HUDSON RIVER PCBs REASSESSMENT RI/FS
PHASE 3 REPORT: FEASIBILITY STUDY

DECEMBER 2000

For

U.S. Environmental Protection Agency
Region 2
and
U.S. Army Corps of Engineers
Kansas City District

Book 6 of 6
Appendix I

TAMS Consultants, Inc.

402079

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Book 6 of 6
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TAMS Consultants, Inc.

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HUDSON RIVER PCBs REASSESSMENT RI/FS
PHASE 3 REPORT: FEASIBILITY STUDY

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HUDSON RIVER PCBs REASSESSMENT FS

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APPENDIX I

COST ESTIMATES

I.1 Cost Estimate Summary

HUDSON RIVER PCB 2000 R-11/21/00
Dredging of Hudson River to
Remove PCB Contaminated
Sediments

Designed By: Conceptual Idea Only - No Design
Estimated By: EC-DC

Prepared By: RCM

Preparation Date: 04/01/00
Effective Date of Pricing: 04/01/00
Est Construction Time: 990 Days

Sales Tax: 8.25%

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HUDSON RIVER PCB REMEDIATION

Escalation is put at highest price adust level.

Effective date of estimate is to be Dec 2000
Escalation is set a 2% a year
Labor rate date is 03/2000; escalation 1.5%
Equipment rate date is 09/97; escalation is 6.5%
UPB date is 03/97: escalation is 7.5%

	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
12 Alt No Action							
12.33 HTRW/Remediation/Construction							
TOTAL HTRW/Remediation/Construction							
12.34 O & M							
12.34.22 5 Year Review	2.00 YR	55,153	0	765	0	55,919	27959.29
TOTAL O & M	1.00 EA	55,153	0	765	0	55,919	55918.58
Overhead						8,388	
SUBTOTAL						64,306	
Home Office Percent						5,145	
SUBTOTAL						69,451	
Profit						418	
SUBTOTAL						69,869	
Bond						6,987	
TOTAL INCL INDIRECTS						76,856	
16 Alt Monitored Natural Attenuatin							
16.32 Studies & Design							
16.32.12 Geophysical Surveys 0/0/3 (d)	117.00 DAY	465,687	0	36,761	0	502,448	4294.43
16.32.25 Model Development	1.00 EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00 EA	973,187	0	36,761	0	1,009,948	1009948.13
16.33 HTRW/Remediation/Construction							
16.34 O & M							
16.34.11 Weekly Field Sampling (1 YR)	52.00 WKS	224,041	26,108	157,629	0	407,778	7841.89
16.34.12 Monthly Field Sampling (1 YR)	12.00 MO	59,088	7,183	23,995	0	90,266	7522.15
16.34.13 Suspended Solids Monitoring (YR)	1.00 YR	265,738	13,061	127,775	0	406,574	406574.42
16.34.14 Float Surveys (1 YR)	1.00 YR	104,246	14,449	364,837	0	483,531	483531.30
16.34.15 Core Sampling -1,4,9,14,19,24,29	1.00 YR	25,078	6,898	142,901	0	174,877	174877.17
16.34.16 Sediment Inventory (5 YR)	1.00 EVT	167,415	28,793	235,206	0	431,415	431415.18
16.34.17 Shallow Sediment Inventory (5 YR	1.00 EVT	578,978	99,577	157,548	0	836,103	836102.76
16.34.18 Multibeam Survey (3 YR)	90.00 DAY	453,979	0	35,771	0	489,750	5441.67
16.34.19 Bathymetry (3 YR)	4.00 DAY	23,612	0	1,590	0	25,202	6300.51
16.34.20 Annual Reporting	1.00 YR	32,008	0	765	0	32,773	32773.48

	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
16.34.22 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
16.34.26 Analysis of Model	1.00	YR	128,398	0	0	0	128,398	128397.50
16.34.27 Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
16.34.30 Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL O & M	1.00	EA	2,706,828	196,071	1,295,284	650,000	4,848,184	4848183.61
Overhead							727,228	
SUBTOTAL							5,575,411	
Home Office Percent							446,033	
SUBTOTAL							6,021,444	
Profit							36,266	
SUBTOTAL							6,057,710	
Bond							605,771	
TOTAL INCL INDIRECTS							6,663,481	
24 Alt Cap 3/10/Select								
24.32 Studies & Design								
24.32.01 Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
24.32.02 Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
24.32.11 Sediment Inventory 3/10/10 (c)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
24.32.12 Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38
24.32.25 Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,368,618	720,313	7,217,099	10,500,000	21,806,029	21806029.16
Overhead							1,619,779	
SUBTOTAL							23,425,809	
Home Office Percent							993,465	
SUBTOTAL							24,419,273	
Profit							80,777	
SUBTOTAL							24,500,050	
Bond							1,349,255	
TOTAL INCL INDIRECTS							25,849,305	
24.33 HTRW/Remediation/Construction								
24.33.01 Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
24.33.02 Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
24.33.06 Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37

		QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
24.33.12	Mobilization/Demobilization	1.00	EA	978,195	612,532	0	1,161,560	2,752,287	2752286.52
24.33.16	Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	9,742,745	12,274,743	12274743.08
24.33.22	Site Prep and Fac Const - South	1.00	EA	332,568	630,628	419,748	4,452,212	5,835,155	5835155.26
24.33.26	Dredging	1732820	BCY	19,670,549	12,932,054	89,187	2,868,801	35,560,591	20.52
24.33.32	Testing and Monitoring (remed)	1.00	EA	3,477,905	378,956	1,329,112	3,250,000	8,435,973	8435973.49
24.33.36	Barging	1732820	BCY	10,431,840	15,902,746	0	1,867,613	28,202,200	16.28
24.33.42	Stabilization	1732830	BCY	9,703,966	9,868,969	0	17,648,946	37,221,880	21.48
24.33.50	Transport/Landfill Fee	1732820	BCY	2,385,666	937,960	0	195,170,657	198,494,283	114.55
24.33.56	Water Treatment (operation)	1.00	EA	436,507	1,347	162,563	248,446	848,863	848862.80
24.33.72	Backfilling	441174	BCY	5,529,187	4,495,563	67,728	7,560,627	17,653,105	40.01
24.33.76	Capping	207.00	AC	2,947,908	2,661,444	1,621,820	19,020,236	26,251,407	126818.39
24.33.77	Habitat & Vegetation Restoration	96.80	AC	0	0	0	2,669,400	2,669,400	27576.45
24.33.78	River Bank Restoration	91000	LF	122,344	13,295	109,984	0	245,623	2.70
24.33.82	Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL	HTRW/Remediation/Construction	1732820	CY	67,013,066	49,553,165	5,549,606	267,717,384	389,833,222	224.97
	Overhead							30,912,353	17.84
	SUBTOTAL							420,745,575	242.81
	Home Office Percent							22,846,614	13.18
	SUBTOTAL							443,592,189	255.99
	Profit							1,330,101	0.77
	SUBTOTAL							444,922,291	256.76
	Bond							33,354,806	19.25
	TOTAL INCL INDIRECTS							478,277,097	276.01
24.34	O & M								
24.34.11	Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
24.34.12	Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
24.34.13	Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
24.34.14	Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
24.34.15	Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
24.34.16	Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
24.34.17	Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
24.34.18	Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
24.34.20	5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
24.34.26	Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
24.34.31	Aquablock Cap-Visual Inspecton	1.00	EA	21,232	3,646	0	0	24,878	24877.87
24.34.33	Aquablock-Sidescan Radar Survey	49.00	DAY	191,736	0	15,396	0	207,132	4227.18
24.34.35	Aquablock- Patch	5.00	AC	0	0	0	800,000	800,000	160000.00
24.34.40	Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38
TOTAL	O & M	1.00	EA	1,462,438	94,895	997,122	1,450,000	4,004,455	4004455.23
	Overhead							600,668	

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	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
SUBTOTAL							4,605,124	
Home Office Percent							368,410	
SUBTOTAL							4,973,533	
Profit							29,955	
SUBTOTAL							5,003,488	
Bond							500,349	
TOTAL INCL INDIRECTS							5,503,837	
25 Alt Cap 3/10/Select-Benficial								
25.32 Studies & Design								
25.32.01 Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
25.32.02 Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
25.32.11 Sediment Inventory 3/10/10 (c)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
25.32.12 Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38
25.32.25 Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,368,618	720,313	7,217,099	10,500,000	21,806,029	21806029.16
Overhead							1,619,779	
SUBTOTAL							23,425,809	
Home Office Percent							993,465	
SUBTOTAL							24,419,273	
Profit							80,777	
SUBTOTAL							24,500,050	
Bond							1,349,255	
TOTAL INCL INDIRECTS							25,849,305	
25.33 HTRW/Remediation/Construction								
25.33.01 Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
25.33.02 Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
25.33.06 Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
25.33.12 Mobilization/Demobilization	1.00	EA	978,195	612,532	0	1,161,560	2,752,287	2752286.52
25.33.16 Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	9,742,745	12,274,743	12274743.08
25.33.22 Site Prep and Fac Const - South	1.00	EA	332,568	630,628	419,748	4,452,212	5,835,155	5835155.26
25.33.26 Dredging	1732820	BCY	19,670,549	12,932,054	89,187	2,868,801	35,560,591	20.52
25.33.32 Testing and Monitoring (remed)	1.00	EA	3,477,905	378,956	1,329,112	3,250,000	8,435,973	8435973.49
25.33.36 Barging	1352120	BCY	9,090,315	12,389,314	0	1,640,203	23,119,832	17.10
25.33.42 Stabilization	1352122	BCY	8,039,324	7,920,119	0	13,770,227	29,729,669	21.99
25.33.50 Transport/Landfill Fee	1352122	BCY	4,121,343	5,556,127	0	161,623,342	171,300,813	126.69

		QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
25.33.56	Water Treatment (operation)	1.00	EA	436,507	1,347	161,937	248,446	848,237	848236.56
25.33.72	Backfilling	441174	BCY	5,529,187	4,495,563	67,728	7,560,627	17,653,105	40.01
25.33.76	Capping	207.00	AC	2,947,908	2,661,444	1,621,820	20,016,239	27,247,410	131630.00
25.33.77	Habitat & Vegetation Restoration	96.80	AC	0	0	0	2,669,400	2,669,400	27576.45
25.33.78	River Bank Restoration	91000	LF	122,344	13,295	109,984	0	245,623	2.70
25.33.82	Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL	HTRW/Remediation/Construction	1732820	CY	65,742,574	48,709,051	5,548,980	231,059,944	351,060,549	202.59
	Overhead							29,018,080	16.75
	SUBTOTAL							380,078,630	219.34
	Home Office Percent							21,131,743	12.20
	SUBTOTAL							401,210,373	231.54
	Profit							1,265,723	0.73
	SUBTOTAL							402,476,097	232.27
	Bond							30,694,826	17.71
	TOTAL INCL INDIRECTS							433,170,923	249.98
25.34	O & M								
25.34.11	Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
25.34.12	Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
25.34.13	Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
25.34.14	Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
25.34.15	Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
25.34.16	Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
25.34.17	Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
25.34.18	Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
25.34.20	5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
25.34.26	Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
25.34.31	Aquablock Cap-Visual Inspecton	1.00	EA	21,232	3,646	0	0	24,878	24877.87
25.34.33	Aquablock-Sidescan Radar Survey	49.00	DAY	191,736	0	15,396	0	207,132	4227.18
25.34.35	Aquablock- Patch	5.00	AC	0	0	0	800,000	800,000	160000.00
25.34.40	Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38
TOTAL	O & M	1.00	EA	1,462,438	94,895	997,122	1,450,000	4,004,455	4004455.23
	Overhead							600,668	
	SUBTOTAL							4,605,124	
	Home Office Percent							368,410	
	SUBTOTAL							4,973,533	
	Profit							29,955	
	SUBTOTAL							5,003,488	

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	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Bond							500,349	
TOTAL INCL INDIRECTS							5,503,837	
42 Alt Removal 3/10/Select								
42.32 Studies & Design								
42.32.01 Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
42.32.02 Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
42.32.11 Sediment Inventory 3/10/10 (d)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
42.32.1\ Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
42.32.25 Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,379,880	720,313	7,217,496	10,500,000	21,817,689	21817689.02
Overhead							1,621,528	
SUBTOTAL							23,439,217	
Home Office Percent							994,537	
SUBTOTAL							24,433,755	
Profit							80,864	
SUBTOTAL							24,514,619	
Bond							1,350,712	
TOTAL INCL INDIRECTS							25,865,331	
42.33 HTRW/Remediation/Construction								
42.33.01 Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
42.33.02 Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
42.33.06 Construction Management	40.00	MON	5,257,423	208,305	251,394	1,064,593	6,782,215	169555.37
42.33.12 Mobilization/Demobilization	1.00	EA	955,390	625,226	0	1,175,560	2,756,176	2756176.22
42.33.16 Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69
42.33.22 Site Prep and Fac Const - South	1.00	EA	351,221	630,628	419,748	5,317,076	6,718,673	6718672.67
42.33.26 Dredging	2651730	BCY	21,963,533	14,646,697	142,334	3,134,417	39,887,482	15.04
42.33.32 Testing and Monitoring (remed)	1.00	EA	3,932,628	526,065	1,888,946	3,250,000	9,597,639	9597639.12
42.33.36 Barging	2651730	BCY	14,461,255	24,705,228	0	2,296,155	41,462,638	15.64
42.33.42 Stabilization	2651730	BCY	13,721,823	14,573,006	0	27,005,643	55,300,471	20.85
42.33.50 Transport/Landfill Fee	2651730	BCY	3,650,778	1,435,357	0	299,381,729	304,467,864	114.82
42.33.56 Water Treatment (operation)	1.00	EA	392,223	1,347	164,070	248,446	806,086	806085.84
42.33.72 Backfilling	851634	BCY	11,656,629	10,441,035	67,728	13,304,122	35,469,514	41.65
42.33.76 Habitat & Vegetation Restoration	99.00	AC	0	0	0	2,717,000	2,717,000	27444.44
42.33.78 River Bank Restoration	91000	LF	281,131	20,910	535,174	0	837,216	9.20
42.33.82 Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL HTRW/Remediation/Construction	2651730	BCY	82,550,614	68,723,171	4,967,965	368,144,315	524,386,065	197.75

	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Overhead							36,386,577	13.72
SUBTOTAL							560,772,642	211.47
Home Office Percent							28,278,443	10.66
SUBTOTAL							589,051,085	222.14
Profit							1,490,248	0.56
SUBTOTAL							590,541,333	222.70
Bond							41,973,263	15.83
TOTAL INCL INDIRECTS							632,514,596	238.53
42.34 O & M								
42.34.11 Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
42.34.12 Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
42.34.13 Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
42.34.14 Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
42.34.15 Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
42.34.16 Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
42.34.17 Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
42.34.18 Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
42.34.20 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
42.34.26 Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
42.34.40 Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
TOTAL O & M	1.00	EA	1,260,733	91,249	982,123	650,000	2,984,106	2984105.60
Overhead							447,616	
SUBTOTAL							3,431,721	
Home Office Percent							274,538	
SUBTOTAL							3,706,259	
Profit							22,322	
SUBTOTAL							3,728,581	
Bond							372,858	
TOTAL INCL INDIRECTS							4,101,439	
44 Alt Removal 3/10/Select-Benificl								
44.32 Studies & Design								
44.32.01 Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
44.32.02 Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
44.32.11 Sediment Inventory 3/10/10 (d)	1513.00	DAY	2,628,572	720,313	7,197,623	0	10,536,508	6963.98
44.32.1\ Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63

	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
44.32.25 Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,379,880	720,313	7,217,496	10,500,000	21,817,689	21817689.02
Overhead							1,621,528	
SUBTOTAL							23,439,217	
Home Office Percent							994,537	
SUBTOTAL							24,433,755	
Profit							80,864	
SUBTOTAL							24,514,619	
Bond							1,350,712	
TOTAL INCL INDIRECTS							25,865,331	
44.33 HTRW/Remediation/Construction								
44.33.01 Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
44.33.02 Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
44.33.06 Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
44.33.12 Mobilization/Demobilization	1.00	EA	955,390	625,226	0	1,175,560	2,756,176	2756176.22
44.33.16 Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69
44.33.22 Site Prep and Fac Const - South	1.00	EA	351,221	630,628	419,748	5,317,076	6,718,673	6718672.67
44.33.26 Dredging	2651730	BCY	21,963,533	14,646,697	142,834	3,134,417	39,887,482	15.04
44.33.32 Testing and Monitoring (remed)	1.00	EA	3,932,628	526,065	1,898,946	3,250,000	9,597,639	9597639.12
44.33.36 Barging	2041015	BCY	12,158,178	18,950,383	0	1,905,764	33,014,326	16.18
44.33.42 Stabilization	2041015	BCY	11,051,412	11,446,665	0	20,786,023	43,284,100	21.21
44.33.50 Transport/Landfill Fee	2651730	BCY	5,981,982	8,487,879	0	248,243,670	262,713,531	99.07
44.33.56 Water Treatment (operation)	1.00	EA	392,223	1,347	163,068	248,446	805,084	805083.85
44.33.72 Backfilling	851634	BCY	11,656,629	10,441,035	67,728	13,304,122	35,469,514	41.65
44.33.76 Habitat & Vegetation Restoration	99.00	AC	0	0	0	2,717,000	2,717,000	27444.44
44.33.78 River Bank Restoration	91000	LF	281,131	20,910	535,174	0	837,216	9.20
44.33.82 Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL HTRW/Remediation/Construction	2651730	BCY	79,908,330	66,894,508	4,966,963	310,396,246	462,166,047	174.29
Overhead							33,101,284	12.48
SUBTOTAL							495,267,331	186.77
Home Office Percent							25,410,581	9.58
SUBTOTAL							520,677,912	196.35
Profit							1,372,813	0.52
SUBTOTAL							522,050,724	196.87
Bond							37,567,942	14.17
TOTAL INCL INDIRECTS							559,618,667	211.04

	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
44.34 O & M								
44.34.11 Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
44.34.12 Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
44.34.13 Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
44.34.14 Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
44.34.15 Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
44.34.16 Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
44.34.17 Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
44.34.18 Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
44.34.20 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
44.34.26 Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
44.34.40 Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
TOTAL O & M	1.00	EA	1,260,733	91,249	982,123	650,000	2,984,106	2984105.60
Overhead							447,616	
SUBTOTAL							3,431,721	
Home Office Percent							274,538	
SUBTOTAL							3,706,259	
Profit							22,322	
SUBTOTAL							3,728,581	
Bond							372,858	
TOTAL INCL INDIRECTS							4,101,439	
56 Alt Removal 0/0/3R								
56.32 Studies & Design								
56.32.01 Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
56.32.02 Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
56.32.11 Sediment Inventory 0/0/3(d)	1506.00	DAY	2,606,457	716,980	7,164,318	0	10,487,755	6963.98
56.32.12 Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
56.32.25 Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,703,051	716,980	7,210,821	10,500,000	22,130,852	22130851.50
Overhead							1,668,503	
SUBTOTAL							23,799,354	
Home Office Percent							1,023,348	
SUBTOTAL							24,822,703	
Profit							83,206	
SUBTOTAL							24,905,909	
Bond							1,389,841	

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		QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
	TOTAL INCL INDIRECTS							26,295,750	
56.33	HTRW/Remediation/Construction								
56.33.01	Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
56.33.02	Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
56.33.06	Construction Management	40.00	MON	7,341,922	291,626	351,769	1,490,684	9,476,001	236900.03
56.33.12	Mobilization/Demobilization	1.00	EA	1,588,398	1,083,719	0	1,338,560	4,010,677	4010677.20
56.33.16	Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69
56.33.22	Site Prep and Fac Const - South	1.00	EA	315,899	630,628	419,748	6,976,195	8,342,470	8342470.06
56.33.26	Dredging	3823060	BCY	34,620,454	23,694,861	137,469	4,862,219	63,315,003	16.56
56.33.32	Testing and Monitoring (remed)	1.00	EA	6,003,459	860,761	3,262,456	4,550,000	14,676,675	14676675.45
56.33.36	Barging	3823060	BCY	21,720,132	36,946,597	0	3,780,361	62,447,089	16.33
56.33.42	Stabilization	3823060	BCY	19,694,358	20,968,581	0	38,934,655	79,597,593	20.82
56.33.50	Transport/Landfill Fee	3823084	BCY	5,263,411	2,069,388	0	415,051,002	422,383,801	110.48
56.33.56	Water Treatment (operation)	1.00	EA	549,112	1,347	229,898	347,824	1,128,182	1128182.41
56.33.72	Backfilling	1478838	BCY	17,539,496	15,876,385	67,728	21,898,520	55,382,129	37.45
56.33.76	Habitat & Vegetation Restoration	188.00	AC	0	0	0	5,279,000	5,279,000	28079.79
56.33.78	River Bank Restoration	175000	LF	366,124	31,442	673,770	0	1,071,336	6.12
56.33.82	Construction Monitoring	48.00	MON	3,657,349	193,478	0	727,078	4,577,905	95373.03
	TOTAL HTRW/Remediation/Construction	3823060	BCY	122,261,127	103,413,072	6,758,934	513,904,058	746,337,192	195.22
	Overhead							53,161,715	13.91
	SUBTOTAL							799,498,906	209.13
	Home Office Percent							40,896,589	10.70
	SUBTOTAL							840,395,495	219.82
	Profit							2,200,081	0.58
	SUBTOTAL							842,595,576	220.40
	Bond							60,504,334	15.83
	TOTAL INCL INDIRECTS							903,099,910	236.22
56.34	O & M								
56.34.11	Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
56.34.12	Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
56.34.13	Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
56.34.14	Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
56.34.15	Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
56.34.16	Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
56.34.17	Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
56.34.18	Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
56.34.20	5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
56.34.26	Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00

	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
56.34.40 Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL O & M	1.00	EA	1,596,019	91,249	1,008,753	650,000	3,346,021	3346021.14
Overhead							501,903	
SUBTOTAL							3,847,924	
Home Office Percent							307,834	
SUBTOTAL							4,155,758	
Profit							25,029	
SUBTOTAL							4,180,788	
Bond							418,079	
TOTAL INCL INDIRECTS							4,598,866	
58 Alt Removal 0/0/3R - Benficial								
.32 Studies & Design								
58.32.01 Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
58.32.02 Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
58.32.11 Sediment Inventory 0/0/3(d)	1506.00	DAY	2,606,457	716,980	7,164,318	0	10,487,755	6963.98
58.32.12 Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
58.32.25 Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,703,051	716,980	7,210,821	10,500,000	22,130,852	22130851.50
Overhead							1,668,503	
SUBTOTAL							23,799,354	
Home Office Percent							1,023,348	
SUBTOTAL							24,822,703	
Profit							83,206	
SUBTOTAL							24,905,909	
Bond							1,389,841	
TOTAL INCL INDIRECTS							26,295,750	
58.33 HTRW/Remediation/Construction								
58.33.01 Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
58.33.02 Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
33.06 Construction Management	40.00	MON	7,341,922	291,626	351,769	1,490,684	9,476,001	236900.03
.33.12 Mobilization/Demobilization	1.00	EA	1,588,398	1,083,719	0	1,338,560	4,010,677	4010677.20
58.33.16 Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69
58.33.22 Site Prep and Fac Const - South	1.00	EA	315,899	630,628	419,748	6,976,195	8,342,470	8342470.06

		QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
58.33.26	Dredging	3823060	BCY	34,620,454	23,694,861	137,469	4,862,219	63,315,003	16.56
58.33.32	Testing and Monitoring (remed)	1.00	EA	6,003,459	860,761	3,262,456	4,550,000	14,676,675	14676675.45
58.33.36	Barging	2916189	BCY	18,181,294	28,307,632	0	3,180,724	49,669,650	17.03
58.33.42	Stabilization	2916189	BCY	15,885,756	16,437,662	0	29,698,935	62,022,352	21.27
58.33.50	Transport/Landfill Fee	3823084	BCY	8,725,093	12,541,912	0	325,117,666	346,384,671	90.60
58.33.56	Water Treatment (operation)	1.00	EA	549,112	1,347	228,392	347,824	1,126,676	1126675.76
58.33.72	Backfilling	1478838	BCY	17,539,496	15,876,385	67,728	21,898,520	55,382,129	37.45
58.33.76	Habitat & Vegetation Restoration	188.00	AC	0	0	0	5,279,000	5,279,000	28079.79
58.33.78	River Bank Restoration	175000	LF	366,124	31,442	673,770	0	1,071,336	6.12
58.33.82	Construction Monitoring	48.00	MON	3,657,349	193,478	0	727,078	4,577,905	95373.03
TOTAL	HTRW/Remediation/Construction	3823060	BCY	118,375,370	100,715,712	6,757,427	414,135,366	639,983,876	167.40
	Overhead							48,063,123	12.57
	SUBTOTAL							688,046,999	179.97
	Home Office Percent							36,238,703	9.48
	SUBTOTAL							724,285,702	189.45
	Profit							2,029,096	0.53
	SUBTOTAL							726,314,799	189.98
	Bond							53,262,271	13.93
	TOTAL INCL INDIRECTS							779,577,070	203.91
58.34	O & M								
58.34.11	Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
58.34.12	Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
58.34.13	Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
58.34.14	Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
58.34.15	Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
58.34.16	Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
58.34.17	Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
58.34.18	Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
58.34.20	5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
58.34.26	Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
58.34.40	Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL	O & M	1.00	EA	1,596,019	91,249	1,008,753	650,000	3,346,021	3346021.14
	Overhead							501,903	
	SUBTOTAL							3,847,924	
	Home Office Percent							307,834	
	SUBTOTAL							4,155,758	
	Profit							25,029	

	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
SUBTOTAL							4,180,788	
Bond							418,079	
TOTAL INCL INDIRECTS							4,598,866	
60 Alt Hydraulic Dredging 3/10/Sel								
60.32 Studies & Design								
60.32.01 Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
60.32.02 Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
60.32.11 Sediment Inventory 3/10/10 (d)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
60.32.1\ Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
60.32.25 Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,379,880	720,313	7,217,496	10,500,000	21,817,689	21817689.02
Overhead							1,621,528	
SUBTOTAL							23,439,217	
Home Office Percent							994,537	
SUBTOTAL							24,433,755	
Profit							80,864	
SUBTOTAL							24,514,619	
Bond							1,350,712	
TOTAL INCL INDIRECTS							25,865,331	
60.33 HTRW/Remediation/Construction								
60.33.01 Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
60.33.02 Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
60.33.06 Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
60.33.12 Mobilization/Demobilization	1.00	EA	955,390	625,226	0	1,175,560	2,756,176	2756176.22
60.33.16 Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	23,742,745	26,274,743	26274743.08
60.33.22 Site Prep and Fac Const - South	1.00	EA	351,221	630,628	419,748	5,317,076	6,718,673	6718672.67
60.33.26 Dredging	2651730	CY	17,356,877	12,038,520	2,018,716	807,214	32,221,328	12.15
60.33.32 Testing and Monitoring (remed)	1.00	EA	3,932,628	526,065	1,888,946	3,250,000	9,597,639	9597639.12
60.33.36 Barging	1623030	BCY	9,400,414	21,071,521	0	1,722,741	32,194,676	19.84
60.33.39 Water Separation Cyclone-Operate	2141527	BCY	1,531,081	654,287	0	0	2,185,367	1.02
60.33.40 Dewater Hydraulic Dredge Mat	2141527	BCY	0	0	0	21,415,270	21,415,270	10.00
60.33.42 Stabilization	510203	BCY	11,700,429	10,270,129	0	5,195,989	27,166,548	53.25
60.33.50 Transport/Landfill Fee	2651730	BCY	3,432,381	1,349,492	0	281,839,432	286,621,305	108.09
0.33.56 Water Treatment (operation)	1.00	EA	1,150,521	1,347	316,120	248,446	1,716,435	1716434.55
0.33.72 Backfilling	851634	BCY	11,656,629	10,441,035	67,728	13,304,122	35,469,514	41.65
60.33.76 Habitat & Vegetation Restoration	97.50	AC	0	0	0	2,717,000	2,717,000	27866.67
60.33.78 River Bank Restoration	91000	LF	281,131	20,910	535,174	0	837,216	9.20

	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
60.33.82 Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL HTRW/Remediation/Construction	2651730	BCY	72,745,133	58,746,832	6,995,898	362,791,738	501,279,601	189.04
Overhead							38,036,361	14.34
SUBTOTAL							539,315,962	203.38
Home Office Percent							28,568,858	10.77
SUBTOTAL							567,884,819	214.16
Profit							1,611,770	0.61
SUBTOTAL							569,496,589	214.76
Bond							41,935,947	15.81
TOTAL INCL INDIRECTS							611,432,536	230.58
60.34 O & M								
60.34.11 Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
60.34.12 Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
60.34.13 Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
60.34.14 Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
60.34.15 Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
60.34.16 Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
60.34.17 Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
60.34.18 Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
60.34.20 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
60.34.26 Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
60.34.40 Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
TOTAL O & M	1.00	EA	1,260,733	91,249	982,123	650,000	2,984,106	2984105.60
Overhead							447,616	
SUBTOTAL							3,431,721	
Home Office Percent							274,538	
SUBTOTAL							3,706,259	
Profit							22,322	
SUBTOTAL							3,728,581	
Bond							372,858	
TOTAL INCL INDIRECTS							4,101,439	
66 Alt Hydraulic Dredging 0/0/3Sel								
66.32 Studies & Design								

		QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
66.32.01	Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
66.32.02	Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
66.32.11	Sediment Inventory 0/0/3(d)	1506.00	DAY	2,606,457	716,980	7,164,318	0	10,487,755	6963.98
66.32.12	Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
66.32.25	Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL	Studies & Design	1.00	EA	3,703,051	716,980	7,210,821	10,500,000	22,130,852	22130851.50
	Overhead							1,668,503	
	SUBTOTAL							23,799,354	
	Home Office Percent							1,023,348	
	SUBTOTAL							24,822,703	
	Profit							83,206	
	SUBTOTAL							24,905,909	
	Bond							1,389,841	
	TOTAL INCL INDIRECTS							26,295,750	
66.33	HTRW/Remediation/Construction								
66.33.01	Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
66.33.02	Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
66.33.06	Construction Management	40.00	MON	7,341,922	291,626	351,769	1,490,684	9,476,001	236900.03
66.33.12	Mobilization/Demobilization	1.00	EA	1,588,398	1,083,719	0	1,338,560	4,010,677	4010677.20
66.33.16	Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	23,742,745	26,274,743	26274743.08
66.33.22	Site Prep and Fac Const - South	1.00	EA	315,899	630,628	419,748	6,976,195	8,342,470	8342470.06
66.33.26	Dredging	3913060	BCY	25,954,675	18,317,430	3,027,210	1,136,690	48,436,005	12.38
66.33.32	Testing and Monitoring (remed)	1.00	EA	6,003,459	860,761	3,262,456	4,550,000	14,676,675	14676675.45
66.33.36	Barging	2472880	BCY	14,426,246	30,599,542	0	2,494,330	47,520,118	19.22
66.33.39	Water Separation Cyclone-Operate	3224706	BCY	2,305,498	985,223	0	0	3,290,721	1.02
66.33.40	Dewater Hydraulic Dredge Mat	3224706	BCY	0	0	0	32,247,060	32,247,060	10.00
66.33.42	Stabilization	688354	BCY	17,310,155	15,363,917	0	7,010,307	39,684,379	57.65
66.33.50	Transport/Landfill Fee	3913060	BCY	5,058,356	1,988,807	0	399,485,645	406,532,808	103.89
66.33.56	Water Treatment (operation)	1.00	EA	1,415,201	1,347	459,735	347,824	2,224,108	2224107.77
66.33.72	Backfilling	1478838	BCY	17,539,496	15,876,385	67,728	21,898,520	55,382,129	37.45
66.33.76	Habitat & Vegetation Restoration	188.00	AC	0	0	0	5,279,000	5,279,000	28079.79
66.33.78	River Bank Restoration	173773	LF	366,125	31,442	673,770	0	1,071,337	6.17
66.33.82	Construction Monitoring	48.00	MON	3,657,349	193,478	0	727,078	4,577,905	95373.03
TOTAL	HTRW/Remediation/Construction	3913060	BCY	106,696,220	86,988,565	9,878,512	509,134,573	712,697,871	182.13
	Overhead							54,294,875	13.88
	SUBTOTAL							766,992,746	196.01
	Home Office Percent							40,720,188	10.41
	SUBTOTAL							807,712,935	206.41

		QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
	Profit							2,303,997	0.59
	SUBTOTAL							810,016,932	207.00
	Bond							59,743,285	15.27
	TOTAL INCL INDIRECTS							869,760,217	222.27
66.34	O & M								
66.34.11	Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
66.34.12	Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
66.34.13	Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
66.34.14	Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
66.34.15	Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
66.34.16	Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
66.34.17	Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
66.34.18	Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
66.34.20	5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
66.34.26	Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
66.34.40	Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL O & M		1.00	EA	1,596,019	91,249	1,008,753	650,000	3,346,021	3346021.14
	Overhead							501,903	
	SUBTOTAL							3,847,924	
	Home Office Percent							307,834	
	SUBTOTAL							4,155,758	
	Profit							25,029	
	SUBTOTAL							4,180,788	
	Bond							418,079	
	TOTAL INCL INDIRECTS							4,598,866	

HUDSON RIVER PCBS REASSESSMENT FS

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Alt No Action								
Studies & Design								
TOTAL Studies & Design	1.00	EA	0	0	0	0	0	0.00
HTRW/Remediation/Construction								
TOTAL HTRW/Remediation/Construction	1730000	CY	0	0	0	0	0	0.00
O & M								
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
TOTAL O & M	1.00	EA	55,153	0	765	0	55,919	55918.58
TOTAL Alt No Action	1.00	EA	55,153	0	765	0	55,919	55918.58

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HUDSON RIVER PCBs REASSESSMENT FS

APPENDIX I

COST ESTIMATES

I.4 Detailed Estimate - Monitored Natural Attenuation Alternative

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Monitored Natural Attenuatin								
Studies & Design								
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	64,125	0	0	0	64,125	54.81
Survey Crew	117.00	DAY	380,016	0	0	0	380,016	3248.00
Post Processing	204.75	HR	18,704	0	0	0	18,704	91.35
Per Diem	117.00	DAY	0	0	36,761	0	36,761	314.20
Mob/Demob	1.00	EA	2,842	0	0	0	2,842	2842.00
TOTAL Labor/Equipment	1170.00	HR	465,687	0	36,761	0	502,448	429.44
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	465,687	0	36,761	0	502,448	4294.43
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	973,187	0	36,761	0	1,009,948	1009948.13
HTRW/Remediation/Construction								
TOTAL HTRW/Remediation/Construction	1730000	CY	0	0	0	0	0	0.00
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring (YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00	EA	0	0	0	0	0	0.00
Cost included in float surveys								
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79
TOTAL Suspended Solids Monitoring (YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp cost of one boat included with weekly monitoring	2.00	EA	0	2,694	0	0	2,694	1347.23
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30

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O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Core Sampling -1,4,9,14,19,24,29								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	4,368	0	0	0	4,368	69.33
Chemist, Jr.	63.00	HR	3,853	0	0	0	3,853	61.16
Sampling Technician	63.00	HR	2,682	0	0	0	2,682	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,999	0	0	2,999	47.61
TOTAL Labor/Equipment Upper Hudson	60.00	HR	10,904	2,999	0	0	13,903	231.71
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	5,678	0	0	0	5,678	69.33
Chemist, Jr.	81.90	HR	5,009	0	0	0	5,009	61.16
Sampling Technician	81.90	HR	3,487	0	0	0	3,487	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,899	0	0	3,899	47.61
TOTAL Labor/Equipment Lower Hudson	78.00	HR	14,175	3,899	0	0	18,074	231.71
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	83,466	0	83,466	264.97
Cesium - 137/Beryllium -7	315.00	EA	0	0	34,778	0	34,778	110.40
Organic Carbon	315.00	EA	0	0	23,185	0	23,185	73.60
TOTAL Analytical	315.00	EA	0	0	141,429	0	141,429	448.98
TOTAL Core Sampling -1,4,9,14,19,24,29	1.00	YR	25,078	6,898	142,901	0	174,877	174877.17
Sediment Inventory (5 YR)								
Labor/Equipment								
Chemist	604.80	HR	41,932	0	0	0	41,932	69.33
Chemist, Jr.	1209.60	HR	73,983	0	0	0	73,983	61.16
Sampling Technician	1209.60	HR	51,501	0	0	0	51,501	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	604.80	HR	0	28,793	0	0	28,793	47.61
TOTAL Labor/Equipment	576.00	HR	167,415	28,793	0	0	196,209	340.64

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	756.00	EA	0	0	200,319	0	200,319	264.97
Cesium - 137/Beryllium -7	252.00	EA	0	0	27,822	0	27,822	110.40
Organic Carbon	76.00	EA	0	0	5,594	0	5,594	73.60
TOTAL Analytical	1200.00	EA	0	0	233,734	0	233,734	194.78
TOTAL Sediment Inventory (5 YR)	1.00	EVT	167,415	28,793	235,206	0	431,415	431415.18
Shallow Sediment Inventory (5 YR								
Labor/Equipment								
Chemist	2091.60	HR	145,015	0	0	0	145,015	69.33
Chemist, Jr.	4183.20	HR	255,856	0	0	0	255,856	61.16
Sampling Technician	4183.20	HR	178,106	0	0	0	178,106	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	2091.60	HR	0	99,577	0	0	99,577	47.61
TOTAL Labor/Equipment	996.00	HR	578,978	99,577	0	0	678,555	681.28
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	2,944	0	2,944	2944.13
TOTAL Materials			0	0	2,944	0	2,944	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	105.00	EA	0	0	11,593	0	11,593	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	1000.00	EA	0	0	154,604	0	154,604	154.60
TOTAL Shallow Sediment Inventory (5 YR	1.00	EVT	578,978	99,577	157,548	0	836,103	836102.76
Multibeam Survey (3 YR)								
Labor/Equipment								
Chemist	900.00	HR	62,399	0	0	0	62,399	69.33
Survey Crew	90.00	DAY	369,785	0	0	0	369,785	4108.72
Post Processing	157.50	HR	18,200	0	0	0	18,200	115.56
Per Diem	90.00	DAY	0	0	35,771	0	35,771	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13

D & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Labor/Equipment	900.00	HR	453,979	0	35,771	0	489,750	544.17
TOTAL Multibeam Survey (3 YR)	90.00	DAY	453,979	0	35,771	0	489,750	5441.67
Bathymetry (3 YR)								
Labor/Equipment								
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Survey Crew	4.00	DAY	16,435	0	0	0	16,435	4108.72
Post Processing	7.00	HR	809	0	0	0	809	115.56
Per Diem	4.00	DAY	0	0	1,590	0	1,590	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	40.00	HR	23,612	0	1,590	0	25,202	630.05
TOTAL Bathymetry (3 YR)	4.00	DAY	23,612	0	1,590	0	25,202	6300.51
Annual Reporting								
Lbr/Matls for Quarterly Report								
Project Manager	24.00	HR	2,772	0	0	0	2,772	115.51
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00	HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	527	0	0	0	527	32.93
Reproduction Operators	8.00	HR	169	0	0	0	169	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00	WK	12,146	0	383	0	12,529	12529.22
Lbr/Matls for Annual Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00	WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting	1.00	YR	32,008	0	765	0	32,773	32773.48

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	128,398	0	0	0	128,398	128397.50
TOTAL Analysis of Model	1.00	YR	128,398	0	0	0	128,398	128397.50
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Survey Crew	117.00	DAY	480,720	0	0	0	480,720	4108.72
Post Processing	204.75	HR	23,660	0	0	0	23,660	115.56
Per Diem	117.00	DAY	0	0	46,503	0	46,503	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1170.00	HR	589,094	0	46,503	0	635,597	543.25

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O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL O & M	1.00	EA	2,706,828	196,071	1,295,284	650,000	4,848,184	4848183.61
TOTAL Alt Monitored Natural Attenuatin	1.00	EA	3,680,016	196,071	1,332,045	650,000	5,858,132	5858131.74

HUDSON RIVER PCBs REASSESSMENT FS

APPENDIX I

COST ESTIMATES

I.5 Detailed Estimate - Alternative CAP-3/10/Select

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Cap 3/10/Select								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 3/10/10 (c)								
Labor/Equipment								
Chemist	15130	HR	1,048,994	0	0	0	1,048,994	69.33
Chemist, Jr.	15130	HR	925,393	0	0	0	925,393	61.16
Sampling Technician	15130	HR	644,184	0	0	0	644,184	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15130	HR	0	720,313	0	0	720,313	47.61
TOTAL Labor/Equipment	15130	HR	2,618,572	720,313	0	0	3,338,884	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22695	EA	0	0	6,013,531	0	6,013,531	264.97
Cesium - 137/Beryllium -7	7565.00	EA	0	0	835,213	0	835,213	110.40
Organic Carbon	2270.00	EA	0	0	167,079	0	167,079	73.60
Cation Exchange Capacity	2270.00	EA	0	0	167,079	0	167,079	73.60
TOTAL Analytical	7565.00	EA	0	0	7,182,903	0	7,182,903	949.49
TOTAL Sediment Inventory 3/10/10 (c)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
Geophysical Surveys 3/10/10 (c)								
Labor/Equipment								
Chemist	490.00	HR	33,973	0	0	0	33,973	69.33
Survey Crew	49.00	DAY	201,327	0	0	0	201,327	4108.72
Post Processing	85.75	HR	3,651	0	0	0	3,651	42.58
Per Diem	49.00	DAY	0	0	19,475	0	19,475	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	490.00	HR	242,546	0	19,475	0	262,021	534.74
TOTAL Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,368,618	720,313	7,217,099	10,500,000	21,806,029	21806029.16
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	40.00	MON	0	0	23,351	0	23,351	583.79
TOTAL Health & Safety Equipment	40.00	MO	0	0	23,351	0	23,351	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25) Unit Measure Of	343.00	EA	0	0	65,061	0	65,061	189.68
Boot Covers, Tyvek (Bag Of 10Pr) Unit Measure Of	858.00	EA	0	0	11,482	0	11,482	13.38
Gloves, Latex (Box Of 100) (Single Hand) Unit Measure Of	42.86	EA	0	0	604	0	604	14.10
Pvc/Nitrile Blend (Package Of 12 Pr) Unit Measure	42.86	EA	0	0	2,580	0	2,580	60.21
TOTAL Health & Safety Stores	171.43	WKS	0	0	82,542	0	82,542	481.50

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	20571	HR	1,229,828	0	0	0	1,229,828	59.78
Industrial Hygiene Technician	20571	HR	793,437	0	0	0	793,437	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1028.57	MDY	0	0	0	75,240	75,240	73.15
Air Fare (Round Trip)	57.00	EA	0	0	0	28,500	28,500	500.00
TOTAL Health & Safety Labor	10286	HRS	2,023,265	0	0	103,740	2,127,005	206.79
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn,trailer,8'x36',2 showers	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety Decon Trailer	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements								
Project Manager	10286	HR	939,231	0	0	0	939,231	91.31
General Superintendents (South)	10286	HR	539,141	0	0	0	539,141	52.42
General Superintendents (North)	10286	HR	539,141	0	0	0	539,141	52.42
Engineers, Project	10286	HR	656,173	0	0	0	656,173	63.79
Chemist	10286	HR	563,737	0	0	0	563,737	54.81
Industrial Hygiene Technician	10286	HR	396,719	0	0	0	396,719	38.57
Engineers, Quality Control	10286	HR	499,270	0	0	0	499,270	48.54
Schedulers	10286	HR	499,270	0	0	0	499,270	48.54
Clerks, Typists, Bookkeepers & Receptionist	8228.54	HR	214,228	0	0	0	214,228	26.03
Janitors	8228.54	HR	69,180	0	0	0	69,180	8.41
Per Diem	8228.54	MDY	0	0	0	601,918	601,918	73.15
8men/10hr/day = .8 multiplier								
Air Fare (Round Trip)	457.71	EA	0	0	0	228,856	228,856	500.00
5 men/3wks = 1.67 multiplier								
TOTAL Field Office Labor Requirements	10286	HRS	4,916,091	0	0	830,774	5,746,865	558.72
Home Office Labor Requirements								
Program Managers	686.00	HR	64,825	0	0	0	64,825	94.50
Operations Managers	1371.00	HR	50,764	0	0	0	50,764	37.03
Certified Industrial Hygienist	343.00	HR	23,482	0	0	0	23,482	68.46
Contract Administrators	686.00	HR	25,149	0	0	0	25,149	36.66
Purchasing Agents, Chief	1371.00	HR	50,262	0	0	0	50,262	36.66
Engineers, Quality Control	686.00	HR	33,299	0	0	0	33,299	48.54
Chief Scheduler & Planning Eng.	343.00	HR	12,039	0	0	0	12,039	35.10
Accountants	686.00	HR	13,878	0	0	0	13,878	20.23
Operations Managers	343.00	HR	12,700	0	0	0	12,700	37.03
Clerks, Typists, Bookkeepers & Receptionist	343.00	HR	8,930	0	0	0	8,930	26.03
Air Fare (Round Trip)	171.00	EA	0	0	0	85,500	85,500	500.00
Per Diem & Lodging	343.00	DAY	0	0	0	45,619	45,619	133.00
Car Rental (Air Port to Site)	343.00	DAY	0	0	0	18,865	18,865	55.00
TOTAL Home Office Labor Requirements	171.43	WKS	295,328	0	0	149,984	445,312	2597.66
Field Equipment Requirements								
Trailer: Contractor	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Contracting Officer	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Storage	80.00	MO	0	0	14,430	0	14,430	180.37
Furniture Rental	160.00	MO	0	0	32,583	0	32,583	203.65
Telephone System Rental	160.00	MO	0	0	29,790	0	29,790	186.19
Sanitary Facility: Temporary	160.00	MO	0	0	16,757	0	16,757	104.73
Portable Radios (4 Ea)	160.00	WKS	0	0	9,310	0	9,310	58.18
Personal Computer	160.00	MO	0	0	20,481	0	20,481	128.01
Printer for PC	160.00	MO	0	0	12,102	0	12,102	75.64
Copy Machine	160.00	MO	0	0	30,721	0	30,721	192.01
Fax Machine	160.00	MO	0	0	3,724	0	3,724	23.27

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	9,652	0	0	9,652	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	59,588	0	0	59,588	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	12,813	0	0	12,813	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	74,567	0	0	74,567	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	20571	HR	0	51,684	0	0	51,684	2.51
TOTAL Field Equipment Requirements	40.00	MO	0	208,305	224,824	0	433,129	10828.23
Field Support Utilities								
Electricity	80.00	MO	0	0	0	15,200	15,200	190.00
Telephone (2 Lines)	80.00	MO	0	0	0	20,000	20,000	250.00
Bottled Water Service	343.00	WKS	0	0	0	15,435	15,435	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	80.00	MO	0	0	0	33,200	33,200	415.00
TOTAL Field Support Utilities	171.43	WKS	0	0	0	83,835	83,835	489.04
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	80.00	WK	0	0	3,258	0	3,258	40.73
Water Kegs (5 Gallon)	43.00	EA	0	0	998	0	998	23.22
Water Cups (Conical)	3429.00	BOX	0	0	15,762	0	15,762	4.60
Co2 Extinguisher (10Lb)	29.00	EA	0	0	4,759	0	4,759	164.11
Video Tape	171.00	EA	0	0	895	0	895	5.24
Camera Film and Development	40.00	MO	0	0	1,396	0	1,396	34.91
TOTAL Field Support Stores/Supplies	171.43	WKS	0	0	27,069	0	27,069	157.91
TOTAL Construction Management	1.00	EA	5,257,423	208,305	251,894	1,064,593	6,782,215	6782214.99
TOTAL Construction Management	1.00	EA	5,257,423	208,305	251,894	1,064,593	6,782,215	6782214.99
TOTAL Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	3.00	EA	0	0	0	255,000	255,000	85000.00
Long Arm Purchase	5.00	EA	0	0	0	390,000	390,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	645,000	645,000	645000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	645,000	645,000	645000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	645,000	645,000	645000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	400.00	HR	14,356	0	0	0	14,356	35.89
Dredge Engineer	200.00	HR	9,415	0	0	0	9,415	47.08
Oiler	200.00	HR	7,338	0	0	0	7,338	36.69
Excavator Dredge Operator	200.00	HR	10,857	0	0	0	10,857	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	200.00	HR	0	5,824	0	0	5,824	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	200.00	HR	0	1,429	0	0	1,429	7.14
SMALL TOOLS	200.00	HR	0	334	0	0	334	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	200.00	HR	0	1,460	0	0	1,460	7.30
Command/Control System	200.00	HR	0	3,195	0	0	3,195	15.98
TOTAL Shallow Dredge Crew	5.00	HR	41,967	12,242	0	0	54,209	10841.80
Deep Dredge Crew								
Deckhand for Dredge	80.00	HR	2,871	0	0	0	2,871	35.89
Dredge Engineer	40.00	HR	1,883	0	0	0	1,883	47.08
Oiler	40.00	HR	1,468	0	0	0	1,468	36.69
Excavator Dredge Operator	40.00	HR	2,171	0	0	0	2,171	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	40.00	HR	0	1,929	0	0	1,929	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	40.00	HR	0	286	0	0	286	7.14
SMALL TOOLS	40.00	HR	0	67	0	0	67	1.67

