160.	421.00 EA	0	0	0	0	11,228	11,228	26.67
USR GC Trees		0.00	0.00	0.00	0.00	166.00	166.00	
MEANS Site Work and Landscape Cost Data 1999, Populus nigra italica, 20 gal pg 137 Bagged and burlapped, 12" dia. ball backhoe pg 130	174.00 EA	0	0	0	0	28,884	28,884	166.00

62.20. Restoration	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
USR GC Vines			0.00	0.00	0.00	0.00	2.49	2.49	
MEANS Site Work and Landscape Cost Data, 1999, Ground covers, vines and climbing plants, pg 175 Planting, plotted, 3' dia. pg 130	204.00	EA	0	0	0	0	508	508	2.49
TOTAL Hard Structures	9900.00	SF	0	12,711	5,461	32,437	353,988	404,596	40.87
TOTAL Restoration			0	38,133	16,382	133,302	908,079	1,095,897	
TOTAL Restoration of River Bank			0	133,332	153,407	302,366	908,079	1,497,184	
TOTAL GE-Pittsfield EE/CA Recomm. Alt.	1.00	EA	0	1123794	566,069	1095446	2615254	5,400,563	5400563

APPENDIX E.5

RECOMMENDED DISPOSAL ALTERNATIVE

GE-Pittsfield EE/CA
Recommended Disposal
Alternative Cost

Designed By: Roy F. Weston Inc.
Estimated By: Dan Moretz (610) 701-3176

Prepared By: Roy F. Weston Inc.
West Chester, Pa. 19380

Preparation Date: 08/11/00
Effective Date of Pricing: 08/11/00

Sales Tax: 0.00%

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GE-Pittsfield EE/CA Recommended Transportation and Disposal Alternative

Disposal Option A, Consolidation of up to 50,000 cy of contaminated soils and sediments at designated consolidation area at GE with off-site treatment/disposal of of excess material.

Contract Information	
Escalation	0.00%
Contingency	25.00%
Engineering and Design	6.00%
USACE Construction Management	8.00%

General Contractor	
Contractor Management	10.00%
Field Overhead	6.00%
Home Office Overhead	15.00%
Profit	5.00%
Bond	0.00%

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** PROJECT OWNER SUMMARY - Scope **

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
70 Disposal Option	143360.00	TN	9,554,244	0	2,388,561	716,568	1,012,750	0	13,672,124	95.37

		QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	ENG&DES	CONST MT		TOTAL COST	UNIT COST
70	Disposal Option										
70.10	On-Site Cons	75000.00	TN	422,384	0	105,596	31,679	44,773	0	604,431	8.06
70.20	Transport an	68360.00	TN	9,131,861	0	2,282,965	684,890	967,977	0	13,067,693	191.16
TOTAL	Disposal Opt	143360.00	TN	9,554,244	0	2,388,561	716,568	1,012,750	0	13,672,124	95.37

** PROJECT INDIRECT SUMMARY - Scope **

	QUANTITY	UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
70 Disposal Option	143360.00	TN	6,785,950	678,595	447,873	1,186,863	454,964	0	9,554,244	66.65

** PROJECT INDIRECT SUMMARY - Facility **

	QUANTITY	UOM	DIRECT	Contr MT	Field OH	Home OH	Profit	Bond	TOTAL COST	UNIT COST
70 Disposal Option										
70.10 On-Site Cons	75000.00	TN	300,000	30,000	19,800	52,470	20,114	0	422,384	5.63
70.20 Transport an	68360.00	TN	6,485,950	648,595	428,073	1,134,393	434,851	0	9,131,861	133.58
TOTAL Disposal Opt	143360.00	TN	6,785,950	678,595	447,873	1,186,863	454,964	0	9,554,244	66.65

** PROJECT DIRECT SUMMARY - Scope **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
70 Disposal Option A	143360.00	TN	0	0	0	0	6785950	6,785,950	47.34

** PROJECT DIRECT SUMMARY - Facility **

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
70 Disposal Option A									
70.10 On-Site Consolidation	75000.00	TN	0	0	0	0	300,000	300,000	4.00
70.20 Transport and Disposal Off-Site	68360.00	TN	0	0	0	0	6485950	6,485,950	94.88
TOTAL Disposal Option A	143360.00	TN	0	0	0	0	6785950	6,785,950	47.34

70.10. On-Site Consolidation	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST

70. Disposal Option A

70.10. On-Site Consolidation

Assume 50,000 cy of volume available on-site for on-site consolidation.

70.10.10. Trans. Matl to On-Site Facility

Assume placement by others.

RCRA C Waste	4200 tn
Solid Waste	52650 tn
TSCA Waste	18150 tn

Assume (3) trucks x (75000 tn / 450 tn/day) x 8 hrs/day = 4000 hrs

USR GC Dump Truck (3)			0.00	0.00	0.00	0.00	75.00	75.00	
	4000.00	HR	0	0	0	0	300,000	300,000	75.00
TOTAL Trans. Matl to On-Site Facility	75000	TN	0	0	0	0	300,000	300,000	4.00
TOTAL On-Site Consolidation	75000	TN	0	0	0	0	300,000	300,000	4.00

70.20. Transport and Disposal Off-Site	QUANTY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	SUBCONT	TOTAL COST	UNIT COST
70.20. Transport and Disposal Off-Site									
70.20.10. Transportation Off-Site Landfill									
USR GC Trans Solid Waste			0.00	0.00	0.00	0.00	35.00	35.00	
	68010	TN	0	0	0	0	2380350	2,380,350	35.00
USR GC Trans Chipped Vegetation			0.00	0.00	0.00	0.00	20.00	20.00	
	250.00	TN	0	0	0	0	5,000	5,000	20.00
USR GC Trans Residuals Disposals			0.00	0.00	0.00	0.00	40.00	40.00	
	100.00	TN	0	0	0	0	4,000	4,000	40.00
TOTAL Transportation Off-Site Landfill	42995	TN	0	0	0	0	2389350	2,389,350	55.57
70.20.20. Disposal Off-Site Landfill									
USR GC Disposal Residuals			0.00	0.00	0.00	0.00	110.00	110.00	
	100.00	TN	0	0	0	0	11,000	11,000	110.00
USR GC Disposal Chipped Vegetation			0.00	0.00	0.00	0.00	20.00	20.00	
	250.00	TN	0	0	0	0	5,000	5,000	20.00
USR GC Disposal Solid Waste			0.00	0.00	0.00	0.00	60.00	60.00	
	68010	TN	0	0	0	0	4080600	4,080,600	60.00
TOTAL Disposal Off-Site Landfill	68360	TN	0	0	0	0	4096600	4,096,600	59.93
TOTAL Transport and Disposal Off-Site	68360	TN	0	0	0	0	6485950	6,485,950	94.88
TOTAL Disposal Option A	143360	TN	0	0	0	0	6785950	6,785,950	47.34
TOTAL GE-Pittsfield EE/CA	1.00	EA	0	0	0	0	6785950	6,785,950	6785950