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	40.00	HR	0	422	0	0	422	10.56
Command/Control System	40.00	HR	0	639	0	0	639	15.98
TOTAL Deep Dredge Crew	1.00	CRW	8,393	3,343	0	0	11,737	11736.57
North Barge Crew Rate								
Deckhand for Tug	200.00	HR	6,972	0	0	0	6,972	34.86
Boat Captain	200.00	HR	8,232	0	0	0	8,232	41.16
500 TO 800 Hp TUG BOAT	200.00	HR	0	13,564	0	0	13,564	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	200.00	HR	0	3,161	0	0	3,161	15.80
TOTAL North Barge Crew Rate	5.00	CRW	15,203	16,725	0	0	31,928	6385.58
South Barge Crew Rate								
Deckhand for Tug	40.00	HR	1,394	0	0	0	1,394	34.86
Boat Captain	40.00	HR	1,646	0	0	0	1,646	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	40.00	HR	0	5,348	0	0	5,348	133.70
DREDGE BARGE, 1000 TON	40.00	HR	0	1,245	0	0	1,245	31.12
TOTAL South Barge Crew Rate	1.00	CRW	3,041	6,593	0	0	9,634	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.48
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			130,994	95,250	0	0	226,244	
TOTAL Equipment Mobilization	1.00	EA	130,994	95,250	0	0	226,244	226243.69

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	1600.00	HR	57,425	0	0	0	57,425	35.89
Dredge Engineer	800.00	HR	37,661	0	0	0	37,661	47.08
Oiler	800.00	HR	29,352	0	0	0	29,352	36.69
Excavator Dredge Operator	800.00	HR	43,429	0	0	0	43,429	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	800.00	HR	0	23,296	0	0	23,296	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	800.00	HR	0	5,716	0	0	5,716	7.14
SMALL TOOLS	800.00	HR	0	1,338	0	0	1,338	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	800.00	HR	0	5,839	0	0	5,839	7.30
Command/Control System	800.00	HR	0	12,780	0	0	12,780	15.98
TOTAL Shallow Dredge Crew	5.00	CRW	167,867	48,969	0	0	216,836	43367.21
Deep Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	160.00	HR	0	7,717	0	0	7,717	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Deep Dredge Crew	1.00	HR	33,573	13,373	0	0	46,946	46946.28
North Barge Crew Rate								
Deckhand for Tug	800.00	HR	27,886	0	0	0	27,886	34.86
Boat Captain	800.00	HR	32,926	0	0	0	32,926	41.16
500 TO 800 Hp TUG BOAT	800.00	HR	0	54,255	0	0	54,255	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	800.00	HR	0	12,644	0	0	12,644	15.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	5.00	CRW	60,813	66,899	0	0	127,712	25542.33
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	1.00	CRW	12,163	26,372	0	0	38,534	38534.38
Spare Tug Crew Rate								
Spare Tug Crew	320.00	HR	27,631	21,702	0	0	49,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	27,631	21,702	0	0	49,333	24666.44
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	40.00	HR	15,432	20,090	0	0	35,523	888.06
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	40.00	HR	15,432	32,604	0	0	48,037	1200.92

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	40.00	HR	17,138	14,430	0	0	31,568	789.20
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL South Truck Crew	40.00	HR	17,138	17,538	0	0	34,676	866.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	40.00	HR	37,446	17,180	0	0	54,626	1365.66
TOTAL Equipment Mobilization			404,634	279,157	0	0	683,791	
Process Equipment								
Master Mechanic	1280.00	HR	63,029	0	0	0	63,029	49.24
Outside Equip. Operators, Heavy	1280.00	HR	60,431	0	0	0	60,431	47.21
TOTAL Process Equipment	160.00	HR	123,460	0	0	0	123,460	771.62
TOTAL Process Equipment Start Up			123,460	0	0	0	123,460	
TOTAL Annual Remobilization & Startup	1.00	EA	528,094	279,157	0	0	807,251	807250.60
Annual Demobilization								
Shallow Dredge Crew								
Deckhand for Dredge	800.00	HR	28,712	0	0	0	28,712	35.89
Dredge Engineer	400.00	HR	18,831	0	0	0	18,831	47.08
Oiler	400.00	HR	14,676	0	0	0	14,676	36.69
Excavator Dredge Operator	400.00	HR	21,715	0	0	0	21,715	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	400.00	HR	0	11,648	0	0	11,648	29.12

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	400.00	HR	0	2,858	0	0	2,858	7.14
SMALL TOOLS	400.00	HR	0	669	0	0	669	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	400.00	HR	0	2,920	0	0	2,920	7.30
Command/Control System	400.00	HR	0	6,390	0	0	6,390	15.98
TOTAL Shallow Dredge Crew	5.00	CRW	83,934	24,484	0	0	108,418	21683.61
Deep Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	80.00	HR	0	3,858	0	0	3,858	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	80.00	HR	0	845	0	0	845	10.56
Command/Control System	80.00	HR	0	1,278	0	0	1,278	15.98
TOTAL Deep Dredge Crew	1.00	CRW	16,787	6,686	0	0	23,473	23473.14
North Barge Crew Rate								
Deckhand for Tug	400.00	HR	13,943	0	0	0	13,943	34.86
Boat Captain	400.00	HR	16,463	0	0	0	16,463	41.16
500 TO 800 Hp TUG BOAT	400.00	HR	0	27,128	0	0	27,128	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	400.00	HR	0	6,322	0	0	6,322	15.80
TOTAL North Barge Crew Rate	5.00	CRW	30,406	33,450	0	0	63,856	12771.17
South Barge Crew Rate								
Deckhand for Tug	80.00	HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00	HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00	HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00	HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	1.00	CRW	6,081	13,186	0	0	19,267	19267.19

RTW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate								
Spare Tug Crew	160.00	HR	13,815	10,851	0	0	24,666	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	13,815	10,851	0	0	24,666	12333.22
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00	HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00	HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00	HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00	HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00	HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization			253,611	190,500	0	0	444,110	
TOTAL Annual Demobilization	1.00	EA	253,611	190,500	0	0	444,110	444110.37
Final Demob Site Restoration								
Shallow Dredge Crew								
Deckhand for Dredge	200.00	HR	7,178	0	0	0	7,178	35.89
Dredge Engineer	100.00	HR	4,708	0	0	0	4,708	47.08
Oiler	100.00	HR	3,669	0	0	0	3,669	36.69
Excavator Dredge Operator	100.00	HR	5,429	0	0	0	5,429	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	100.00	HR	0	2,912	0	0	2,912	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	100.00	HR	0	714	0	0	714	7.14
SMALL TOOLS	100.00	HR	0	167	0	0	167	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	100.00	HR	0	730	0	0	730	7.30
Command/Control System	100.00	HR	0	1,598	0	0	1,598	15.98
TOTAL Shallow Dredge Crew	5.00	HR	20,983	6,121	0	0	27,105	5420.90
Deep Dredge Crew								
Deckhand for Dredge	40.00	HR	1,436	0	0	0	1,436	35.89
Dredge Engineer	20.00	HR	942	0	0	0	942	47.08
Oiler	20.00	HR	734	0	0	0	734	36.69
Excavator Dredge Operator	20.00	HR	1,086	0	0	0	1,086	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	20.00	HR	0	965	0	0	965	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	20.00	HR	0	143	0	0	143	7.14
SMALL TOOLS	20.00	HR	0	33	0	0	33	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of	20.00	HR	0	211	0	0	211	10.56

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.								
Command/Control System	20.00	HR	0	320	0	0	320	15.98
TOTAL Deep Dredge Crew	1.00	HR	4,197	1,672	0	0	5,868	5868.28
North Barge Crew Rate								
Deckhand for Tug	100.00	HR	3,486	0	0	0	3,486	34.86
Boat Captain	100.00	HR	4,116	0	0	0	4,116	41.16
500 TO 800 Hp TUG BOAT	100.00	HR	0	6,782	0	0	6,782	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	100.00	HR	0	1,580	0	0	1,580	15.80
TOTAL North Barge Crew Rate	5.00	HR	7,602	8,362	0	0	15,964	3192.79
South Barge Crew Rate								
Deckhand for Tug	20.00	HR	697	0	0	0	697	34.86
Boat Captain	20.00	HR	823	0	0	0	823	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	20.00	HR	0	2,674	0	0	2,674	133.70
DREDGE BARGE, 1000 TON	20.00	HR	0	622	0	0	622	31.12
TOTAL South Barge Crew Rate	1.00	HR	1,520	3,296	0	0	4,817	4816.80
Spare Tug Crew Rate								
Spare Tug Crew	40.00	HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00	HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew								
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00	HR	0	4,731	0	0	4,731	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	40.00	HR	0	292	0	0	292	7.30
TOTAL North Unloading Crew	80.00	HR	3,858	5,023	0	0	8,881	111.01

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			65,497	47,625	0	0	113,122	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	65,497	47,625	0	500,000	613,122	613121.85
TOTAL Mobilization/Demobilization	1.00	EA	978,195	612,532	0	1,161,560	2,752,287	2752286.52

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket	107.25	HR	0	877	0	0	877	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl					** OVERTIME **			
Cover Building #2 This building is a rain cover for railroad cars.	5000.00	SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00	SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000	SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
Water Treatment Fac -Hydraulic Water treatment plant for the hydraulic dredging will be approximately 200 GPM plant - prorated from historical data.								
TOTAL Water Treatment Fac -Hydraulic	1.00	EA	0	0	0	2,000,000	2,000,000	2000000.00
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	9,742,745	12,274,743	12274743.08
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	40.00	HR	2,602	0	0	0	2,602	65.04
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	204.80	HR	13,321	0	0	0	13,321	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54
TOTAL Repair Road/Work Area	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

NTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	18,653	0	0	156,464	175,117	175117.41
TOTAL Set Up Material Handling Equip	1.00	EA	18,653	0	0	156,464	175,117	175117.41
TOTAL Set Up Material Handling Equip	1.00	EA	18,653	0	0	156,464	175,117	175117.41
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added.								

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Storage Building #1	15000	SF	0	0	0	1,108,800	1,108,800	73.92
This building is a rain cover for material.								
Cover Building #2	4000.00	SF	0	0	0	295,680	295,680	73.92
This building is a rain cover for railroad cars.								
Concrete Slab and Hardstand	5000.00	SY	0	0	0	308,000	308,000	61.60
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,712,480	1,712,480	1712480.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,712,480	1,712,480	1712480.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,712,480	1,712,480	1712480.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,665	0	0	8,624	11,289	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL South Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	332,568	630,628	419,748	4,452,212	5,835,155	5835155.26
Dredging								
Deep Draft Dredging								
Dredging Reach 1								
Deckhand for Dredge	19546	HR	848,842	0	0	0	848,842	43.43
Dredge Engineer	9773.12	HR	556,706	0	0	0	556,706	56.96
Oiler	9773.12	HR	433,879	0	0	0	433,879	44.40
Excavator Dredge Operator	9773.12	HR	641,961	0	0	0	641,961	65.69
HYD EXCAV, CRWLR, 4.75 CY BKT	8144.26	HR	0	1,904,083	0	0	1,904,083	233.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	1628.85	HR	0	95,056	0	0	95,056	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	9773.12	HR	0	84,488	0	0	84,488	8.64
SMALL TOOLS	9773.12	HR	0	19,773	0	0	19,773	2.02
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	9773.12	HR	0	124,864	0	0	124,864	12.78
Command/Control System	9773.12	HR	0	188,912	0	0	188,912	19.33
Per Diem	4886.56	MDY	0	0	0	432,517	432,517	88.51
TOTAL Dredging Reach 1	592316	BCY	2,481,387	2,417,176	0	432,517	5,331,080	9.00
TOTAL Reach #1	592316	BCY	2,481,387	2,417,176	0	432,517	5,331,080	9.00
Dredging Reach 2								
Deckhand for Dredge	3513.94	HR	152,601	0	0	0	152,601	43.43
Dredge Engineer	1756.97	HR	100,082	0	0	0	100,082	56.96
Oiler	1756.97	HR	78,001	0	0	0	78,001	44.40
Excavator Dredge Operator	1756.97	HR	115,409	0	0	0	115,409	65.69
HYD EXCAV, CRWLR, 4.75 CY BKT	1464.14	HR	0	342,308	0	0	342,308	233.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	292.83	HR	0	17,089	0	0	17,089	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	1756.97	HR	0	15,189	0	0	15,189	8.64
SMALL TOOLS	1756.97	HR	0	3,555	0	0	3,555	2.02
Command/Control System	1756.97	HR	0	33,962	0	0	33,962	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from	1756.97	HR	0	22,448	0	0	22,448	12.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
database.								
Per Diem	878.48	MDY	0	0	0	77,756	77,756	88.51
TOTAL Dredging Reach 2	106484	BCY	446,093	434,549	0	77,756	958,398	9.00
TOTAL Reach #2	106484	BCY	446,093	434,549	0	77,756	958,398	9.00
Dredging Reach 3								
Deckhand for Dredge	6493.87	HR	282,012	0	0	0	282,012	43.43
Dredge Engineer	3246.94	HR	184,955	0	0	0	184,955	56.96
Oiler	3246.94	HR	144,148	0	0	0	144,148	44.40
Excavator Dredge Operator	3246.94	HR	213,279	0	0	0	213,279	65.69
HYD EXCAV, CRWLR, 4.75 CY BKT	2705.78	HR	0	632,596	0	0	632,596	233.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	541.16	HR	0	31,581	0	0	31,581	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3246.94	HR	0	28,069	0	0	28,069	8.64
SMALL TOOLS	3246.94	HR	0	6,569	0	0	6,569	2.02
Command/Control System	3246.94	HR	0	62,762	0	0	62,762	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3246.94	HR	0	41,484	0	0	41,484	12.78
Per Diem	1623.47	MDY	0	0	0	143,696	143,696	88.51
TOTAL Dredging Reach 3	196786	BCY	824,395	803,062	0	143,696	1,771,152	9.00
TOTAL Reach #3	196786	BCY	824,395	803,062	0	143,696	1,771,152	9.00
TOTAL Deep Draft Dredging	895586	BCY	3,751,875	3,654,787	0	653,968	8,060,630	9.00
Shallow Draft Dredging								
Dredging Reach 1								
Deckhand for Dredge	31970	HR	1,388,374	0	0	0	1,388,374	43.43
Dredge Engineer	15985	HR	910,553	0	0	0	910,553	56.96
Oiler	15985	HR	709,657	0	0	0	709,657	44.40
Excavator Dredge Operator	15985	HR	1,049,997	0	0	0	1,049,997	65.69
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	13321	HR	0	1,906,209	0	0	1,906,209	143.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2664.17	HR	0	93,874	0	0	93,874	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	15985	HR	0	138,189	0	0	138,189	8.64
SMALL TOOLS	15985	HR	0	32,341	0	0	32,341	2.02
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of	15985	HR	0	141,174	0	0	141,174	8.83

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected.								
Command/Control System	15985	HR	0	308,986	0	0	308,986	19.33
Per Diem	7992.50	MDY	0	0	0	707,428	707,428	88.51
TOTAL Dredging Reach 1	322933	BCY	4,058,580	2,620,772	0	707,428	7,386,781	22.87
TOTAL Reach 1	322933	BCY	4,058,580	2,620,772	0	707,428	7,386,781	22.87
Dredging Reach 2								
Deckhand for Dredge	14562	HR	632,370	0	0	0	632,370	43.43
Dredge Engineer	7280.77	HR	414,734	0	0	0	414,734	56.96
Oiler	7280.77	HR	323,231	0	0	0	323,231	44.40
Excavator Dredge Operator	7280.77	HR	478,248	0	0	0	478,248	65.69
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	6067.31	HR	0	868,231	0	0	868,231	143.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1213.46	HR	0	42,757	0	0	42,757	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	7280.77	HR	0	62,942	0	0	62,942	8.64
SMALL TOOLS	7280.77	HR	0	14,730	0	0	14,730	2.02
Command/Control System	7280.77	HR	0	140,736	0	0	140,736	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	7280.77	HR	0	64,301	0	0	64,301	8.83
Per Diem	3640.39	MDY	0	0	0	322,216	322,216	88.51
TOTAL Dredging Reach 2	147088	BCY	1,848,583	1,193,697	0	322,216	3,364,496	22.87
TOTAL Reach 2	147088	BCY	1,848,583	1,193,697	0	322,216	3,364,496	22.87
Dredging Reach 3								
Deckhand for Dredge	31028	HR	1,347,462	0	0	0	1,347,462	43.43
Dredge Engineer	15514	HR	883,721	0	0	0	883,721	56.96
Oiler	15514	HR	688,745	0	0	0	688,745	44.40
Excavator Dredge Operator	15514	HR	1,019,056	0	0	0	1,019,056	65.69
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12928	HR	0	1,850,038	0	0	1,850,038	143.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2585.66	HR	0	91,108	0	0	91,108	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	15514	HR	0	134,117	0	0	134,117	8.64
SMALL TOOLS	15514	HR	0	31,388	0	0	31,388	2.02
Command/Control System	15514	HR	0	299,881	0	0	299,881	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	15514	HR	0	137,014	0	0	137,014	8.83
Per Diem	7756.98	MDY	0	0	0	686,582	686,582	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Dredging Reach 3	313417	BCY	3,938,984	2,543,545	0	686,582	7,169,111	22.87
TOTAL Reach 3	313417	BCY	3,938,984	2,543,545	0	686,582	7,169,111	22.87
TOTAL Shallow Draft Dredging	783438	BCY	9,846,147	6,358,014	0	1,716,226	17,920,388	22.87
Land Locked Area								
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	4438.13	HR	211,107	0	0	0	211,107	47.57
Dredge Engineer	2219.06	HR	138,479	0	0	0	138,479	62.40
Oiler	2219.06	HR	107,936	0	0	0	107,936	48.64
Excavator Dredge Operator	2219.06	HR	159,985	0	0	0	159,985	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1849.22	HR	0	249,350	0	0	249,350	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	369.84	HR	0	13,032	0	0	13,032	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	2219.06	HR	0	5,488	0	0	5,488	2.47
SMALL TOOLS	2219.06	HR	0	4,131	0	0	4,131	1.86
Command/Control System	2219.06	HR	0	42,894	0	0	42,894	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2219.06	MDY	0	18,153	0	0	18,153	8.18
Per Diem	1109.53	MDY	0	0	0	98,206	98,206	88.51
TOTAL Dredging Reach 2	53796	BCY	617,507	333,048	0	98,206	1,048,762	19.50
TOTAL Shallow Draft Dredging	53796	BCY	617,507	333,048	0	98,206	1,048,762	19.50
Reach 2					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	6934.57	HR	0	127,371	0	0	127,371	18.37
Spare Tug Crew	2311.52	HR	241,505	100,265	0	0	341,770	147.85
Spare Tug Crew Per Diem days	462.00	MDY	0	0	0	40,892	40,892	88.51
TOTAL Reach 2	53796	BCY	241,505	227,635	0	40,892	510,033	9.48
TOTAL Small Barging to Transfer Site			241,505	227,635	0	40,892	510,033	
Transfer of Mat'l to Large barge					** OVERTIME **			
Oiler	1087.78	HR	54,799	0	0	0	54,799	50.38
Excavator Dredge Operator	1087.78	HR	81,276	0	0	0	81,276	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	870.22	HR	0	120,325	0	0	120,325	138 27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	217.56	HR	0	7,666	0	0	7,666	35.24

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK FLOAT, MED DUTY, 30'X10'X3'	1087.78	HR	0	2,752	0	0	2,752	2.53
PUMP SUBM, 4"D, SKID W/P-UNIT INCLUDES POWER UNIT	1087.78	HR	0	5,750	0	0	5,750	5.29
SMALL TOOLS	1087.78	HR	0	2,098	0	0	2,098	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	1087.78	HR	0	9,193	0	0	9,193	8.45
Per Diem	217.56	MDY	0	0	0	19,256	19,256	88.51
TOTAL Transfer of Mat'l to Large barge	53796	BCY	136,075	147,783	0	19,256	303,115	5.63
TOTAL Transfer of Mat'l to 200T Barge			136,075	147,783	0	19,256	303,115	
Mobilization								
Mob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Clearing and Grubbing	2.00	AC	0	0	0	12,100	12,100	6050.00
Mob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Mob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00	EA	0	0	0	60,984	60,984	30492.00
Mob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Mob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00
TOTAL Mobilization			0	0	0	176,176	176,176	

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Demobilization								
Demob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Demob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Demob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00	EA	0	0	0	60,984	60,984	30492.00
Demob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Demob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00
TOTAL Demobilization			0	0	0	164,076	164,076	
TOTAL Mobilization/Demobilization			0	0	0	340,252	340,252	
TOTAL Land Locked Area	53796	BCY	995,087	708,467	0	498,607	2,202,161	40.94
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	36000	HR	0	1,630,675	0	0	1,630,675	45.30
SMALL TOOLS	3599.99	HR	0	6,943	0	0	6,943	1.93
Deckhand for Tug	36000	HR	1,720,886	0	0	0	1,720,886	47.80
Boat Captain	36000	HR	2,040,181	0	0	0	2,040,181	56.67
TOTAL Shallow Turbidity Control	4.00	CRW	3,761,067	1,637,619	14,081	0	5,412,766	1353191.53

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Deep Turbidity Control					** OVERTIME **			
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	2800.00	LF	0	0	51,253	0	51,253	18.30
Anchoring System	56.00	EA	0	0	18,924	0	18,924	337.93
Mooring Buoy Light w/Photocell	28.00	EA	0	0	4,928	0	4,928	176.01
Freight to Site	1.40	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	12600	HR	0	570,736	0	0	570,736	45.30
SMALL TOOLS	1260.00	HR	0	2,430	0	0	2,430	1.93
Deckhand for Tug	12600	HR	602,310	0	0	0	602,310	47.80
Boat Captain	12600	HR	714,063	0	0	0	714,063	56.67
TOTAL Deep Turbidity Control	1.40	CRW	1,316,373	573,167	75,106	0	1,964,646	1403318.53
TOTAL Turbidity Control			5,077,440	2,210,785	89,187	0	7,377,412	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	5,077,440	2,210,785	89,187	0	7,377,412	7377412.07
TOTAL Dredging	1732820	BCY	19,670,549	12,932,054	89,187	2,868,801	35,560,591	20.52
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	12012	HR	832,817	0	0	0	832,817	69.33
Sampling Technician	12012	HR	511,430	0	0	0	511,430	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	12012	HR	0	163,423	0	0	163,423	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,344,247	164,770	0	0	1,509,017	829.13
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	2496.00	EA	0	0	661,369	0	661,369	264.97
Total Suspended Solids	2496.00	EA	0	0	91,857	0	91,857	36.80
Fraction Organic Carbon On TSS	2496.00	EA	0	0	183,714	0	183,714	73.60
TOTAL Analytical	416.00	EA	0	0	936,940	0	936,940	2252.26
TOTAL Weekly Field Sampling	52.00	WKS	1,344,247	164,770	945,772	0	2,454,789	47207.49
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores 3/10/10 (cap)								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Chemist, Jr.	1170.00	HR	71,560	0	0	0	71,560	61.16
Sampling Technician	1170.00	HR	49,815	0	0	0	49,815	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	1170.00	HR	0	55,702	0	0	55,702	47.61
TOTAL Labor/Equipment	1170.00	HR	202,494	55,702	0	0	258,195	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	1474.00	EA	0	0	43,396	0	43,396	29.44
Total PCB's	369.00	EA	0	0	97,775	0	97,775	264.97
Organic Carbon	369.00	EA	0	0	27,160	0	27,160	73.60
TOTAL Analytical	1170.00	EA	0	0	168,331	0	168,331	143.87
TOTAL Confirmation Cores 3/10/10 (cap)	117.00	DAY	202,494	55,702	183,051	0	441,247	3771.34
Geophysical Surveys 3/10/10 (cp)								
Chemist	1020.00	HR	70,719	0	0	0	70,719	69.33
Survey Crew	102.00	DAY	419,089	0	0	0	419,089	4108.72
Post Processing	178.50	HR	20,627	0	0	0	20,627	115.56
Per Diem	102.00	DAY	0	0	40,541	0	40,541	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1020.00	HR	514,030	0	40,541	0	554,571	543.70
TOTAL Geophysical Surveys 3/10/10 (cp)	102.00	DAY	514,030	0	40,541	0	554,571	5436.97
TOTAL Fish Sample Analysis	5.00	EA	0	0	0	3,250,000	3,250,000	650000.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Annual Reporting								
Project Manager	120.00	HR	13,862	0	0	0	13,862	115.51
Chemist	200.00	HR	13,866	0	0	0	13,866	69.33
Engineers, Quality Control	120.00	HR	7,368	0	0	0	7,368	61.40
Clerks, Typists, Bookkeepers & Receptionist	80.00	HR	2,635	0	0	0	2,635	32.93
Reproduction Operators	40.00	HR	844	0	0	0	844	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	5.00	WK	43,007	0	383	0	43,389	8677.87
Project Manager	240.00	HR	27,723	0	0	0	27,723	115.51
Chemist	400.00	HR	27,733	0	0	0	27,733	69.33
Engineers, Quality Control	240.00	HR	14,737	0	0	0	14,737	61.40
Clerks, Typists, Bookkeepers & Receptionist	160.00	HR	5,269	0	0	0	5,269	32.93
Reproduction Operators	80.00	HR	1,688	0	0	0	1,688	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	10.00	WK	81,582	0	383	0	81,965	8196.45
TOTAL Annual Reporting	5.00	YR	124,588	0	765	0	125,354	25070.78
TOTAL Testing and Monitoring (remed)	1.00	EA	3,477,905	378,956	1,329,112	3,250,000	8,435,973	8435973.49
Barging								
Barging to North - 1000T Hopper								
Reach 1								
Spare Tug Crew	1815.09	HR	189,638	148,948	0	0	338,586	186.54
Spare Tug Crew Per Diem days	364.00	MDY	0	0	0	32,218	32,218	88.51
DREDGE BARGE, 1000 TON	5445.26	HR	0	205,038	0	0	205,038	37.65
TOTAL Reach 1	105606	BCY	189,638	353,986	0	32,218	575,842	5.45
TOTAL Reach 1	105606	BCY	189,638	353,986	0	32,218	575,842	5.45
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 1000T Hopper	105606	BCY	189,638	353,986	0	32,218	575,842	5.45

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Barging N (Hydraulic) 1000 T								
Reach 1					** OVERTIME **			
TOTAL Reach 1		MDY	0	0	0	0	0	
TOTAL Reach 1			0	0	0	0	0	
Reach 2					** OVERTIME **			
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
Reach 3					** OVERTIME **			
TOTAL Reach 3		MDY	0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging N (Hydraulic) 1000 T			0	0	0	0	0	
Barging to North - 200T Deck								
Reach 1					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	49953	HR	0	917,515	0	0	917,515	18.37
Spare Tug Crew	3330.21	HR	347,936	273,281	0	0	621,217	186.54
Spare Tug Crew Per Diem days	666.00	MDY	0	0	0	58,949	58,949	88.51
TOTAL Reach 1	322933	BCY	347,936	1,190,796	0	58,949	1,597,680	4.95
TOTAL Reach 1	322933	BCY	347,936	1,190,796	0	58,949	1,597,680	4.95
Reach 2					** OVERTIME **			
Deckhand for Tug	10358	HR	495,137	0	0	0	495,137	47.80
Boat Captain	10358	HR	587,005	0	0	0	587,005	56.67
500 TO 800 Hp TUG BOAT	10358	HR	0	816,261	0	0	816,261	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	31074	HR	0	570,750	0	0	570,750	18.37
Per Diem	2071.59	DAY	0	0	0	183,360	183,360	88.51
Spare Tug Crew	2071.59	HR	216,437	169,997	0	0	386,435	186.54
Spare Tug Crew Per Diem days	414.00	MDY	0	0	0	36,644	36,644	88.51
TOTAL Reach 2	200884	BCY	1,298,580	1,557,009	0	220,004	3,075,592	15.31

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	200884	BCY	1,298,580	1,557,009	0	220,004	3,075,592	15.31
Reach 3					** OVERTIME **			
Deckhand for Tug	48481	HR	2,317,522	0	0	0	2,317,522	47.80
Boat Captain	48481	HR	2,747,517	0	0	0	2,747,517	56.67
500 TO 800 Hp TUG BOAT	48481	HR	0	3,820,566	0	0	3,820,566	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	80802	HR	0	1,484,130	0	0	1,484,130	18.37
Per Diem	9696.23	MDY	0	0	0	858,228	858,228	88.51
Spare Tug Crew	3232.08	HR	337,683	265,228	0	0	602,911	186.54
Spare Tug Crew Per Diem days	646.00	MDY	0	0	0	57,178	57,178	88.51
TOTAL Reach 3	313417	BCY	5,402,722	5,569,924	0	915,406	11,888,053	37.93
TOTAL Reach 3	313417	BCY	5,402,722	5,569,924	0	915,406	11,888,053	37.93
TOTAL Barging to North - 200T Deck	837234	BCY	7,049,238	8,317,729	0	1,194,358	16,561,325	19.78
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	16730	HR	799,760	0	0	0	799,760	47.80
Boat Captain	16730	HR	948,148	0	0	0	948,148	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	16730	HR	0	2,627,652	0	0	2,627,652	157.06
DREDGE BARGE, 1000 TON	50191	HR	0	1,889,927	0	0	1,889,927	37.65
Per Diem	3346.10	DAY	0	0	0	296,168	296,168	88.51
Spare Tug Crew	4182.62	HR	436,995	343,231	0	0	780,226	186.54
Spare Tug Crew Per Diem days	836.00	MDY	0	0	0	73,996	73,996	88.51
TOTAL Reach 1	486710	BCY	2,184,903	4,860,810	0	370,164	7,415,877	15.24
TOTAL Reach 1	486710	BCY	2,184,903	4,860,810	0	370,164	7,415,877	15.24
Reach 2					** OVERTIME **			
Deckhand for Tug	3660.35	HR	174,974	0	0	0	174,974	47.80
Boat Captain	3660.35	HR	207,439	0	0	0	207,439	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3660.35	HR	0	574,886	0	0	574,886	157.06
DREDGE BARGE, 1000 TON	10981	HR	0	413,484	0	0	413,484	37.65
Per Diem	732.07	DAY	0	0	0	64,797	64,797	88.51
Spare Tug Crew	915.09	HR	95,607	75,093	0	0	170,700	186.54
Spare Tug Crew Per Diem days	184.00	MDY	0	0	0	16,286	16,286	88.51
TOTAL Reach 2	106484	BCY	478,020	1,063,464	0	81,083	1,622,567	15.24

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	106484	BCY	478,020	1,063,464	0	81,083	1,622,567	15.24
Reach 3					** OVERTIME **			
Deckhand for Tug	3382.23	HR	161,679	0	0	0	161,679	47.80
Boat Captain	3382.23	HR	191,677	0	0	0	191,677	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3382.23	HR	0	531,205	0	0	531,205	157.06
DREDGE BARGE, 1000 TON	16911	HR	0	636,778	0	0	636,778	37.65
Per Diem	676.45	DAY	0	0	0	59,873	59,873	88.51
Spare Tug Crew	1691.11	HR	176,685	138,775	0	0	315,460	186.54
Spare Tug Crew Per Diem days	338.00	MDY	0	0	0	29,917	29,917	88.51
TOTAL Reach 3	196786	BCY	530,041	1,306,757	0	89,790	1,926,588	9.79
TOTAL Reach 3	196786	BCY	530,041	1,306,757	0	89,790	1,926,588	9.79
TOTAL Barging to South - 1000T Hopper	789980	BCY	3,192,965	7,231,031	0	541,037	10,965,033	13.88
TOTAL Barging to South - 200T Deck	1.00	EA	0	0	0	0	0	0.00
TOTAL Canal/Lock Usage Fees			0	0	0	100,000	100,000	
TOTAL Barging	1732820	BCY	10,431,840	15,902,746	0	1,867,613	28,202,200	16.28
Stabilization								
Transfer from Barge to Pugmil								
Unloading at Northern Facility					** OVERTIME **			
Outside Equip. Operators, Heavy	12201	HR	814,891	0	0	0	814,891	66.79
Master Mechanic	12201	HR	851,435	0	0	0	851,435	69.78
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12201	HR	0	1,763,752	0	0	1,763,752	144.55
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	12201	HR	0	107,798	0	0	107,798	8.83
TOTAL Unloading at Northern Facility	942840	BCY	1,666,326	1,871,551	0	0	3,537,876	3.75
TOTAL Unload Barge - North	942840	BCY	1,666,326	1,871,551	0	0	3,537,876	3.75

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading at Southern Facility					** OVERTIME **			
Master Mechanic	5111.58	HR	356,697	0	0	0	356,697	69.78
Outside Equip. Operators, Heavy	5111.58	HR	341,387	0	0	0	341,387	66.79
HYD EXCAV, CRWLR, 4.75 CY BKT	5111.58	HR	0	1,206,625	0	0	1,206,625	236.06
Environmental Bucket	5111.58	HR	0	65,332	0	0	65,332	12.78
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL Unloading at Southern Facility	789980	BCY	698,084	1,271,958	0	0	1,970,042	2.49
TOTAL Unload Barge - South	789980	BCY	698,084	1,271,958	0	0	1,970,042	2.49
TOTAL Transfer from Barge to Pugmil	1732820	BCY	2,364,410	3,143,508	0	0	5,507,918	3.18
Stabilization Processing								
Soil Stabilization (30)					** OVERTIME **			
To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	17328	HR	0	1,065,902	0	0	1,065,902	61.51
Mixing Equipment	17328	HR	0	3,501,748	0	0	3,501,748	202.08
Outside Equip. Oper Light	17328	HR	1,045,361	0	0	0	1,045,361	60.33
Outside Equip. Oper Med	17328	HR	1,141,139	0	0	0	1,141,139	65.85
Outside Laborer (Semi-Skilled)	34656	HR	1,731,522	0	0	0	1,731,522	49.96
TOTAL Soil Stabilization	1732820	CY	3,918,022	4,567,649	0	0	8,485,672	4.90
TOTAL Soil Stabilization			3,918,022	4,567,649	0	0	8,485,672	
TOTAL Stabilization Processing	1732820	BCY	3,918,022	4,567,649	0	0	8,485,672	4.90
Stabilization Agents/Chemical								
Stabilization Agents/Chemical					** OVERTIME **			
Portland Cement - Material Cost BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sales tax = $90.93	194094	TNS	0	0	0	17,648,946	17,648,946	90.93
TOTAL Stabilization Agents/Chemical	1732980	BCY	0	0	0	17,648,946	17,648,946	10.18
TOTAL Stabilization Agents/Chemical	1.00	EA	0	0	0	17,648,946	17,648,946	17648945.60

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Stabilization Agents/Chemical	1732820	BCY	0	0	0	17,648,946	17,648,946	10.19
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	12202	HR	609,637	0	0	0	609,637	49.96
Outside Truck Drivers, Heavy	39534	HR	1,842,029	0	0	0	1,842,029	46.59
REAR DUMP BODY, 12.0CY	39534	HR	0	159,070	0	0	159,070	4.02
(ADD 36,000 GVW TRUCK)								
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	39534	HR	0	1,309,031	0	0	1,309,031	33.11
TOTAL Truck Cycle Times-North Facility	1018267	BCY	2,451,667	1,468,101	0	0	3,919,768	3.85
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	5111.49	HR	255,383	0	0	0	255,383	49.96
Outside Truck Drivers, Heavy	15334	HR	714,484	0	0	0	714,484	46.59
TRLR,END DUMP, 20CY, 24T	15334	HR	0	181,964	0	0	181,964	11.87
(ADD TOWING TRUCK)								
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	15334	HR	0	507,746	0	0	507,746	33.11
TOTAL Truck Cycle Times-South Facility	853178	BCY	969,867	689,710	0	0	1,659,577	1.95
TOTAL Truck Cycle Times	1.00	EA	3,421,534	2,157,811	0	0	5,579,345	5579344.91
TOTAL Transfer to RR Holding Area	1871445	BCY	3,421,534	2,157,811	0	0	5,579,345	2.98
TOTAL Stabilization	1732830	BCY	9,703,966	9,868,969	0	17,648,946	37,221,880	21.48
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	7786.23	HR	0	478,951	0	0	478,951	61.51
Outside Equip. Operators, Heavy	7786.23	HR	520,019	0	0	0	520,019	66.79
Laborer	15572	HR	778,039	0	0	0	778,039	49.96
SMALL TOOLS	15572	HR	0	31,400	0	0	31,400	2.02
TOTAL Loader Cycle Time - North Site	1018267	BCY	1,298,058	510,351	0	0	1,808,409	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	6523.87	HR	0	401,300	0	0	401,300	61.51
Outside Equip. Operators, Heavy	6523.87	HR	435,710	0	0	0	435,710	66.79
Laborer	13048	HR	651,899	0	0	0	651,899	49.96
SMALL TOOLS	13048	HR	0	26,309	0	0	26,309	2.02
TOTAL Loader Cycle Time - South Site	853179	BCY	1,087,608	427,609	0	0	1,515,218	1.78
TOTAL Load RR Car	1871445	BCY	2,385,666	937,960	0	0	3,323,626	1.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transp/Disposal >33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	12128	TRP	0	0	0	60,641,278	60,641,278	5000.00
TOTAL Rail Transport Fee (>33ppm)	1091543	TNS	0	0	0	60,641,278	60,641,278	55.56
TOTAL Rail Transport Fee (>33ppm)	1091543	TNS	0	0	0	60,641,278	60,641,278	55.56
Sediment Disposal (>-33 ppm)								
Disposal Fee/Taxes - Texas	1091543	TNS	0	0	0	57,306,008	57,306,008	52.50
TOTAL Sediment Disposal (>-33 ppm)	1091543	EA	0	0	0	57,306,008	57,306,008	52.50
TOTAL Sediment Disposal (>33 ppm)	1091543	TNS	0	0	0	57,306,008	57,306,008	52.50
TOTAL Transp/Disposal >33 ppm - Texas	1091543	TNS	0	0	0	117,947,286	117,947,286	108.06
Transp/Disposal(0-33) Northeast								
Transp/Disposal(0-33) Northeast								
Transp/disposal at Northeastern This includes both the total transportation and disposal costs for Northeastern Disposal facility.	813002	TON	0	0	0	40,650,100	40,650,100	50.00
TOTAL Transp/Disposal(0-33) Northeast	813002	TNS	0	0	0	40,650,100	40,650,100	50.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	40,650,100	40,650,100	40650100.00
TOTAL Transp/Disposal(0-33) Northeast	813002	TNS	0	0	0	40,650,100	40,650,100	50.00
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
Transp/disposal at Southeast This includes both the total transportation and disposal costs for southeaster disposal facility.	715478	TNS	0	0	0	35,773,900	35,773,900	50.00
TOTAL Transp/Disposal(0-33) Southeast	715478	TNS	0	0	0	35,773,900	35,773,900	50.00
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	35,773,900	35,773,900	35773900.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transp/Disposal(0-33) Southeast	715478	TNS	0	0	0	35,773,900	35,773,900	50.00
Sediment Sample & Analysis								
Analytical costs for Disposal								
Total PCB's - Sediment Assume 1 test/1000 tns	2621.51	EA	0	0	0	393,227	393,227	150.00
Total TCLP Assume 1 test/10000 tns	261.99	EA	0	0	0	314,391	314,391	1200.00
Paint Filter Test Assume 1 test/1000 tns	2621.51	EA	0	0	0	52,430	52,430	20.00
Duplicates Assume 5% of Total PCB's	131.08	EA	0	0	0	19,661	19,661	150.00
Quality Assurance Assume 5% of Total PCB's	131.08	EA	0	0	0	19,661	19,661	150.00
TOTAL Analytical costs for Disposal	1732820	BCY	0	0	0	799,371	799,371	0.46
TOTAL Analytical costs for Disposal	1732830	BCY	0	0	0	799,371	799,371	0.46
TOTAL Sediment Sample & Analysis	2620024	TNS	0	0	0	799,371	799,371	0.31
TOTAL Transport/Landfill Fee	1732820	BCY	2,385,666	937,960	0	195,170,657	198,494,283	114.55
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant								
Wastewater Treatment Operator	4499.99	HR	145,919	0	0	0	145,919	32.43
Laborer	4499.99	HR	198,692	0	0	0	198,692	44.15
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	2855.98	LB	0	0	378	0	378	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	7014.03	LB	0	0	1,169	0	1,169	0.17
TOTAL O&M at North Plant	42000000	GAL	344,611	674	81,407	0	426,691	0.01

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
O&M at South Plant								
Wastewater Treatment Operator	1200.00	HR	38,912	0	0	0	38,912	32.43
Laborer	1200.00	HR	52,984	0	0	0	52,984	44.15
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	2393.58	LB	0	0	317	0	317	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	5878.42	LB	0	0	980	0	980	0.17
TOTAL O&M at South Plant	35200000	GAL	91,896	674	81,156	0	173,726	0.00
TOTAL Water Plant Operation			436,507	1,347	162,563	0	600,417	
TOTAL Water Treatment Process	1.00	EA	436,507	1,347	162,563	0	600,417	600416.80
Effluent Monitoring								
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Southern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Northern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	248,446	248,446	248446.00
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	436,507	1,347	162,563	248,446	848,863	848862.80
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	276368	TNS	0	0	0	4,012,863	4,012,863	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,863	4,012,863	4012863.36
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,863	4,012,863	4012863.36
TOTAL Material 1 (topsoil type)	276315	TNS	0	0	0	4,012,863	4,012,863	14.52
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	170664	TNS	0	0	0	1,445,524	1,445,524	8.47
Graded Gravel (at Plant)	170664	TNS	0	0	0	1,445,524	1,445,524	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	2,891,048	2,891,048	2891048.16
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	2,891,048	2,891,048	2891048.16
TOTAL Material 2 (sand, gravel)	341328	TNS	0	0	0	2,891,048	2,891,048	8.47

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	2297.78	HR	109,812	0	0	0	109,812	47.79
Outside Truck Drivers, Heavy	16084	HR	716,846	0	0	0	716,846	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	16084	HR	0	182,566	0	0	182,566	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	16084	HR	0	509,424	0	0	509,424	31.67
TOTAL Truck Cycle Times-North Facility	441174	BCY	826,658	691,990	0	0	1,518,647	3.44
TOTAL Truck Cycle Times			826,658	691,990	0	0	1,518,647	
TOTAL Transportation to River	441174	BCY	826,658	691,990	0	0	1,518,647	3.44
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	1961.93	HR	0	154,404	0	0	154,404	78.70
Outside Equip. Operators, Heavy	1961.93	HR	125,335	0	0	0	125,335	63.88
Laborer	3923.86	HR	187,523	0	0	0	187,523	47.79
SMALL TOOLS	3923.86	HR	0	7,568	0	0	7,568	1.93
TOTAL Loader Cycle Time - North Site	441174	BCY	312,857	161,972	0	0	474,829	1.08
TOTAL Barge Loading	1.00	EA	312,857	161,972	0	0	474,829	474829.23
TOTAL Barge Loading	441174	BCY	312,857	161,972	0	0	474,829	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	9481.15	HR	453,223	0	0	0	453,223	47.80
Boat Captain	9481.15	HR	537,315	0	0	0	537,315	56.67
500 TO 800 Hp TUG BOAT	9481.15	HR	0	747,164	0	0	747,164	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	15170	HR	0	278,632	0	0	278,632	18.37

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Per Diem for tug crew	1896.23	MDY	0	0	0	167,838	167,838	88.51
Spare Tug Crew	1896.23	HR	198,116	155,607	0	0	353,723	186.54
Spare Tug Crew Per Diem days	380.00	MDY	0	0	0	33,634	33,634	88.51
TOTAL Reach 1	236429	BCY	1,188,654	1,181,404	0	201,473	2,571,530	10.88
Reach 2					** OVERTIME **			
Deckhand for Tug	2190.16	HR	104,695	0	0	0	104,695	47.80
Boat Captain	2190.16	HR	124,120	0	0	0	124,120	56.67
500 TO 800 Hp TUG BOAT	2190.16	HR	0	172,596	0	0	172,596	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	3128.80	HR	0	57,468	0	0	57,468	18.37
Per Diem for tug crew	438.03	MDY	0	0	0	38,771	38,771	88.51
Spare Tug Crew	312.88	HR	32,689	25,675	0	0	58,365	186.54
Spare Tug Crew Per Diem days	62.00	MDY	0	0	0	5,488	5,488	88.51
TOTAL Reach 2	39011	BCY	261,505	255,739	0	44,259	561,503	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	5624.60	HR	268,870	0	0	0	268,870	47.80
Boat Captain	5624.60	HR	318,757	0	0	0	318,757	56.67
500 TO 800 Hp TUG BOAT	5624.60	HR	0	443,248	0	0	443,248	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	6679.22	HR	0	122,681	0	0	122,681	18.37
Per Diem for tug crew	1124.92	MDY	0	0	0	99,568	99,568	88.51
Spare Tug Crew	351.54	HR	36,728	28,848	0	0	65,576	186.54
Spare Tug Crew Per Diem days	70.00	MDY	0	0	0	6,196	6,196	88.51
TOTAL Reach 3	43831	BCY	624,355	594,776	0	105,764	1,324,896	30.23
TOTAL Barging for Shallow Backfill	319271	BCY	2,074,514	2,031,919	0	351,495	4,457,928	13.96
Reach 1					** OVERTIME **			
Deckhand for Tug	569.75	HR	27,235	0	0	0	27,235	47.80
Boat Captain	569.75	HR	32,289	0	0	0	32,289	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	569.75	HR	0	89,483	0	0	89,483	157.06
DREDGE BARGE, 1000 TON	1139.50	HR	0	42,907	0	0	42,907	37.65
Per Diem for tug crew	113.95	MDY	0	0	0	10,086	10,086	88.51
Spare Tug Crew	284.87	HR	29,763	23,377	0	0	53,140	186.54
Spare Tug Crew Per Diem days	56.00	MDY	0	0	0	4,957	4,957	88.51
TOTAL Reach 1	49726	BCY	89,287	155,768	0	15,043	260,098	5.23

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 2					** OVERTIME **			
Deckhand for Tug	324.78	HR	15,525	0	0	0	15,525	47.80
Boat Captain	324.78	HR	18,406	0	0	0	18,406	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	324.78	HR	0	51,009	0	0	51,009	157.06
DREDGE BARGE, 1000 TON	811.95	HR	0	30,574	0	0	30,574	37.65
Per Diem for tug crew	64.96	MDY	0	0	0	5,749	5,749	88.51
Spare Tug Crew	162.39	HR	16,966	13,326	0	0	30,292	186.54
Spare Tug Crew Per Diem days	32.00	MDY	0	0	0	2,832	2,832	88.51
TOTAL Reach 2	28346	BCY	50,898	94,909	0	8,582	154,389	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	1255.51	HR	60,017	0	0	0	60,017	47.80
Boat Captain	1255.51	HR	71,152	0	0	0	71,152	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1255.51	HR	0	197,188	0	0	197,188	157.06
DREDGE BARGE, 1000 TON	2008.82	HR	0	75,641	0	0	75,641	37.65
Per Diem for tug crew	251.10	MDY	0	0	0	22,225	22,225	88.51
Spare Tug Crew	251.10	HR	26,235	20,606	0	0	46,841	186.54
Spare Tug Crew Per Diem days	50.00	MDY	0	0	0	4,426	4,426	88.51
TOTAL Reach 3	43831	BCY	157,404	293,435	0	26,651	477,490	10.89
TOTAL Barging for Deep Backfill	121903	BCY	297,589	544,111	0	50,275	891,976	7.32
TOTAL Barging to Backfill Site	441174	BCY	2,372,103	2,576,031	0	401,771	5,349,904	12.13
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	5427.57	HR	267,363	0	0	0	267,363	49.26
Dredge Engineer	2713.78	HR	175,393	0	0	0	175,393	64.63
Oiler	2713.78	HR	136,712	0	0	0	136,712	50.38
Excavator Dredge Operator	2713.78	HR	202,768	0	0	0	202,768	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2171.03	HR	0	300,186	0	0	300,186	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	542.76	HR	0	19,124	0	0	19,124	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2713.78	HR	0	22,467	0	0	22,467	8.28
SMALL TOOLS	2713.78	HR	0	5,234	0	0	5,234	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2713.78	HR	0	22,934	0	0	22,934	8.45
Command/Control System	2713.78	HR	0	52,457	0	0	52,457	19.33
Per Diem	1696.11	MDY	0	0	0	150,126	150,126	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Backfill - Fines	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines			782,237	422,401	0	150,126	1,354,764	
TOTAL Material Placement (Fines)	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
Material Placement (Material 2)								
Shallow Draft Backfilling					** OVERTIME **			
Deckhand for Dredge	1955.40	HR	96,323	0	0	0	96,323	49.26
Dredge Engineer	977.70	HR	63,189	0	0	0	63,189	64.63
Oiler	977.70	HR	49,253	0	0	0	49,253	50.38
Excavator Dredge Operator	977.70	HR	73,052	0	0	0	73,052	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	782.16	HR	0	108,148	0	0	108,148	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	195.54	HR	0	6,890	0	0	6,890	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	977.70	HR	0	8,094	0	0	8,094	8.28
SMALL TOOLS	977.70	HR	0	1,886	0	0	1,886	1.93
Environmental Bucket	977.70	HR	0	8,262	0	0	8,262	8.45
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	977.70	HR	0	18,899	0	0	18,899	19.33
Per Diem	611.06	MDY	0	0	0	54,086	54,086	88.51
TOTAL Shallow Draft Backfilling	121903	BCY	281,817	152,179	0	54,086	488,082	4.00
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Shallow Draft Backfilling			281,817	152,179	0	54,086	488,082	
Backfill Reach 1					** OVERTIME **			
Deckhand for Dredge	1396.74	HR	68,804	0	0	0	68,804	49.26
Dredge Engineer	698.37	HR	45,136	0	0	0	45,136	64.63
Oiler	698.37	HR	35,182	0	0	0	35,182	50.38
Excavator Dredge Operator	698.37	HR	52,181	0	0	0	52,181	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	558.69	HR	0	126,150	0	0	126,150	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	139.67	HR	0	8,151	0	0	8,151	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	698.37	HR	0	5,782	0	0	5,782	8.28

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
SMALL TOOLS	698.37	HR	0	1,347	0	0	1,347	1.93
Environmental Bucket	698.37	HR	0	8,538	0	0	8,538	12.23
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Command/Control System	698.37	HR	0	13,499	0	0	13,499	19.33
Per Diem	436.48	MDY	0	0	0	38,633	38,633	88.51
TOTAL Backfill Reach 1	121903	BCY	201,302	163,466	0	38,633	403,401	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			201,302	163,466	0	38,633	403,401	
TOTAL Material Placement (Material 2)	243806	BCY	483,119	315,645	0	92,719	891,484	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.17
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Backfilling	441174	BCY	5,529,187	4,495,563	67,728	7,560,627	17,653,105	40.01
Capping								
Material 1 (Sand & Gravel)								
Material 1 (Sand & Gravel)								
Sand and Gravel	269118	TNS	0	0	1,565,846	0	1,565,846	5.82
TOTAL Material 1 (Sand & Gravel)	1.00	EA	0	0	1,565,846	0	1,565,846	1565846.26
TOTAL Material 1 (Sand & Gravel)	1.00	EA	0	0	1,565,846	0	1,565,846	1565846.26
TOTAL Material 1 (Sand & Gravel)	269118	TNS	0	0	1,565,846	0	1,565,846	5.82
Material 2 (Aquablock)								
TOTAL Material 2 (Aquablock)	1.00	EA	0	0	0	0	0	0.00
TOTAL Aquablok Material-Quote			0	0	0	16,000,000	16,000,000	
TOTAL Aquablok Material-Quote			0	0	0	677,000	677,000	
TOTAL Aquablok Material-Quote			0	0	0	200	200	
TOTAL Material 2 (Aquablock)	150000	TNS	0	0	0	16,677,200	16,677,200	111.18
Transportation to River								
Truck Cycle Times-Sand					** OVERTIME **			
Laborer (Hopper tender)	1001.18	HR	39,543	0	0	0	39,543	39.50
Outside Truck Drivers, Heavy	8009.46	HR	295,010	0	0	0	295,010	36.83
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	8009.46	HR	0	75,133	0	0	75,133	9.38
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	8009.46	HR	0	209,648	0	0	209,648	26.18
TOTAL Truck Cycle Times-Sand	192227	BCY	334,553	284,781	0	0	619,334	3.22
Truck Cycle Times-Aquablok					** OVERTIME **			
Laborer (Hopper tender)	558.04	HR	22,040	0	0	0	22,040	39.50
Outside Truck Drivers, Heavy	4464.29	HR	164,432	0	0	0	164,432	36.83
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	4464.29	HR	0	41,877	0	0	41,877	9.38
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	4464.29	HR	0	116,853	0	0	116,853	26.18
TOTAL Truck Cycle Times-Aquablok	107143	BCY	186,472	158,730	0	0	345,203	3.22

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Truck Cycle Times			521,025	443,511	0	0	964,536	
TOTAL Transportation to River	299370	BCY	521,025	443,511	0	0	964,536	3.22
Barge Loading								
Loader Cycle Time - Sand					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	854.85	HR	0	70,335	0	0	70,335	82.28
Outside Equip. Operators, Heavy	854.85	HR	57,093	0	0	0	57,093	66.79
Laborer	1709.69	HR	85,421	0	0	0	85,421	49.96
SMALL TOOLS	1709.69	HR	0	3,447	0	0	3,447	2.02
TOTAL Loader Cycle Time - Sand	192227	BCY	142,513	73,782	0	0	216,295	1.13
Loader Cycle Time - Aquablok					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	476.47	HR	0	39,203	0	0	39,203	82.28
Outside Equip. Operators, Heavy	476.47	HR	31,822	0	0	0	31,822	66.79
Laborer	952.95	HR	47,612	0	0	0	47,612	49.96
SMALL TOOLS	952.95	HR	0	1,922	0	0	1,922	2.02
TOTAL Loader Cycle Time - Aquablok	107143	BCY	79,434	41,124	0	0	120,558	1.13
TOTAL Barge Loading	1.00	EA	221,947	114,906	0	0	336,853	336853.42
TOTAL Barge Loading	299370	GCY	221,947	114,906	0	0	336,853	1.13
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	898.43	HR	42,947	0	0	0	42,947	47.80
Boat Captain	898.43	HR	50,915	0	0	0	50,915	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	898.43	HR	0	141,105	0	0	141,105	157.06
DREDGE BARGE, 1000 TON	1796.85	HR	0	67,659	0	0	67,659	37.65
Per Diem for tug crew	179.69	MDY	0	0	0	15,904	15,904	88.51
Spare Tug Crew	449.21	HR	46,933	36,863	0	0	83,796	186.54
Spare Tug Crew Per Diem days	90.00	MDY	0	0	0	7,966	7,966	88.51
TOTAL Reach 1	78412	BCY	140,796	245,627	0	23,870	410,293	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	512.15	HR	24,482	0	0	0	24,482	47.80
Boat Captain	512.15	HR	29,025	0	0	0	29,025	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	512.15	HR	0	80,437	0	0	80,437	157.06
DREDGE BARGE, 1000 TON	1280.38	HR	0	48,212	0	0	48,212	37.65
Per Diem for tug crew	102.43	MDY	0	0	0	9,066	9,066	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew	256.08	HR	26,754	21,014	0	0	47,768	186.54
Spare Tug Crew Per Diem days	52.00	MDY	0	0	0	4,603	4,603	88.51
TOTAL Reach 2	44699	BCY	80,261	149,663	0	13,669	243,593	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	1979.79	HR	94,639	0	0	0	94,639	47.80
Boat Captain	1979.79	HR	112,198	0	0	0	112,198	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1979.79	HR	0	310,941	0	0	310,941	157.06
DREDGE BARGE, 1000 TON	3167.66	HR	0	119,276	0	0	119,276	37.65
Per Diem for tug crew	395.96	MDY	0	0	0	35,047	35,047	88.51
Spare Tug Crew	395.96	HR	41,369	32,493	0	0	73,862	186.54
Spare Tug Crew Per Diem days	80.00	MDY	0	0	0	7,081	7,081	88.51
TOTAL Reach 3	69116	BCY	248,206	462,710	0	42,128	753,043	10.90
TOTAL Barging of Sand	192227	BCY	469,263	857,999	0	79,667	1,406,929	7.32
Reach 1					** OVERTIME **			
Deckhand for Tug	473.50	HR	22,635	0	0	0	22,635	47.80
Boat Captain	473.50	HR	26,834	0	0	0	26,834	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	473.50	HR	0	74,367	0	0	74,367	157.06
DREDGE BARGE, 1000 TON	947.01	HR	0	35,659	0	0	35,659	37.65
Per Diem for tug crew	94.70	MDY	0	0	0	8,382	8,382	88.51
Spare Tug Crew	236.75	HR	24,736	19,428	0	0	44,164	186.54
Spare Tug Crew Per Diem days	48.00	MDY	0	0	0	4,249	4,249	88.51
TOTAL Reach 1	41326	BCY	74,205	129,454	0	12,631	216,290	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	294.56	HR	14,081	0	0	0	14,081	47.80
Boat Captain	294.56	HR	16,693	0	0	0	16,693	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	294.56	HR	0	46,262	0	0	46,262	157.06
DREDGE BARGE, 1000 TON	736.39	HR	0	27,728	0	0	27,728	37.65
Per Diem for tug crew	58.91	MDY	0	0	0	5,214	5,214	88.51
Spare Tug Crew	147.28	HR	15,387	12,086	0	0	27,473	186.54
Spare Tug Crew Per Diem days	30.00	MDY	0	0	0	2,655	2,655	88.51
TOTAL Reach 2	25708	BCY	46,161	86,076	0	7,870	140,107	5.45

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 3					** OVERTIME **			
Deckhand for Tug	1148.90	HR	54,920	0	0	0	54,920	47.80
Boat Captain	1148.90	HR	65,110	0	0	0	65,110	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1148.90	HR	0	180,443	0	0	180,443	157.06
DREDGE BARGE, 1000 TON	1838.24	HR	0	69,218	0	0	69,218	37.65
Per Diem for tug crew	229.78	MDY	0	0	0	20,338	20,338	88.51
Spare Tug Crew	229.78	HR	24,007	18,856	0	0	42,863	186.54
Spare Tug Crew Per Diem days	46.00	MDY	0	0	0	4,072	4,072	88.51
TOTAL Reach 3	40109	BCY	144,038	268,517	0	24,410	436,964	10.89
TOTAL Barging of Aquablok	107143	BCY	264,403	484,048	0	44,910	793,361	7.40
TOTAL Barging to Backfill Site	299370	BCY	733,666	1,342,047	0	124,577	2,200,290	7.35
Material Placement (S & G)								
Sand & Gravel Cover Placement					** OVERTIME **			
Deckhand for Tug	1922.27	HR	91,889	0	0	0	91,889	47.80
Boat Captain	1922.27	HR	108,939	0	0	0	108,939	56.67
500 TO 800 Hp TUG BOAT	1922.27	HR	0	151,485	0	0	151,485	78.81
Per Diem for tug crew	480.57	MDY	0	0	0	42,536	42,536	88.51
Deckhand for Dredge	5766.81	HR	284,074	0	0	0	284,074	49.26
Dredge Engineer	1922.27	HR	124,237	0	0	0	124,237	64.63
Oiler	1922.27	HR	96,838	0	0	0	96,838	50.38
Excavator Dredge Operator	1922.27	HR	143,628	0	0	0	143,628	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1922.27	HR	0	265,790	0	0	265,790	138.27
WORK BARGE-S,MED DUTY,60'X16'X5'	1922.27	HR	0	15,914	0	0	15,914	8.28
SMALL TOOLS	1922.27	HR	0	3,708	0	0	3,708	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	1922.27	HR	0	16,245	0	0	16,245	8.45
Command/Control System	1922.27	HR	0	37,157	0	0	37,157	19.33
Conveyor	1922.27	HR	0	0	0	46,519	46,519	24.20
Per Diem	1441.70	MDY	0	0	0	127,607	127,607	88.51
TOTAL Sand & Gravel Cover Placement	192227	BCY	849,606	490,298	0	216,662	1,556,566	8.10
TOTAL Sand & Gravel Cover Placement			849,606	490,298	0	216,662	1,556,566	
TOTAL Material Placement (S & G)	192227	BCY	849,606	490,298	0	216,662	1,556,566	8.10

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Material Placement (Aquablok)								
TOTAL Aquablok Placement			0	0	0	0	0	
TOTAL Aquablok Placement-Quote			0	0	0	2,000,000	2,000,000	
TOTAL Aquablok Placement-Quote			0	0	0	997	997	
TOTAL Aquablok Placement-Quote			0	0	0	800	800	
TOTAL Material Placement (Aquablok)	107143	BCY	0	0	0	2,001,797	2,001,797	18.68
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	11,637	0	11,637	11636.88
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	134,767	0	0	134,767	37.44
SMALL TOOLS	360.00	HR	0	574	0	0	574	1.59
Deckhand for Tug	3599.99	HR	142,222	0	0	0	142,222	39.51
Boat Captain	3599.99	HR	168,610	0	0	0	168,610	46.84
TOTAL Shallow Turbidity Control	1.00	CRW	310,832	135,340	11,637	0	457,809	457809.23
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	30,256	0	30,256	15.13
Anchoring System	40.00	EA	0	0	11,171	0	11,171	279.29
Mooring Buoy Light w/Photocell	20.00	EA	0	0	2,909	0	2,909	145.46
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	134,767	0	0	134,767	37.44
SMALL TOOLS	360.00	HR	0	574	0	0	574	1.59
Deckhand for Tug	3599.99	HR	142,222	0	0	0	142,222	39.51
Boat Captain	3599.99	HR	168,610	0	0	0	168,610	46.84
TOTAL Deep Turbidity Control	1.00	CRW	310,832	135,340	44,336	0	490,509	490508.85
TOTAL Turbidity Control			621,664	270,681	55,973	0	948,318	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	621,664	270,681	55,973	0	948,318	948318.08
TOTAL Capping	207.00	AC	2,947,908	2,661,444	1,621,820	19,020,236	26,251,407	126818.39

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	21.00	AC	0	0	0	693,000	693,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	21.00	AC	0	0	0	168,000	168,000	8000.00
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	54.80	AC	0	0	0	1,808,400	1,808,400	33000.00
TOTAL Habitat & Vegetation Restoration			0	0	0	2,669,400	2,669,400	
TOTAL Habitat & Vegetation Restoration			0	0	0	2,669,400	2,669,400	
TOTAL Habitat & Vegetation Restoration			0	0	0	2,669,400	2,669,400	
TOTAL Habitat & Vegetation Restoration	96.80	AC	0	0	0	2,669,400	2,669,400	27576.45
River Bank Restoration								
Shoreline Protect <2'-Hydroseed								
Shoreline Protection <2'						** OVERTIME **		
Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr								
Boat Captain	277.33	HR	16,431	0	0	0	16,431	59.25
Deckhand	277.33	HR	14,282	0	0	0	14,282	51.50
Outside Equip. Operators, Heavy	277.33	HR	18,522	0	0	0	18,522	66.79
Laborer	277.33	HR	13,856	0	0	0	13,856	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	277.33	HR	0	5,104	0	0	5,104	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	277.33	HR	0	449	0	0	449	1.62
Hydroseeder	277.33	HR	0	2,989	0	0	2,989	10.78
SMALL TOOLS	277.33	HR	0	559	0	0	559	2.02
Seed, Mulch, Fertlizer	173333	SY	0	0	63,789	0	63,789	0.37
TOTAL Shoreline Protection <2'	173333	SY	63,092	9,101	63,789	0	135,983	0.78

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protect <2'-Hydroseed			63,092	9,101	63,789	0	135,983	
TOTAL Shoreline Protect <2'-Hydroseed	78000	LF	63,092	9,101	63,789	0	135,983	1.74
Shoreline Protect 2'-3' Mat								
Shoreline Protection 2'-3'					** OVERTIME **			
Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr								
Boat Captain	240.74	HR	11,275	0	0	0	11,275	46.84
Deckhand	240.74	HR	9,801	0	0	0	9,801	40.71
Labor Foreman	240.74	HR	9,651	0	0	0	9,651	40.09
Laborer	722.22	HR	28,525	0	0	0	28,525	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	240.74	HR	0	3,502	0	0	3,502	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	240.74	HR	0	308	0	0	308	1.28
SMALL TOOLS	240.74	HR	0	384	0	0	384	1.59
Staples	19259	EA	0	0	1,793	0	1,793	0.09
Erosion Control Mat w/seeds	28889	SY	0	0	43,703	0	43,703	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	28889	SY	59,252	4,194	46,194	0	109,640	3.80
TOTAL Shoreline Protect 2'-3' Mat			59,252	4,194	46,194	0	109,640	
TOTAL Shoreline Protect 2'-3' Mat	13000	LF	59,252	4,194	46,194	0	109,640	8.43
TOTAL River Bank Restoration	91000	LF	122,344	13,295	109,984	0	245,623	2.70
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	12343	HR	1,127,078	0	0	0	1,127,078	91.31
Engineers, Project	12343	HR	787,407	0	0	0	787,407	63.79
Inspectors	12343	HR	364,188	0	0	0	364,188	29.51
Engineers, Quality Control	12343	HR	599,125	0	0	0	599,125	48.54
Clerks, Typists, Bookkeepers & Receptionist	9874.25	HR	257,074	0	0	0	257,074	26.03
Per Diem 5men/10hr/day = .5 multiplier	6171.41	MDY	0	0	0	451,438	451,438	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	343.54	EA	0	0	0	171,771	171,771	500.00
TOTAL Field Office Labor Requirements			3,134,871	0	0	623,209	3,758,080	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	11,582	0	0	11,582	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	71,506	0	0	71,506	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	24686	HR	0	62,021	0	0	62,021	2.51
TOTAL Field Equipment Requirements	48.00	MO	0	145,109	0	0	145,109	3023.10
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL HTRW/Remediation/Construction	1732820	CY	67,013,066	49,553,165	5,549,606	267,717,384	389,833,222	224.97
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89

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O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00	EA	0	0	0	0	0	0.00
Cost included in float surveys								
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp cost of one boat included with weekly monitoring	2.00	EA	0	2,694	0	0	2,694	1347.23
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9,14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63

D & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.18
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67
TOTAL Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Shallow Sediment Inventory (5YR)								
Labor/Equipment								
Chemist	525.00	HR	36,399	0	0	0	36,399	69.33
Chemist, Jr.	1050.00	HR	64,221	0	0	0	64,221	61.16
Sampling Technician	1050.00	HR	44,705	0	0	0	44,705	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	525.00	HR	0	24,994	0	0	24,994	47.61
TOTAL Labor/Equipment	500.00	HR	145,326	24,994	0	0	170,320	340.64
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	263.00	EA	0	0	29,036	0	29,036	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	250.00	EA	0	0	172,048	0	172,048	688.19
TOTAL Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66

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) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Annual Reporting (1 YR)								
Lbr/Matls for Quarterly Report								
Project Manager	24.00	HR	2,772	0	0	0	2,772	115.51
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00	HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	527	0	0	0	527	32.93
Reproduction Operators	8.00	HR	169	0	0	0	169	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00	WK	12,146	0	383	0	12,529	12529.22
Lbr/Matls for Annual Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00	WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
TOTAL Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
Aquablock Cap-Visual Inspecton								
Labor/Equipment								
Chemist	240.00	HR	13,154	0	0	0	13,154	54.81
Technician	240.00	HR	8,078	0	0	0	8,078	33.66
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	240.00	HR	0	2,581	0	0	2,581	10.75
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,065	0	0	1,065	1065.00
TOTAL Labor/Equipment	240.00	HR	21,232	3,646	0	0	24,878	103.66
TOTAL Aquablock Cap-Visual Inspecton	1.00	EA	21,232	3,646	0	0	24,878	24877.87
Aquablock-Sidescan Radar Survey								
Labor/Equipment								
Chemist	490.00	HR	26,856	0	0	0	26,856	54.81
Survey Crew	49.00	DAY	159,152	0	0	0	159,152	3248.00
Post Processing	85.75	HR	2,886	0	0	0	2,886	33.66
Per Diem	49.00	DAY	0	0	15,396	0	15,396	314.20
Mob/Demob	1.00	EA	2,842	0	0	0	2,842	2842.00
TOTAL Labor/Equipment	490.00	HR	191,736	0	15,396	0	207,132	422.72
TOTAL Aquablock-Sidescan Radar Survey	49.00	DAY	191,736	0	15,396	0	207,132	4227.18
TOTAL Aquablock- Patch	5.00	AC	0	0	0	800,000	800,000	160000.00

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Geophysical Surveys 3/10/10 (c)								
Labor/Equipment								
Chemist	490.00	HR	33,973	0	0	0	33,973	69.33
Survey Crew	49.00	DAY	201,327	0	0	0	201,327	4108.72
Post Processing	85.75	HR	3,651	0	0	0	3,651	42.58
Per Diem	49.00	DAY	0	0	19,475	0	19,475	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	490.00	HR	242,546	0	19,475	0	262,021	534.74
TOTAL Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38
TOTAL O & M	1.00	EA	1,462,438	94,895	997,122	1,450,000	4,004,455	4004455.23
TOTAL Alt Cap 3/10/Select	1732820	BCY	71,844,122	50,368,373	13,763,827	279,667,384	415,643,706	239.87

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HUDSON RIVER PCBs REASSESSMENT FS

APPENDIX I

COST ESTIMATES

I.6 Detailed Estimate - Alternative CAP-3/10/Select - Beneficial Use

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Cap 3/10/Select-Benficial								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 3/10/10 (c)								
Labor/Equipment								
Chemist	15130	HR	1,048,994	0	0	0	1,048,994	69.33
Chemist, Jr.	15130	HR	925,393	0	0	0	925,393	61.16
Sampling Technician	15130	HR	644,184	0	0	0	644,184	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15130	HR	0	720,313	0	0	720,313	47.61
TOTAL Labor/Equipment	15130	HR	2,618,572	720,313	0	0	3,338,884	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22695	EA	0	0	6,013,531	0	6,013,531	264.97
Cesium - 137/Beryllium -7	7565.00	EA	0	0	835,213	0	835,213	110.40
Organic Carbon	2270.00	EA	0	0	167,079	0	167,079	73.60
Cation Exchange Capacity	2270.00	EA	0	0	167,079	0	167,079	73.60
TOTAL Analytical	7565.00	EA	0	0	7,182,903	0	7,182,903	949.49
TOTAL Sediment Inventory 3/10/10 (c)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
Geophysical Surveys 3/10/10 (c)								
Labor/Equipment								
Chemist	490.00	HR	33,973	0	0	0	33,973	69.33
Survey Crew	49.00	DAY	201,327	0	0	0	201,327	4108.72
Post Processing	85.75	HR	3,651	0	0	0	3,651	42.58
Per Diem	49.00	DAY	0	0	19,475	0	19,475	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	490.00	HR	242,546	0	19,475	0	262,021	534.74
TOTAL Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,368,618	720,313	7,217,099	10,500,000	21,806,029	21806029.16
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	40.00	MON	0	0	23,351	0	23,351	583.79
TOTAL Health & Safety Equipment	40.00	MO	0	0	23,351	0	23,351	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25)	343.00	EA	0	0	65,061	0	65,061	189.68
Unit Measure Of Boot Covers, Tyvek (Bag Of 10Pr)	858.00	EA	0	0	11,482	0	11,482	13.38
Unit Measure Of Gloves, Latex (Box Of 100) (Single Hand)	42.86	EA	0	0	604	0	604	14.10
Unit Measure Of Pvc/Nitrile Blend (Package Of 12 Pr)	42.86	EA	0	0	2,580	0	2,580	60.21
Unit Measure								
TOTAL Health & Safety Stores	171.43	WKS	0	0	82,542	0	82,542	481.50

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	20571	HR	1,229,828	0	0	0	1,229,828	59.78
Industrial Hygiene Technician	20571	HR	793,437	0	0	0	793,437	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1028.57	MDY	0	0	0	75,240	75,240	73.15
Air Fare (Round Trip)	57.00	EA	0	0	0	28,500	28,500	500.00
TOTAL Health & Safety Labor	10286	HRS	2,023,265	0	0	103,740	2,127,005	206.79
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn,trailer,8'x36',2 showers	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety Decon Trailer	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements								
Project Manager	10286	HR	939,231	0	0	0	939,231	91.31
General Superintendents (South)	10286	HR	539,141	0	0	0	539,141	52.42
General Superintendents (North)	10286	HR	539,141	0	0	0	539,141	52.42
Engineers, Project	10286	HR	656,173	0	0	0	656,173	63.79
Chemist	10286	HR	563,737	0	0	0	563,737	54.81
Industrial Hygiene Technician	10286	HR	396,719	0	0	0	396,719	38.57
Engineers, Quality Control	10286	HR	499,270	0	0	0	499,270	48.54
Schedulers	10286	HR	499,270	0	0	0	499,270	48.54
Clerks, Typists, Bookkeepers & Receptionist	8228.54	HR	214,228	0	0	0	214,228	26.03
Janitors	8228.54	HR	69,180	0	0	0	69,180	8.41
Per Diem	8228.54	MDY	0	0	0	601,918	601,918	73.15
8men/10hr/day = .8 multiplier								
Air Fare (Round Trip)	457.71	EA	0	0	0	228,856	228,856	500.00
5 men/3wks = 1.67 multiplier								
TOTAL Field Office Labor Requirements	10286	HRS	4,916,091	0	0	830,774	5,746,865	558.72
Home Office Labor Requirements								
Program Managers	686.00	HR	64,825	0	0	0	64,825	94.50
Operations Managers	1371.00	HR	50,764	0	0	0	50,764	37.03
Certified Industrial Hygienist	343.00	HR	23,482	0	0	0	23,482	68.46
Contract Administrators	686.00	HR	25,149	0	0	0	25,149	36.66
Purchasing Agents, Chief	1371.00	HR	50,262	0	0	0	50,262	36.66
Engineers, Quality Control	686.00	HR	33,299	0	0	0	33,299	48.54
Chief Scheduler & Planning Eng.	343.00	HR	12,039	0	0	0	12,039	35.10
Accountants	686.00	HR	13,878	0	0	0	13,878	20.23
Operations Managers	343.00	HR	12,700	0	0	0	12,700	37.03
Clerks, Typists, Bookkeepers & Receptionist	343.00	HR	8,930	0	0	0	8,930	26.03
Air Fare (Round Trip)	171.00	EA	0	0	0	85,500	85,500	500.00
Per Diem & Lodging	343.00	DAY	0	0	0	45,619	45,619	133.00
Car Rental (Air Port to Site)	343.00	DAY	0	0	0	18,865	18,865	55.00
TOTAL Home Office Labor Requirements	171.43	WKS	295,328	0	0	149,984	445,312	2597.66
Field Equipment Requirements								
Trailer: Contractor	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Contracting Officer	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Storage	80.00	MO	0	0	14,430	0	14,430	180.37
Furniture Rental	160.00	MO	0	0	32,583	0	32,583	203.65
Telephone System Rental	160.00	MO	0	0	29,790	0	29,790	186.19
Sanitary Facility: Temporary	160.00	MO	0	0	16,757	0	16,757	104.73
Portable Radios (4 Ea)	160.00	WKS	0	0	9,310	0	9,310	58.18
Personal Computer	160.00	MO	0	0	20,481	0	20,481	128.01
Printer for PC	160.00	MO	0	0	12,102	0	12,102	75.64
Copy Machine	160.00	MO	0	0	30,721	0	30,721	192.01
Fax Machine	160.00	MO	0	0	3,724	0	3,724	23.27

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	9,652	0	0	9,652	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	59,588	0	0	59,588	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	12,813	0	0	12,813	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	74,567	0	0	74,567	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	20571	HR	0	51,684	0	0	51,684	2.51
TOTAL Field Equipment Requirements	40.00	MO	0	208,305	224,824	0	433,129	10828.23
Field Support Utilities								
Electricity	80.00	MO	0	0	0	15,200	15,200	190.00
Telephone (2 Lines)	80.00	MO	0	0	0	20,000	20,000	250.00
Bottled Water Service	343.00	WKS	0	0	0	15,435	15,435	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	80.00	MO	0	0	0	33,200	33,200	415.00
TOTAL Field Support Utilities	171.43	WKS	0	0	0	83,835	83,835	489.04
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	80.00	WK	0	0	3,258	0	3,258	40.73
Water Kegs (5 Gallon)	43.00	EA	0	0	998	0	998	23.22
Water Cups (Conical)	3429.00	BOX	0	0	15,762	0	15,762	4.60
Co2 Extinguisher (10Lb)	29.00	EA	0	0	4,759	0	4,759	164.11
Video Tape	171.00	EA	0	0	895	0	895	5.24
Camera Film and Development	40.00	MO	0	0	1,396	0	1,396	34.91
TOTAL Field Support Stores/Supplies	171.43	WKS	0	0	27,069	0	27,069	157.91
TOTAL Construction Management	1.00	EA	5,257,423	208,305	251,894	1,064,593	6,782,215	6782214.99
TOTAL Construction Management	1.00	EA	5,257,423	208,305	251,894	1,064,593	6,782,215	6782214.99
TOTAL Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

NTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	3.00	EA	0	0	0	255,000	255,000	85000.00
Long Arm Purchase	5.00	EA	0	0	0	390,000	390,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	645,000	645,000	645000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	645,000	645,000	645000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	645,000	645,000	645000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	400.00	HR	14,356	0	0	0	14,356	35.89
Dredge Engineer	200.00	HR	9,415	0	0	0	9,415	47.08
Oiler	200.00	HR	7,338	0	0	0	7,338	36.69
Excavator Dredge Operator	200.00	HR	10,857	0	0	0	10,857	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	200.00	HR	0	5,824	0	0	5,824	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	200.00	HR	0	1,429	0	0	1,429	7.14
SMALL TOOLS	200.00	HR	0	334	0	0	334	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	200.00	HR	0	1,460	0	0	1,460	7.30
Command/Control System	200.00	HR	0	3,195	0	0	3,195	15.98
TOTAL Shallow Dredge Crew	5.00	HR	41,967	12,242	0	0	54,209	10841.80
Deep Dredge Crew								
Deckhand for Dredge	80.00	HR	2,871	0	0	0	2,871	35.89
Dredge Engineer	40.00	HR	1,883	0	0	0	1,883	47.08
Oiler	40.00	HR	1,468	0	0	0	1,468	36.69
Excavator Dredge Operator	40.00	HR	2,171	0	0	0	2,171	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	40.00	HR	0	1,929	0	0	1,929	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	40.00	HR	0	286	0	0	286	7.14
SMALL TOOLS	40.00	HR	0	67	0	0	67	1.67

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	40.00	HR	0	422	0	0	422	10.56
Command/Control System	40.00	HR	0	639	0	0	639	15.98
TOTAL Deep Dredge Crew	1.00	CRW	8,393	3,343	0	0	11,737	11736.57
North Barge Crew Rate								
Deckhand for Tug	200.00	HR	6,972	0	0	0	6,972	34.86
Boat Captain	200.00	HR	8,232	0	0	0	8,232	41.16
500 TO 800 Hp TUG BOAT	200.00	HR	0	13,564	0	0	13,564	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	200.00	HR	0	3,161	0	0	3,161	15.80
TOTAL North Barge Crew Rate	5.00	CRW	15,203	16,725	0	0	31,928	6385.58
South Barge Crew Rate								
Deckhand for Tug	40.00	HR	1,394	0	0	0	1,394	34.86
Boat Captain	40.00	HR	1,646	0	0	0	1,646	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	40.00	HR	0	5,348	0	0	5,348	133.70
DREDGE BARGE, 1000 TON	40.00	HR	0	1,245	0	0	1,245	31.12
TOTAL South Barge Crew Rate	1.00	CRW	3,041	6,593	0	0	9,634	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000-for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.48
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			130,994	95,250	0	0	226,244	
TOTAL Equipment Mobilization	1.00	EA	130,994	95,250	0	0	226,244	226243.69

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	1600.00	HR	57,425	0	0	0	57,425	35.89
Dredge Engineer	800.00	HR	37,661	0	0	0	37,661	47.08
Oiler	800.00	HR	29,352	0	0	0	29,352	36.69
Excavator Dredge Operator	800.00	HR	43,429	0	0	0	43,429	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	800.00	HR	0	23,296	0	0	23,296	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	800.00	HR	0	5,716	0	0	5,716	7.14
SMALL TOOLS	800.00	HR	0	1,338	0	0	1,338	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	800.00	HR	0	5,839	0	0	5,839	7.30
Command/Control System	800.00	HR	0	12,780	0	0	12,780	15.98
TOTAL Shallow Dredge Crew	5.00	CRW	167,867	48,969	0	0	216,836	43367.21
Deep Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	160.00	HR	0	7,717	0	0	7,717	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Deep Dredge Crew	1.00	HR	33,573	13,373	0	0	46,946	46946.28
North Barge Crew Rate								
Deckhand for Tug	800.00	HR	27,886	0	0	0	27,886	34.86
Boat Captain	800.00	HR	32,926	0	0	0	32,926	41.16
500 TO 800 Hp TUG BOAT	800.00	HR	0	54,255	0	0	54,255	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	800.00	HR	0	12,644	0	0	12,644	15.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	5.00	CRW	60,813	66,899	0	0	127,712	25542.33
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	1.00	CRW	12,163	26,372	0	0	38,534	38534.38
Spare Tug Crew Rate								
Spare Tug Crew	320.00	HR	27,631	21,702	0	0	49,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	27,631	21,702	0	0	49,333	24666.44
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.2.
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	40.00	HR	15,432	20,090	0	0	35,523	888.06
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	40.00	HR	15,432	32,604	0	0	48,037	1200.92

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	40.00	HR	17,138	14,430	0	0	31,568	789.20
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL South Truck Crew	40.00	HR	17,138	17,538	0	0	34,676	866.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	40.00	HR	37,446	17,180	0	0	54,626	1365.66
TOTAL Equipment Mobilization			404,634	279,157	0	0	683,791	
Process Equipment								
Master Mechanic	1280.00	HR	63,029	0	0	0	63,029	49.24
Outside Equip. Operators, Heavy	1280.00	HR	60,431	0	0	0	60,431	47.21
TOTAL Process Equipment	160.00	HR	123,460	0	0	0	123,460	771.62
TOTAL Process Equipment Start Up			123,460	0	0	0	123,460	
TOTAL Annual Remobilization & Startup	1.00	EA	528,094	279,157	0	0	807,251	807250.60
Annual Demobilization								
- Shallow Dredge Crew								
Deckhand for Dredge	800.00	HR	28,712	0	0	0	28,712	35.89
Dredge Engineer	400.00	HR	18,831	0	0	0	18,831	47.08
Oiler	400.00	HR	14,676	0	0	0	14,676	36.69
Excavator Dredge Operator	400.00	HR	21,715	0	0	0	21,715	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	400.00	HR	0	11,648	0	0	11,648	29.12

ETRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	400.00	HR	0	2,858	0	0	2,858	7.14
SMALL TOOLS	400.00	HR	0	669	0	0	669	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	400.00	HR	0	2,920	0	0	2,920	7.30
Command/Control System	400.00	HR	0	6,390	0	0	6,390	15.98
TOTAL Shallow Dredge Crew	5.00	CRW	83,934	24,484	0	0	108,418	21683.61
Deep Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	80.00	HR	0	3,858	0	0	3,858	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	80.00	HR	0	845	0	0	845	10.56
Command/Control System	80.00	HR	0	1,278	0	0	1,278	15.98
TOTAL Deep Dredge Crew	1.00	CRW	16,787	6,686	0	0	23,473	23473.14
North Barge Crew Rate								
Deckhand for Tug	400.00	HR	13,943	0	0	0	13,943	34.86
Boat Captain	400.00	HR	16,463	0	0	0	16,463	41.16
500 TO 800 Hp TUG BOAT	400.00	HR	0	27,128	0	0	27,128	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	400.00	HR	0	6,322	0	0	6,322	15.80
TOTAL North Barge Crew Rate	5.00	CRW	30,406	33,450	0	0	63,856	12771.17
South Barge Crew Rate								
Deckhand for Tug	80.00	HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00	HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00	HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00	HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	1.00	CRW	6,081	13,186	0	0	19,267	19267.19

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate								
Spare Tug Crew	160.00	HR	13,815	10,851	0	0	24,666	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	13,815	10,851	0	0	24,666	12333.22
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00	HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is apprcx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00	HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00	HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76

ITRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00 HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew							
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00 HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00 HR	15,108	0	0	0	15,108	47.21
Laborer	640.00 HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00 HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00 HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization		253,611	190,500	0	0	444,110	
TOTAL Annual Demobilization	1.00 EA	253,611	190,500	0	0	444,110	444110.37
Final Demob Site Restoration							
Shallow Dredge Crew							
Deckhand for Dredge	200.00 HR	7,178	0	0	0	7,178	35.89
Dredge Engineer	100.00 HR	4,708	0	0	0	4,708	47.08
Oiler	100.00 HR	3,669	0	0	0	3,669	36.69
Excavator Dredge Operator	100.00 HR	5,429	0	0	0	5,429	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	100.00 HR	0	2,912	0	0	2,912	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	100.00 HR	0	714	0	0	714	7.14
SMALL TOOLS	100.00 HR	0	167	0	0	167	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	100.00 HR	0	730	0	0	730	7.30
Command/Control System	100.00 HR	0	1,598	0	0	1,598	15.98
TOTAL Shallow Dredge Crew	5.00 HR	20,983	6,121	0	0	27,105	5420.90
Deep Dredge Crew							
Deckhand for Dredge	40.00 HR	1,436	0	0	0	1,436	35.89
Dredge Engineer	20.00 HR	942	0	0	0	942	47.08
Oiler	20.00 HR	734	0	0	0	734	36.69
Excavator Dredge Operator	20.00 HR	1,086	0	0	0	1,086	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	20.00 HR	0	965	0	0	965	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	20.00 HR	0	143	0	0	143	7.14
SMALL TOOLS	20.00 HR	0	33	0	0	33	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of	20.00 HR	0	211	0	0	211	10.56

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.								
Command/Control System	20.00	HR	0	320	0	0	320	15.98
TOTAL Deep Dredge Crew	1.00	HR	4,197	1,672	0	0	5,868	5868.28
North Barge Crew Rate								
Deckhand for Tug	100.00	HR	3,486	0	0	0	3,486	34.86
Boat Captain	100.00	HR	4,116	0	0	0	4,116	41.16
500 TO 800 Hp TUG BOAT	100.00	HR	0	6,782	0	0	6,782	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	100.00	HR	0	1,580	0	0	1,580	15.80
TOTAL North Barge Crew Rate	5.00	HR	7,602	8,362	0	0	15,964	3192.79
South Barge Crew Rate								
Deckhand for Tug	20.00	HR	697	0	0	0	697	34.86
Boat Captain	20.00	HR	823	0	0	0	823	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	20.00	HR	0	2,674	0	0	2,674	133.70
DREDGE BARGE, 1000 TON	20.00	HR	0	622	0	0	622	31.12
TOTAL South Barge Crew Rate	1.00	HR	1,520	3,296	0	0	4,817	4816.80
Spare Tug Crew Rate								
Spare Tug Crew	40.00	HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00	HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew								
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00	HR	0	4,731	0	0	4,731	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	40.00	HR	0	292	0	0	292	7.30
TOTAL North Unloading Crew	80.00	HR	3,858	5,023	0	0	8,881	111.01

NTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			65,497	47,625	0	0	113,122	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	65,497	47,625	0	500,000	613,122	613121.85
TOTAL Mobilization/Demobilization	1.00	EA	978,195	612,532	0	1,161,560	2,752,287	2752286.52

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket	107.25	HR	0	877	0	0	877	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

ITRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.							
TOTAL Set Up Sediment Stabilization Eq	1.00 EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00 EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl							
Construct Sediment Storage Facl				** OVERTIME **			
Cover Building #2 This building is a rain cover for railroad cars.	5000.00 SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00 SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000 SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00 EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00 EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00 EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale							
Set Up Rail Car Load Fac-w/scale				** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00 EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00 LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00 LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00 EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00 EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00 EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00 EA	4,326	0	0	102,000	106,326	106325.93

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
Water Treatment Fac -Hydraulic Water treatment plant for the hydraulic dredging will be approximately 200 GPM plant - prorated from historical data.								
TOTAL Water Treatment Fac -Hydraulic	1.00	EA	0	0	0	2,000,000	2,000,000	2000000.00
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	9,742,745	12,274,743	12274743.08
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	40.00	HR	2,602	0	0	0	2,602	65.04
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	204.80	HR	13,321	0	0	0	13,321	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54
TOTAL Repair Road/Work Area	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	18,653	0	0	156,464	175,117	175117.41
TOTAL Set Up Material Handling Equip	1.00	EA	18,653	0	0	156,464	175,117	175117.41
TOTAL Set Up Material Handling Equip	1.00	EA	18,653	0	0	156,464	175,117	175117.41
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added.								

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Storage Building #1	15000	SF	0	0	0	1,108,800	1,108,800	73.92
This building is a rain cover for material.								
Cover Building #2	4000.00	SF	0	0	0	295,680	295,680	73.92
This building is a rain cover for railroad cars.								
Concrete Slab and Hardstand	5000.00	SY	0	0	0	308,000	308,000	61.60
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,712,480	1,712,480	1712480.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,712,480	1,712,480	1712480.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,712,480	1,712,480	1712480.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,665	0	0	8,624	11,289	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL South Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	

!TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	332,568	630,628	419,748	4,452,212	5,835,155	5835155.26
Dredging								
Deep Draft Dredging								
Dredging Reach 1								
Deckhand for Dredge	19546	HR	848,842	0	0	0	848,842	43.43
Dredge Engineer	9773.12	HR	556,706	0	0	0	556,706	56.96
Oiler	9773.12	HR	433,879	0	0	0	433,879	44.40
Excavator Dredge Operator	9773.12	HR	641,961	0	0	0	641,961	65.69
HYD EXCAV, CRWLR, 4.75 CY BKT	8144.26	HR	0	1,904,083	0	0	1,904,083	233.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	1628.85	HR	0	95,056	0	0	95,056	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	9773.12	HR	0	84,488	0	0	84,488	8.64
SMALL TOOLS	9773.12	HR	0	19,773	0	0	19,773	2.02
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	9773.12	HR	0	124,864	0	0	124,864	12.78
Command/Control System	9773.12	HR	0	188,912	0	0	188,912	19.33
Per Diem	4886.56	MDY	0	0	0	432,517	432,517	88.51
TOTAL Dredging Reach 1	592316	BCY	2,481,387	2,417,176	0	432,517	5,331,080	9.00
TOTAL Reach #1	592316	BCY	2,481,387	2,417,176	0	432,517	5,331,080	9.00
Dredging Reach 2								
Deckhand for Dredge	3513.94	HR	152,601	0	0	0	152,601	43.43
Dredge Engineer	1756.97	HR	100,082	0	0	0	100,082	56.96
Oiler	1756.97	HR	78,001	0	0	0	78,001	44.40
Excavator Dredge Operator	1756.97	HR	115,409	0	0	0	115,409	65.69
HYD EXCAV, CRWLR, 4.75 CY BKT	1464.14	HR	0	342,308	0	0	342,308	233.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	292.83	HR	0	17,089	0	0	17,089	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	1756.97	HR	0	15,189	0	0	15,189	8.64
SMALL TOOLS	1756.97	HR	0	3,555	0	0	3,555	2.02
Command/Control System	1756.97	HR	0	33,962	0	0	33,962	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from	1756.97	HR	0	22,448	0	0	22,448	12.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
database.								
Per Diem	878.48	MDY	0	0	0	77,756	77,756	88.51
TOTAL Dredging Reach 2	106484	BCY	446,093	434,549	0	77,756	958,398	9.00
TOTAL Reach #2	106484	BCY	446,093	434,549	0	77,756	958,398	9.00
Dredging Reach 3								
Deckhand for Dredge	6493.87	HR	282,012	0	0	0	282,012	43.43
Dredge Engineer	3246.94	HR	184,955	0	0	0	184,955	56.96
Oiler	3246.94	HR	144,148	0	0	0	144,148	44.40
Excavator Dredge Operator	3246.94	HR	213,279	0	0	0	213,279	65.69
HYD EXCAV, CRWLR, 4.75 CY BKT	2705.78	HR	0	632,596	0	0	632,596	233.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	541.16	HR	0	31,581	0	0	31,581	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3246.94	HR	0	28,069	0	0	28,069	8.64
SMALL TOOLS	3246.94	HR	0	6,569	0	0	6,569	2.02
Command/Control System	3246.94	HR	0	62,762	0	0	62,762	19.33
Environmental Bucket	3246.94	HR	0	41,484	0	0	41,484	12.78
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Per Diem	1623.47	MDY	0	0	0	143,696	143,696	88.51
TOTAL Dredging Reach 3	196786	BCY	824,395	803,062	0	143,696	1,771,152	9.00
TOTAL Reach #3	196786	BCY	824,395	803,062	0	143,696	1,771,152	9.00
TOTAL Deep Draft Dredging	895586	BCY	3,751,875	3,654,787	0	653,968	8,060,630	9.00
Shallow Draft Dredging								
Dredging Reach 1								
Deckhand for Dredge	31970	HR	1,388,374	0	0	0	1,388,374	43.43
Dredge Engineer	15985	HR	910,553	0	0	0	910,553	56.96
Oiler	15985	HR	709,657	0	0	0	709,657	44.40
Excavator Dredge Operator	15985	HR	1,049,997	0	0	0	1,049,997	65.69
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	13321	HR	0	1,906,209	0	0	1,906,209	143.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2664.17	HR	0	93,874	0	0	93,874	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	15985	HR	0	138,189	0	0	138,189	8.64
SMALL TOOLS	15985	HR	0	32,341	0	0	32,341	2.02
Environmental Bucket	15985	HR	0	141,174	0	0	141,174	8.83
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of								

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected.								
Command/Control System	15985	HR	0	308,986	0	0	308,986	19.33
Per Diem	7992.50	MDY	0	0	0	707,428	707,428	88.51
TOTAL Dredging Reach 1	322933	BCY	4,058,580	2,620,772	0	707,428	7,386,781	22.87
TOTAL Reach 1	322933	BCY	4,058,580	2,620,772	0	707,428	7,386,781	22.87
Dredging Reach 2								
Deckhand for Dredge	14562	HR	632,370	0	0	0	632,370	43.43
Dredge Engineer	7280.77	HR	414,734	0	0	0	414,734	56.96
Oiler	7280.77	HR	323,231	0	0	0	323,231	44.40
Excavator Dredge Operator	7280.77	HR	478,248	0	0	0	478,248	65.69
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	6067.31	HR	0	868,231	0	0	868,231	143.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1213.46	HR	0	42,757	0	0	42,757	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	7280.77	HR	0	62,942	0	0	62,942	8.64
SMALL TOOLS	7280.77	HR	0	14,730	0	0	14,730	2.02
Command/Control System	7280.77	HR	0	140,736	0	0	140,736	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	7280.77	HR	0	64,301	0	0	64,301	8.83
Per Diem	3640.39	MDY	0	0	0	322,216	322,216	88.51
TOTAL Dredging Reach 2	147088	BCY	1,848,583	1,193,697	0	322,216	3,364,496	22.87
TOTAL Reach 2	147088	BCY	1,848,583	1,193,697	0	322,216	3,364,496	22.87
Dredging Reach 3								
Deckhand for Dredge	31028	HR	1,347,462	0	0	0	1,347,462	43.43
Dredge Engineer	15514	HR	883,721	0	0	0	883,721	56.96
Oiler	15514	HR	688,745	0	0	0	688,745	44.40
Excavator Dredge Operator	15514	HR	1,019,056	0	0	0	1,019,056	65.69
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12928	HR	0	1,850,038	0	0	1,850,038	143.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2585.66	HR	0	91,108	0	0	91,108	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	15514	HR	0	134,117	0	0	134,117	8.64
SMALL TOOLS	15514	HR	0	31,388	0	0	31,388	2.02
Command/Control System	15514	HR	0	299,881	0	0	299,881	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	15514	HR	0	137,014	0	0	137,014	8.83
Per Diem	7756.98	MDY	0	0	0	686,582	686,582	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Dredging Reach 3	313417	BCY	3,938,984	2,543,545	0	686,582	7,169,111	22.87
TOTAL Reach 3	313417	BCY	3,938,984	2,543,545	0	686,582	7,169,111	22.87
TOTAL Shallow Draft Dredging	783438	BCY	9,846,147	6,358,014	0	1,716,226	17,920,388	22.87
Land Locked Area								
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	4438.13	HR	211,107	0	0	0	211,107	47.57
Dredge Engineer	2219.06	HR	138,479	0	0	0	138,479	62.40
Oiler	2219.06	HR	107,936	0	0	0	107,936	48.64
Excavator Dredge Operator	2219.06	HR	159,985	0	0	0	159,985	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1849.22	HR	0	249,350	0	0	249,350	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	369.84	HR	0	13,032	0	0	13,032	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	2219.06	HR	0	5,488	0	0	5,488	2.47
SMALL TOOLS	2219.06	HR	0	4,131	0	0	4,131	1.86
Command/Control System	2219.06	HR	0	42,894	0	0	42,894	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2219.06	MDY	0	18,153	0	0	18,153	8.18
Per Diem	1109.53	MDY	0	0	0	98,206	98,206	88.51
TOTAL Dredging Reach 2	53796	BCY	617,507	333,048	0	98,206	1,048,762	19.50
TOTAL Shallow Draft Dredging	53796	BCY	617,507	333,048	0	98,206	1,048,762	19.50
Reach 2					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	6934.57	HR	0	127,371	0	0	127,371	18.37
Spare Tug Crew	2311.52	HR	241,505	100,265	0	0	341,770	147.85
Spare Tug Crew Per Diem days	462.00	MDY	0	0	0	40,892	40,892	88.51
TOTAL Reach 2	53796	BCY	241,505	227,635	0	40,892	510,033	9.48
TOTAL Small Barging to Transfer Site			241,505	227,635	0	40,892	510,033	
Transfer of Mat'l to Large barge					** OVERTIME **			
Oiler	1087.78	HR	54,799	0	0	0	54,799	50.38
Excavator Dredge Operator	1087.78	HR	81,276	0	0	0	81,276	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	870.22	HR	0	120,325	0	0	120,325	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	217.56	HR	0	7,666	0	0	7,666	35.24

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK FLOAT, MED DUTY, 30'X10'X3'	1087.78	HR	0	2,752	0	0	2,752	2.53
PUMP SUBM, 4"D, SKID W/P-UNIT INCLUDES POWER UNIT	1087.78	HR	0	5,750	0	0	5,750	5.29
SMALL TOOLS	1087.78	HR	0	2,098	0	0	2,098	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	1087.78	HR	0	9,193	0	0	9,193	8.45
Per Diem	217.56	MDY	0	0	0	19,256	19,256	88.51
TOTAL Transfer of Mat'l to Large barge	53796	BCY	136,075	147,783	0	19,256	303,115	5.63
TOTAL Transfer of Mat'l to 200T Barge			136,075	147,783	0	19,256	303,115	
Mobilization								
Mob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Clearing and Grubbing	2.00	AC	0	0	0	12,100	12,100	6050.00
Mob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Mob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00	EA	0	0	0	60,984	60,984	30492.00
Mob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Mob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00
TOTAL Mobilization			0	0	0	176,176	176,176	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Demobilization								
Demob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Demob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Demob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00	EA	0	0	0	60,984	60,984	30492.00
Demob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Demob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00
TOTAL Demobilization			0	0	0	164,076	164,076	
TOTAL Mobilization/Demobilization			0	0	0	340,252	340,252	
TOTAL Land Locked Area	53796	BCY	995,087	708,467	0	498,607	2,202,161	40.94
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	36000	HR	0	1,630,675	0	0	1,630,675	45.30
SMALL TOOLS	3599.99	HR	0	6,943	0	0	6,943	1.93
Deckhand for Tug	36000	HR	1,720,886	0	0	0	1,720,886	47.80
Boat Captain	36000	HR	2,040,181	0	0	0	2,040,181	56.67
TOTAL Shallow Turbidity Control	4.00	CRW	3,761,067	1,637,619	14,081	0	5,412,766	1353191.53

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Deep Turbidity Control				** OVERTIME **				
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	2800.00	LF	0	0	51,253	0	51,253	18.30
Anchoring System	56.00	EA	0	0	18,924	0	18,924	337.93
Mooring Buoy Light w/Photocell	28.00	EA	0	0	4,928	0	4,928	176.01
Freight to Site	1.40	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	12600	HR	0	570,736	0	0	570,736	45.30
SMALL TOOLS	1260.00	HR	0	2,430	0	0	2,430	1.93
Deckhand for Tug	12600	HR	602,310	0	0	0	602,310	47.80
Boat Captain	12600	HR	714,063	0	0	0	714,063	56.67
TOTAL Deep Turbidity Control	1.40	CRW	1,316,373	573,167	75,106	0	1,964,646	1403318.53
TOTAL Turbidity Control			5,077,440	2,210,785	89,187	0	7,377,412	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	5,077,440	2,210,785	89,187	0	7,377,412	7377412.07
TOTAL Dredging	1732820	BCY	19,670,549	12,932,054	89,187	2,868,801	35,560,591	20.52
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	12012	HR	832,817	0	0	0	832,817	69.33
Sampling Technician	12012	HR	511,430	0	0	0	511,430	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	12012	HR	0	163,423	0	0	163,423	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,344,247	164,770	0	0	1,509,017	829.13
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	2496.00	EA	0	0	661,369	0	661,369	264.97
Total Suspended Solids	2496.00	EA	0	0	91,857	0	91,857	36.80
Fraction Organic Carbon On TSS	2496.00	EA	0	0	183,714	0	183,714	73.60
TOTAL Analytical	416.00	EA	0	0	936,940	0	936,940	2252.26
TOTAL Weekly Field Sampling	52.00	WKS	1,344,247	164,770	945,772	0	2,454,789	47207.49
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores 3/10/10 (cap)								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Chemist, Jr.	1170.00	HR	71,560	0	0	0	71,560	61.16
Sampling Technician	1170.00	HR	49,815	0	0	0	49,815	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	1170.00	HR	0	55,702	0	0	55,702	47.61
TOTAL Labor/Equipment	1170.00	HR	202,494	55,702	0	0	258,195	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	1474.00	EA	0	0	43,396	0	43,396	29.44
Total PCB's	369.00	EA	0	0	97,775	0	97,775	264.97
Organic Carbon	369.00	EA	0	0	27,160	0	27,160	73.60
TOTAL Analytical	1170.00	EA	0	0	168,331	0	168,331	143.87
TOTAL Confirmation Cores 3/10/10 (cap)	117.00	DAY	202,494	55,702	183,051	0	441,247	3771.34
Geophysical Surveys 3/10/10 (cp)								
Chemist	1020.00	HR	70,719	0	0	0	70,719	69.33
Survey Crew	102.00	DAY	419,089	0	0	0	419,089	4108.72
Post Processing	178.50	HR	20,627	0	0	0	20,627	115.56
Per Diem	102.00	DAY	0	0	40,541	0	40,541	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1020.00	HR	514,030	0	40,541	0	554,571	543.70
TOTAL Geophysical Surveys 3/10/10 (cp)	102.00	DAY	514,030	0	40,541	0	554,571	5436.97
TOTAL Fish Sample Analysis	5.00	EA	0	0	0	3,250,000	3,250,000	650000.00

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Annual Reporting								
Project Manager	120.00	HR	13,862	0	0	0	13,862	115.51
Chemist	200.00	HR	13,866	0	0	0	13,866	69.33
Engineers, Quality Control	120.00	HR	7,368	0	0	0	7,368	61.40
Clerks, Typists, Bookkeepers & Receptionist	80.00	HR	2,635	0	0	0	2,635	32.93
Reproduction Operators	40.00	HR	844	0	0	0	844	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	5.00	WK	43,007	0	383	0	43,389	8677.87
Project Manager	240.00	HR	27,723	0	0	0	27,723	115.51
Chemist	400.00	HR	27,733	0	0	0	27,733	69.33
Engineers, Quality Control	240.00	HR	14,737	0	0	0	14,737	61.40
Clerks, Typists, Bookkeepers & Receptionist	160.00	HR	5,269	0	0	0	5,269	32.93
Reproduction Operators	80.00	HR	1,688	0	0	0	1,688	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	10.00	WK	81,582	0	383	0	81,965	8196.45
TOTAL Annual Reporting	5.00	YR	124,588	0	765	0	125,354	25070.78
TOTAL Testing and Monitoring (remed)	1.00	EA	3,477,905	378,956	1,329,112	3,250,000	8,435,973	8435973.49
Barging								
Barging to North - 1000T Hopper								
Reach 1								
Spare Tug Crew	1815.09	HR	189,638	148,948	0	0	338,586	186.54
Spare Tug Crew Per Diem days	364.00	MDY	0	0	0	32,218	32,218	88.51
DREDGE BARGE, 1000 TON	5445.26	HR	0	205,038	0	0	205,038	37.65
TOTAL Reach 1	105606	BCY	189,638	353,986	0	32,218	575,842	5.45
TOTAL Reach 1	105606	BCY	189,638	353,986	0	32,218	575,842	5.45
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 1000T Hopper	105606	BCY	189,638	353,986	0	32,218	575,842	5.45

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Barging N (Hydraulic) 1000 T								
Reach 1					** OVERTIME **			
TOTAL Reach 1		MDY	0	0	0	0	0	
TOTAL Reach 1			0	0	0	0	0	
Reach 2					** OVERTIME **			
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
Reach 3					** OVERTIME **			
TOTAL Reach 3		MDY	0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging N (Hydraulic) 1000 T	1.00	BCY	0	0	0	0	0	0.00
Barging to North - 200T Deck								
Reach 1					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	49953	HR	0	917,515	0	0	917,515	18.37
Spare Tug Crew	3330.21	HR	347,936	273,281	0	0	621,217	186.54
Spare Tug Crew Per Diem days	666.00	MDY	0	0	0	58,949	58,949	88.51
TOTAL Reach 1	322933	BCY	347,936	1,190,796	0	58,949	1,597,680	4.95
TOTAL Reach 1	322933	BCY	347,936	1,190,796	0	58,949	1,597,680	4.95
Reach 2					** OVERTIME **			
Deckhand for Tug	10358	HR	495,137	0	0	0	495,137	47.80
Boat Captain	10358	HR	587,005	0	0	0	587,005	56.67
500 TO 800 Hp TUG BOAT	10358	HR	0	816,261	0	0	816,261	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	31074	HR	0	570,750	0	0	570,750	18.37
Per Diem	2071.59	DAY	0	0	0	183,360	183,360	88.51
Spare Tug Crew	2071.59	HR	216,437	169,997	0	0	386,435	186.54
Spare Tug Crew Per Diem days	414.00	MDY	0	0	0	36,644	36,644	88.51
TOTAL Reach 2	200884	BCY	1,298,580	1,557,009	0	220,004	3,075,592	15.31

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	200884	BCY	1,298,580	1,557,009	0	220,004	3,075,592	15.31
Reach 3					** OVERTIME **			
Deckhand for Tug	48481	HR	2,317,522	0	0	0	2,317,522	47.80
Boat Captain	48481	HR	2,747,517	0	0	0	2,747,517	56.67
500 TO 800 Hp TUG BOAT	48481	HR	0	3,820,566	0	0	3,820,566	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	80802	HR	0	1,484,130	0	0	1,484,130	18.37
Per Diem	9696.23	MDY	0	0	0	858,228	858,228	88.51
Spare Tug Crew	3232.08	HR	337,683	265,228	0	0	602,911	186.54
Spare Tug Crew Per Diem days	646.00	MDY	0	0	0	57,178	57,178	88.51
TOTAL Reach 3	313417	BCY	5,402,722	5,569,924	0	915,406	11,888,053	37.93
TOTAL Reach 3	313417	BCY	5,402,722	5,569,924	0	915,406	11,888,053	37.93
TOTAL Barging to North - 200T Deck	837234	BCY	7,049,238	8,317,729	0	1,194,358	16,561,325	19.78
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	3644.13	HR	174,198	0	0	0	174,198	47.80
Boat Captain	3644.13	HR	206,519	0	0	0	206,519	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3644.13	HR	0	572,338	0	0	572,338	157.06
DREDGE BARGE, 1000 TON	10932	HR	0	411,652	0	0	411,652	37.65
Per Diem	728.83	DAY	0	0	0	64,509	64,509	88.51
Spare Tug Crew	1822.06	HR	190,367	149,521	0	0	339,888	186.54
Spare Tug Crew Per Diem days	364.00	MDY	0	0	0	32,218	32,218	88.51
TOTAL Reach 1	106012	BCY	571,085	1,133,510	0	96,728	1,801,323	16.99
TOTAL Reach 1	106012	BCY	571,085	1,133,510	0	96,728	1,801,323	16.99
Reach 2					** OVERTIME **			
Deckhand for Tug	3660.35	HR	174,974	0	0	0	174,974	47.80
Boat Captain	3660.35	HR	207,439	0	0	0	207,439	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3660.35	HR	0	574,886	0	0	574,886	157.06
DREDGE BARGE, 1000 TON	10981	HR	0	413,484	0	0	413,484	37.65
Per Diem	732.07	DAY	0	0	0	64,797	64,797	88.51
Spare Tug Crew	1830.18	HR	191,214	150,186	0	0	341,401	186.54
Spare Tug Crew Per Diem days	366.00	MDY	0	0	0	32,395	32,395	88.51
TOTAL Reach 2	106484	BCY	573,627	1,138,557	0	97,192	1,809,377	16.99

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	106484	BCY	573,627	1,138,557	0	97,192	1,809,377	16.99
Reach 3					** OVERTIME **			
Deckhand for Tug	3382.23	HR	161,679	0	0	0	161,679	47.80
Boat Captain	3382.23	HR	191,677	0	0	0	191,677	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3382.23	HR	0	531,205	0	0	531,205	157.06
DREDGE BARGE, 1000 TON	16911	HR	0	636,778	0	0	636,778	37.65
Per Diem	676.45	DAY	0	0	0	59,873	59,873	88.51
Spare Tug Crew	3382.23	HR	353,371	277,550	0	0	630,920	186.54
Spare Tug Crew Per Diem days	676.00	MDY	0	0	0	59,834	59,834	88.51
TOTAL Reach 3	196786	BCY	706,727	1,445,532	0	119,707	2,271,965	11.55
TOTAL Reach 3	196786	BCY	706,727	1,445,532	0	119,707	2,271,965	11.55
TOTAL Barging to South - 1000T Hopper	409280	BCY	1,851,439	3,717,599	0	313,626	5,882,665	14.37
TOTAL Barging to South - 200T Deck	1.00	EA	0	0	0	0	0	0.00
TOTAL Canal/Lock Usage Fees			0	0	0	100,000	100,000	
TOTAL Barging	1352120	BCY	9,090,315	12,389,314	0	1,640,203	23,119,832	17.10
Stabilization								
Transfer from Barge to Pugmil								
Unloading at Northern Facility					** OVERTIME **			
Outside Equip. Operators, Heavy	12201	HR	814,891	0	0	0	814,891	66.79
Master Mechanic	12201	HR	851,435	0	0	0	851,435	69.78
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12201	HR	0	1,763,752	0	0	1,763,752	144.55
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	12201	HR	0	107,798	0	0	107,798	8.83
TOTAL Unloading at Northern Facility	942840	BCY	1,666,326	1,871,551	0	0	3,537,876	3.75
TOTAL Unload Barge - North	942840	BCY	1,666,326	1,871,551	0	0	3,537,876	3.75

TRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading at Southern Facility				** OVERTIME **			
Master Mechanic	2648.27 HR	184,802	0	0	0	184,802	69.78
Outside Equip. Operators, Heavy	2648.27 HR	176,870	0	0	0	176,870	66.79
HYD EXCAV, CRWLR, 4.75 CY BKT	2648.27 HR	0	625,142	0	0	625,142	236.06
Environmental Bucket	2648.27 HR	0	33,848	0	0	33,848	12.78
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.							
TOTAL Unloading at Southern Facility	409282 BCY	361,672	658,991	0	0	1,020,662	2.49
TOTAL Unload Barge - South	409282 BCY	361,672	658,991	0	0	1,020,662	2.49
TOTAL Transfer from Barge to Pugmil	1352122 BCY	2,027,997	2,530,541	0	0	4,558,538	3.37
Stabilization Processing							
Soil Stabilization (30)				** OVERTIME **			
To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.							
LDR,FE, WH, 3.25 CY, ARTIC, 950F	13521 HR	0	831,725	0	0	831,725	61.51
Mixing Equipment	13521 HR	0	2,732,419	0	0	2,732,419	202.08
Outside Equip. Oper Light	13521 HR	815,683	0	0	0	815,683	60.33
Outside Equip. Oper Med	13521 HR	890,415	0	0	0	890,415	65.85
Outside Laborer (Semi-Skilled)	27042 HR	1,351,081	0	0	0	1,351,081	49.96
TOTAL Soil Stabilization	1352122 CY	3,057,180	3,564,143	0	0	6,621,323	4.90
TOTAL Soil Stabilization		3,057,180	3,564,143	0	0	6,621,323	
TOTAL Stabilization Processing	1352122 BCY	3,057,180	3,564,143	0	0	6,621,323	4.90
Stabilization Agents/Chemical							
Stabilization Agents/Chemical				** OVERTIME **			
Portland Cement - Material Cost	151438 TNS	0	0	0	13,770,227	13,770,227	90.93
BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sales tax = $90.93							
TOTAL Stabilization Agents/Chemical	1352122 BCY	0	0	0	13,770,227	13,770,227	10.18
TOTAL Stabilization Agents/Chemical	1.00 EA	0	0	0	13,770,227	13,770,227	13770226.79

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Stabilization Agents/Chemical	1352122	BCY	0	0	0	13,770,227	13,770,227	10.18
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	12202	HR	609,637	0	0	0	609,637	49.96
Outside Truck Drivers, Heavy	39534	HR	1,842,029	0	0	0	1,842,029	46.59
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	39534	HR	0	159,070	0	0	159,070	4.02
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	39534	HR	0	1,309,031	0	0	1,309,031	33.11
TOTAL Truck Cycle Times-North Facility	1018267	BCY	2,451,667	1,468,101	0	0	3,919,768	3.85
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	2648.22	HR	132,312	0	0	0	132,312	49.96
Outside Truck Drivers, Heavy	7944.65	HR	370,168	0	0	0	370,168	46.59
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	7944.65	HR	0	94,274	0	0	94,274	11.87
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	7944.65	HR	0	263,059	0	0	263,059	33.11
TOTAL Truck Cycle Times-South Facility	442025	BCY	502,480	357,333	0	0	859,813	1.95
TOTAL Truck Cycle Times	1.00	EA	2,954,147	1,825,434	0	0	4,779,581	4779580.83
TOTAL Transfer to RR Holding Area	1460291	BCY	2,954,147	1,825,434	0	0	4,779,581	3.27
TOTAL Stabilization	1352122	BCY	8,039,324	7,920,119	0	13,770,227	29,729,669	21.99
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	7786.23	HR	0	478,951	0	0	478,951	61.51
Outside Equip. Operators, Heavy	7786.23	HR	520,019	0	0	0	520,019	66.79
Laborer	15572	HR	778,039	0	0	0	778,039	49.96
SMALL TOOLS	15572	HR	0	31,400	0	0	31,400	2.02
TOTAL Loader Cycle Time - North Site	1018267	BCY	1,298,058	510,351	0	0	1,808,409	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	3379.96	HR	0	207,910	0	0	207,910	61.51
Outside Equip. Operators, Heavy	3379.96	HR	225,737	0	0	0	225,737	66.79
Laborer	6759.91	HR	337,743	0	0	0	337,743	49.96
SMALL TOOLS	6759.91	HR	0	13,631	0	0	13,631	2.02
TOTAL Loader Cycle Time - South Site	442024	BCY	563,480	221,540	0	0	785,020	1.78
TOTAL Load RR Car	1460291	BCY	1,861,538	731,891	0	0	2,593,429	1.78

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transp/Disposal >33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	12128	TRP	0	0	0	60,641,278	60,641,278	5000.00
TOTAL Rail Transport Fee (>33ppm)	1091543	TNS	0	0	0	60,641,278	60,641,278	55.56
TOTAL Rail Transport Fee (>33ppm)	1091543	TNS	0	0	0	60,641,278	60,641,278	55.56
Sediment Disposal (>-33 ppm)								
Disposal Fee/Taxes - Texas	1091543	TNS	0	0	0	57,306,008	57,306,008	52.50
TOTAL Sediment Disposal (>-33 ppm)	1091543	EA	0	0	0	57,306,008	57,306,008	52.50
TOTAL Sediment Disposal (>33 ppm)	1091543	TNS	0	0	0	57,306,008	57,306,008	52.50
TOTAL Transp/Disposal >33 ppm - Texas	1091543	TNS	0	0	0	117,947,286	117,947,286	108.06
Transp/Disposal(0-33) Northeast								
Transp/Disposal(0-33) Northeast								
TOTAL Transp/Disposal(0-33) Northeast	813002	TNS	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Northeast			0	0	0	0	0	
TOTAL Transp/Disposal(0-33) Northeast			0	0	0	0	0	
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
TOTAL Transp/Disposal(0-33) Southeast		TNS	0	0	0	0	0	
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Southeast			0	0	0	0	0	
Disposal(10-33) Benifical								
Disposal(10-33) Benifical								
Disposal - 200 miles This includes both the total transportation and disposal costs for southeastern dispoal facility.	532977	TNS	0	0	0	15,989,310	15,989,310	30.00

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Disposal(10-33) Benifical	532977	TNS	0	0	0	15,989,310	15,989,310	30.00
TOTAL Disposal(10-33) Benifical	1.00	EA	0	0	0	15,989,310	15,989,310	15989310.00
Barge to Benificial					** OVERTIME **			
Deckhand for Tug	19630	HR	775,473	0	0	0	775,473	39.51
Boat Captain	19630	HR	919,355	0	0	0	919,355	46.84
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	19630	HR	0	2,547,910	0	0	2,547,910	129.80
DREDGE BARGE, 1000 TON	58889	HR	0	1,832,573	0	0	1,832,573	31.12
Per Diem	3925.91	DAY	0	0	0	287,180	287,180	73.15
Spare Tug Crew	6543.18	HR	564,978	443,753	0	0	1,008,731	154.17
Spare Tug Crew Per Diem days	1308.00	MDY	0	0	0	95,680	95,680	73.15
TOTAL Barge to Benificial	380698	BCY	2,259,806	4,824,236	0	382,860	7,466,903	19.61
TOTAL Barge to Benificial	380698	BCY	2,259,806	4,824,236	0	382,860	7,466,903	19.61
TOTAL Disposal(10-33) Benifical	532977	TNS	2,259,806	4,824,236	0	16,372,170	23,456,213	44.01
Tramsportation(<10ppm) Benifical								
Transportation(<10ppm) Benifical								
Transportation for <10 ppm This includes both the total transportation and disposal costs for southeastern dispoal facility.	952862	TNS	0	0	0	26,680,136	26,680,136	28.00
TOTAL Transportation(<10ppm) Benifical	952862	TNS	0	0	0	26,680,136	26,680,136	28.00
TOTAL Transportation(<10ppm) Benifical	1.00	EA	0	0	0	26,680,136	26,680,136	26680136.00
TOTAL Tramsportation(<10ppm) Benifical	952862	TNS	0	0	0	26,680,136	26,680,136	28.00
Sediment Sample & Analysis								
Analytical costs for Disposal								
Total PCB's - Sediment Assume 1 test/1000 tns	2045.57	EA	0	0	0	306,836	306,836	150.00
Total TCLP Assume 1 test/10000 tns	204.43	EA	0	0	0	245,320	245,320	1200.00
Paint Filter Test Assume 1 test/1000 tns	2045.57	EA	0	0	0	40,911	40,911	20.00
Duplicates Assume 5% of Total PCB's	102.28	EA	0	0	0	15,342	15,342	150.00
Quality Assurance Assume 5% of Total PCB's	102.28	EA	0	0	0	15,342	15,342	150.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical costs for Disposal	1352122	BCY	0	0	0	623,750	623,750	0.46
TOTAL Analytical costs for Disposal	1.00	EA	0	0	0	623,750	623,750	623750.46
TOTAL Sediment Sample & Analysis	2577386	TNS	0	0	0	623,750	623,750	0.24
TOTAL Transport/Landfill Fee	1352122	BCY	4,121,343	5,556,127	0	161,623,342	171,300,813	126.69
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant								
Wastewater Treatment Operator	4499.99	HR	145,919	0	0	0	145,919	32.43
Laborer	4499.99	HR	198,692	0	0	0	198,692	44.15
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	2855.98	LB	0	0	378	0	378	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	7014.03	LB	0	0	1,169	0	1,169	0.17
TOTAL O&M at North Plant	42000000	GAL	344,611	674	81,407	0	426,691	0.01
O&M at South Plant								
Wastewater Treatment Operator	1200.00	HR	38,912	0	0	0	38,912	32.43
Laborer	1200.00	HR	52,984	0	0	0	52,984	44.15
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	1237.59	LB	0	0	164	0	164	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	3039.41	LB	0	0	506	0	506	0.17
TOTAL O&M at South Plant	18200000	GAL	91,896	674	80,530	0	173,100	0.01
TOTAL Water Plant Operation			436,507	1,347	161,937	0	599,791	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Water Treatment Process	1.00	EA	436,507	1,347	161,937	0	599,791	599790.56
Effluent Monitoring								
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Southern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.6
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Northern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	248,446	248,446	248446.00
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	436,507	1,347	161,937	248,446	848,237	848236.56
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	276368	TNS	0	0	0	4,012,863	4,012,863	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,863	4,012,863	4012863.36
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,863	4,012,863	4012863.36
TOTAL Material 1 (topsoil type)	276315	TNS	0	0	0	4,012,863	4,012,863	14.52
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	170664	TNS	0	0	0	1,445,524	1,445,524	8.47
Graded Gravel (at Plant)	170664	TNS	0	0	0	1,445,524	1,445,524	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	2,891,048	2,891,048	2891048.16
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	2,891,048	2,891,048	2891048.16
TOTAL Material 2 (sand, gravel)	341328	TNS	0	0	0	2,891,048	2,891,048	8.47
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	2297.78	HR	109,812	0	0	0	109,812	47.79
Outside Truck Drivers, Heavy	16084	HR	716,846	0	0	0	716,846	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	16084	HR	0	182,566	0	0	182,566	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	16084	HR	0	509,424	0	0	509,424	31.67
TOTAL Truck Cycle Times-North Facility	441174	BCY	826,658	691,990	0	0	1,518,647	3.44
TOTAL Truck Cycle Times			826,658	691,990	0	0	1,518,647	
TOTAL Transportation to River	441174	BCY	826,658	691,990	0	0	1,518,647	3.44
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	1961.93	HR	0	154,404	0	0	154,404	78.70
Outside Equip. Operators, Heavy	1961.93	HR	125,335	0	0	0	125,335	63.88
Laborer	3923.86	HR	187,523	0	0	0	187,523	47.79
SMALL TOOLS	3923.86	HR	0	7,568	0	0	7,568	1.93
TOTAL Loader Cycle Time - North Site	441174	BCY	312,857	161,972	0	0	474,829	1.08
TOTAL Barge Loading	1.00	EA	312,857	161,972	0	0	474,829	474829.23
TOTAL Barge Loading	441174	BCY	312,857	161,972	0	0	474,829	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	9481.15	HR	453,223	0	0	0	453,223	47.80
Boat Captain	9481.15	HR	537,315	0	0	0	537,315	56.67
500 TO 800 Hp TUG BOAT	9481.15	HR	0	747,164	0	0	747,164	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	15170	HR	0	278,632	0	0	278,632	18.37
Per Diem for tug crew	1896.23	MDY	0	0	0	167,838	167,838	88.51
Spare Tug Crew	1896.23	HR	198,116	155,607	0	0	353,723	186.54
Spare Tug Crew Per Diem days	380.00	MDY	0	0	0	33,634	33,634	88.51
TOTAL Reach 1	236429	BCY	1,188,654	1,181,404	0	201,473	2,571,530	10.88

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 2					** OVERTIME **			
Deckhand for Tug	2190.16	HR	104,695	0	0	0	104,695	47.80
Boat Captain	2190.16	HR	124,120	0	0	0	124,120	56.67
500 TO 800 Hp TUG BOAT	2190.16	HR	0	172,596	0	0	172,596	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	3128.80	HR	0	57,468	0	0	57,468	18.37
Per Diem for tug crew	438.03	MDY	0	0	0	38,771	38,771	88.51
Spare Tug Crew	312.88	HR	32,689	25,675	0	0	58,365	186.54
Spare Tug Crew Per Diem days	62.00	MDY	0	0	0	5,488	5,488	88.51
TOTAL Reach 2	39011	BCY	261,505	255,739	0	44,259	561,503	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	5624.60	HR	268,870	0	0	0	268,870	47.80
Boat Captain	5624.60	HR	318,757	0	0	0	318,757	56.67
500 TO 800 Hp TUG BOAT	5624.60	HR	0	443,248	0	0	443,248	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	6679.22	HR	0	122,681	0	0	122,681	18.37
Per Diem for tug crew	1124.92	MDY	0	0	0	99,568	99,568	88.51
Spare Tug Crew	351.54	HR	36,728	28,848	0	0	65,576	186.54
Spare Tug Crew Per Diem days	70.00	MDY	0	0	0	6,196	6,196	88.51
TOTAL Reach 3	43831	BCY	624,355	594,776	0	105,764	1,324,896	30.23
TOTAL Barging for Shallow Backfill	319271	BCY	2,074,514	2,031,919	0	351,495	4,457,928	13.96
Reach 1					** OVERTIME **			
Deckhand for Tug	569.75	HR	27,235	0	0	0	27,235	47.80
Boat Captain	569.75	HR	32,289	0	0	0	32,289	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	569.75	HR	0	89,483	0	0	89,483	157.06
DREDGE BARGE, 1000 TON	1139.50	HR	0	42,907	0	0	42,907	37.65
Per Diem for tug crew	113.95	MDY	0	0	0	10,086	10,086	88.51
Spare Tug Crew	284.87	HR	29,763	23,377	0	0	53,140	186.54
Spare Tug Crew Per Diem days	56.00	MDY	0	0	0	4,957	4,957	88.51
TOTAL Reach 1	49726	BCY	89,287	155,768	0	15,043	260,098	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	324.78	HR	15,525	0	0	0	15,525	47.80
Boat Captain	324.78	HR	18,406	0	0	0	18,406	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	324.78	HR	0	51,009	0	0	51,009	157.06
DREDGE BARGE, 1000 TON	811.95	HR	0	30,574	0	0	30,574	37.65
Per Diem for tug crew	64.96	MDY	0	0	0	5,749	5,749	88.51
Spare Tug Crew	162.39	HR	16,966	13,326	0	0	30,292	186.54
Spare Tug Crew Per Diem days	32.00	MDY	0	0	0	2,832	2,832	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	28346	BCY	50,898	94,909	0	8,582	154,389	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	1255.51	HR	60,017	0	0	0	60,017	47.80
Boat Captain	1255.51	HR	71,152	0	0	0	71,152	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1255.51	HR	0	197,188	0	0	197,188	157.06
DREDGE BARGE, 1000 TON	2008.82	HR	0	75,641	0	0	75,641	37.65
Per Diem for tug crew	251.10	MDY	0	0	0	22,225	22,225	88.51
Spare Tug Crew	251.10	HR	26,235	20,606	0	0	46,841	186.54
Spare Tug Crew Per Diem days	50.00	MDY	0	0	0	4,426	4,426	88.51
TOTAL Reach 3	43831	BCY	157,404	293,435	0	26,651	477,490	10.89
TOTAL Barging for Deep Backfill	121903	BCY	297,589	544,111	0	50,275	891,976	7.32
TOTAL Barging to Backfill Site	441174	BCY	2,372,103	2,576,031	0	401,771	5,349,904	12.13
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	5427.57	HR	267,363	0	0	0	267,363	49.26
Dredge Engineer	2713.78	HR	175,393	0	0	0	175,393	64.63
Oiler	2713.78	HR	136,712	0	0	0	136,712	50.38
Excavator Dredge Operator	2713.78	HR	202,768	0	0	0	202,768	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2171.03	HR	0	300,186	0	0	300,186	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	542.76	HR	0	19,124	0	0	19,124	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2713.78	HR	0	22,467	0	0	22,467	8.28
SMALL TOOLS	2713.78	HR	0	5,234	0	0	5,234	1.93
Environmental Bucket	2713.78	HR	0	22,934	0	0	22,934	8.45
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	2713.78	HR	0	52,457	0	0	52,457	19.33
Per Diem	1696.11	MDY	0	0	0	150,126	150,126	88.51
TOTAL Backfill - Fines	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
TOTAL-Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines			782,237	422,401	0	150,126	1,354,764	

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Material Placement (Fines)	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
Material Placement (Material 2)								
Shallow Draft Backfilling					** OVERTIME **			
Deckhand for Dredge	1955.40	HR	96,323	0	0	0	96,323	49.26
Dredge Engineer	977.70	HR	63,189	0	0	0	63,189	64.63
Oiler	977.70	HR	49,253	0	0	0	49,253	50.38
Excavator Dredge Operator	977.70	HR	73,052	0	0	0	73,052	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	782.16	HR	0	108,148	0	0	108,148	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	195.54	HR	0	6,890	0	0	6,890	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	977.70	HR	0	8,094	0	0	8,094	8.28
SMALL TOOLS	977.70	HR	0	1,886	0	0	1,886	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	977.70	HR	0	8,262	0	0	8,262	8.45
Command/Control System	977.70	HR	0	18,899	0	0	18,899	19.33
Per Diem	611.06	MDY	0	0	0	54,086	54,086	88.51
TOTAL Shallow Draft Backfilling	121903	BCY	281,817	152,179	0	54,086	488,082	4.00
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Shallow Draft Backfilling			281,817	152,179	0	54,086	488,082	
Backfill Reach 1					** OVERTIME **			
Deckhand for Dredge	1396.74	HR	68,804	0	0	0	68,804	49.26
Dredge Engineer	698.37	HR	45,136	0	0	0	45,136	64.63
Oiler	698.37	HR	35,182	0	0	0	35,182	50.38
Excavator Dredge Operator	698.37	HR	52,181	0	0	0	52,181	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	558.69	HR	0	126,150	0	0	126,150	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	139.67	HR	0	8,151	0	0	8,151	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	698.37	HR	0	5,782	0	0	5,782	8.28
SMALL TOOLS	698.37	HR	0	1,347	0	0	1,347	1.93
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	698.37	HR	0	8,538	0	0	8,538	12.23
Command/Control System	698.37	HR	0	13,499	0	0	13,499	19.33
Per Diem	436.48	MDY	0	0	0	38,633	38,633	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Backfill Reach 1	121903	BCY	201,302	163,466	0	38,633	403,401	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			201,302	163,466	0	38,633	403,401	
TOTAL Material Placement (Material 2)	243806	BCY	483,119	315,645	0	92,719	891,484	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.1
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88
TOTAL Backfilling	441174	BCY	5,529,187	4,495,563	67,728	7,560,627	17,653,105	40.01

NTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Capping								
Material 1 (Sand & Gravel)								
Material 1 (Sand & Gravel)								
Sand and Gravel	269118	TNS	0	0	1,565,846	0	1,565,846	5.82
TOTAL Material 1 (Sand & Gravel)	1.00	EA	0	0	1,565,846	0	1,565,846	1565846.26
TOTAL Material 1 (Sand & Gravel)	1.00	EA	0	0	1,565,846	0	1,565,846	1565846.26
TOTAL Material 1 (Sand & Gravel)	269118	TNS	0	0	1,565,846	0	1,565,846	5.82
Material 2 (Aquablock)								
TOTAL Material 2 (Aquablock)	1.00	EA	0	0	0	0	0	0.00
TOTAL Aquablok Material-Quote			0	0	0	16,000,000	16,000,000	
TOTAL Aquablok Material-Quote			0	0	0	677,000	677,000	
TOTAL Aquablok Material-Quote			0	0	0	200	200	
TOTAL Material 2 (Aquablock)	150000	TNS	0	0	0	16,677,200	16,677,200	111.18
Transportation to River								
Truck Cycle Times-Sand					** OVERTIME **			
Laborer (Hopper tender)	1001.18	HR	39,543	0	0	0	39,543	39.50
Outside Truck Drivers, Heavy	8009.46	HR	295,010	0	0	0	295,010	36.83
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	8009.46	HR	0	75,133	0	0	75,133	9.38
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	8009.46	HR	0	209,648	0	0	209,648	26.18
TOTAL Truck Cycle Times-Sand	192227	BCY	334,553	284,781	0	0	619,334	3.22
Truck Cycle Times-Aquablok					** OVERTIME **			
Laborer (Hopper tender)	558.04	HR	22,040	0	0	0	22,040	39.50
Outside Truck Drivers, Heavy	4464.29	HR	164,432	0	0	0	164,432	36.83
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	4464.29	HR	0	41,877	0	0	41,877	9.38
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	4464.29	HR	0	116,853	0	0	116,853	26.18
TOTAL Truck Cycle Times-Aquablok	107143	BCY	186,472	158,730	0	0	345,203	3.22
TOTAL Truck Cycle Times			521,025	443,511	0	0	964,536	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transportation to River	299370	BCY	521,025	443,511	0	0	964,536	3.22
Barge Loading								
Loader Cycle Time - Sand					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	854.85	HR	0	70,335	0	0	70,335	82.28
Outside Equip. Operators, Heavy	854.85	HR	57,093	0	0	0	57,093	66.79
Laborer	1709.69	HR	85,421	0	0	0	85,421	49.96
SMALL TOOLS	1709.69	HR	0	3,447	0	0	3,447	2.02
TOTAL Loader Cycle Time - Sand	192227	BCY	142,513	73,782	0	0	216,295	1.13
Loader Cycle Time - Aquablok					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	476.47	HR	0	39,203	0	0	39,203	82.28
Outside Equip. Operators, Heavy	476.47	HR	31,822	0	0	0	31,822	66.79
Laborer	952.95	HR	47,612	0	0	0	47,612	49.96
SMALL TOOLS	952.95	HR	0	1,922	0	0	1,922	2.02
TOTAL Loader Cycle Time - Aquablok	107143	BCY	79,434	41,124	0	0	120,558	1.13
TOTAL Barge Loading	1.00	EA	221,947	114,906	0	0	336,853	336853.42
TOTAL Barge Loading	299370	GCY	221,947	114,906	0	0	336,853	1.13
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	898.43	HR	42,947	0	0	0	42,947	47.80
Boat Captain	898.43	HR	50,915	0	0	0	50,915	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	898.43	HR	0	141,105	0	0	141,105	157.06
DREDGE BARGE, 1000 TON	1796.85	HR	0	67,659	0	0	67,659	37.65
Per Diem for tug crew	179.69	MDY	0	0	0	15,904	15,904	88.51
Spare Tug Crew	449.21	HR	46,933	36,863	0	0	83,796	186.54
Spare Tug Crew Per Diem days	90.00	MDY	0	0	0	7,966	7,966	88.51
TOTAL Reach 1	78412	BCY	140,796	245,627	0	23,870	410,293	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	512.15	HR	24,482	0	0	0	24,482	47.80
Boat Captain	512.15	HR	29,025	0	0	0	29,025	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	512.15	HR	0	80,437	0	0	80,437	157.06
DREDGE BARGE, 1000 TON	1280.38	HR	0	48,212	0	0	48,212	37.65
Per Diem for tug crew	102.43	MDY	0	0	0	9,066	9,066	88.51
Spare Tug Crew	256.08	HR	26,754	21,014	0	0	47,768	186.54
Spare Tug Crew Per Diem days	52.00	MDY	0	0	0	4,603	4,603	88.51

NTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	44699	BCY	80,261	149,663	0	13,669	243,593	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	1979.79	HR	94,639	0	0	0	94,639	47.80
Boat Captain	1979.79	HR	112,198	0	0	0	112,198	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1979.79	HR	0	310,941	0	0	310,941	157.06
DREDGE BARGE, 1000 TON	3167.66	HR	0	119,276	0	0	119,276	37.65
Per Diem for tug crew	395.96	MDY	0	0	0	35,047	35,047	88.51
Spare Tug Crew	395.96	HR	41,369	32,493	0	0	73,862	186.54
Spare Tug Crew Per Diem days	80.00	MDY	0	0	0	7,081	7,081	88.51
TOTAL Reach 3	69116	BCY	248,206	462,710	0	42,128	753,043	10.90
TOTAL Barging of Sand	192227	BCY	469,263	857,999	0	79,667	1,406,929	7.32
Reach 1					** OVERTIME **			
Deckhand for Tug	473.50	HR	22,635	0	0	0	22,635	47.80
Boat Captain	473.50	HR	26,834	0	0	0	26,834	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	473.50	HR	0	74,367	0	0	74,367	157.06
DREDGE BARGE, 1000 TON	947.01	HR	0	35,659	0	0	35,659	37.65
Per Diem for tug crew	94.70	MDY	0	0	0	8,382	8,382	88.51
Spare Tug Crew	236.75	HR	24,736	19,428	0	0	44,164	186.54
Spare Tug Crew Per Diem days	48.00	MDY	0	0	0	4,249	4,249	88.51
TOTAL Reach 1	41326	BCY	74,205	129,454	0	12,631	216,290	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	294.56	HR	14,081	0	0	0	14,081	47.80
Boat Captain	294.56	HR	16,693	0	0	0	16,693	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	294.56	HR	0	46,262	0	0	46,262	157.06
DREDGE BARGE, 1000 TON	736.39	HR	0	27,728	0	0	27,728	37.65
Per Diem for tug crew	58.91	MDY	0	0	0	5,214	5,214	88.51
Spare Tug Crew	147.28	HR	15,387	12,086	0	0	27,473	186.54
Spare Tug Crew Per Diem days	30.00	MDY	0	0	0	2,655	2,655	88.51
TOTAL Reach 2	25708	BCY	46,161	86,076	0	7,870	140,107	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	1148.90	HR	54,920	0	0	0	54,920	47.80
Boat Captain	1148.90	HR	65,110	0	0	0	65,110	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1148.90	HR	0	180,443	0	0	180,443	157.06
DREDGE BARGE, 1000 TON	1838.24	HR	0	69,218	0	0	69,218	37.65

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Per Diem for tug crew	229.78	MDY	0	0	0	20,338	20,338	88.51
Spare Tug Crew	229.78	HR	24,007	18,856	0	0	42,863	186.54
Spare Tug Crew Per Diem days	46.00	MDY	0	0	0	4,072	4,072	88.51
TOTAL Reach 3	40109	BCY	144,038	268,517	0	24,410	436,964	10.89
TOTAL Barging of Aquablok	107143	BCY	264,403	484,048	0	44,910	793,361	7.40
TOTAL Barging to Backfill Site	299370	BCY	733,666	1,342,047	0	124,577	2,200,290	7.35
Material Placement (S & G)								
Sand & Gravel Cover Placement					** OVERTIME **			
Deckhand for Tug	1922.27	HR	91,889	0	0	0	91,889	47.80
Boat Captain	1922.27	HR	108,939	0	0	0	108,939	56.67
500 TO 800 Hp TUG BOAT	1922.27	HR	0	151,485	0	0	151,485	78.81
Per Diem for tug crew	480.57	MDY	0	0	0	42,536	42,536	88.51
Deckhand for Dredge	5766.81	HR	284,074	0	0	0	284,074	49.26
Dredge Engineer	1922.27	HR	124,237	0	0	0	124,237	64.63
Oiler	1922.27	HR	96,838	0	0	0	96,838	50.38
Excavator Dredge Operator	1922.27	HR	143,628	0	0	0	143,628	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1922.27	HR	0	265,790	0	0	265,790	138.27
WORK BARGE-S,MED DUTY,60'X16'X5'	1922.27	HR	0	15,914	0	0	15,914	8.28
SMALL TOOLS	1922.27	HR	0	3,708	0	0	3,708	1.93
Environmental Bucket	1922.27	HR	0	16,245	0	0	16,245	8.45
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	1922.27	HR	0	37,157	0	0	37,157	19.33
Conveyor	1922.27	HR	0	0	0	46,519	46,519	24.20
Per Diem	1441.70	MDY	0	0	0	127,607	127,607	88.51
TOTAL Sand & Gravel Cover Placement	192227	BCY	849,606	490,298	0	216,662	1,556,566	8.10
TOTAL Sand & Gravel Cover Placement			849,606	490,298	0	216,662	1,556,566	
TOTAL Material Placement (S & G)	192227	BCY	849,606	490,298	0	216,662	1,556,566	8.10
Material Placement (Aquablok)								
TOTAL Aquablok Placement			0	0	0	0	0	
TOTAL Aquablok Placement-Quote			0	0	0	2,000,000	2,000,000	
TOTAL Aquablok Placement-Quote			0	0	0	997,000	997,000	

MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Aquablok Placement-Quote			0	0	0	800	800	
TOTAL Material Placement (Aquablok)	107143	BCY	0	0	0	2,997,800	2,997,800	27.98
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	11,637	0	11,637	11636.88
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	134,767	0	0	134,767	37.44
SMALL TOOLS	360.00	HR	0	574	0	0	574	1.59
Deckhand for Tug	3599.99	HR	142,222	0	0	0	142,222	39.51
Boat Captain	3599.99	HR	168,610	0	0	0	168,610	46.84
TOTAL Shallow Turbidity Control	1.00	CRW	310,832	135,340	11,637	0	457,809	457809.23
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	30,256	0	30,256	15.13
Anchoring System	40.00	EA	0	0	11,171	0	11,171	279.29
Mooring Buoy Light w/Photocell	20.00	EA	0	0	2,909	0	2,909	145.46
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	134,767	0	0	134,767	37.44
SMALL TOOLS	360.00	HR	0	574	0	0	574	1.59
Deckhand for Tug	3599.99	HR	142,222	0	0	0	142,222	39.51
Boat Captain	3599.99	HR	168,610	0	0	0	168,610	46.84
TOTAL Deep Turbidity Control	1.00	CRW	310,832	135,340	44,336	0	490,509	490508.85
TOTAL Turbidity Control			621,664	270,681	55,973	0	948,318	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	621,664	270,681	55,973	0	948,318	948318.08
TOTAL Capping	207.00	AC	2,947,908	2,661,444	1,621,820	20,016,239	27,247,410	131630.00
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	21.00	AC	0	0	0	693,000	693,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	21.00	AC	0	0	0	168,000	168,000	8000.00

HTRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	54.80 AC	0	0	0	1,808,400	1,808,400	33000.00
TOTAL Habitat & Vegetation Restoration		0	0	0	2,669,400	2,669,400	
TOTAL Habitat & Vegetation Restoration		0	0	0	2,669,400	2,669,400	
TOTAL Habitat & Vegetation Restoration		0	0	0	2,669,400	2,669,400	
TOTAL Habitat & Vegetation Restoration	96.80 AC	0	0	0	2,669,400	2,669,400	27576.45
River Bank Restoration							
Shoreline Protect <2'-Hydroseed							
Shoreline Protection <2' ** OVERTIME ** Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr							
Boat Captain	277.33 HR	16,431	0	0	0	16,431	59.25
Deckhand	277.33 HR	14,282	0	0	0	14,282	51.50
Outside Equip. Operators, Heavy	277.33 HR	18,522	0	0	0	18,522	66.79
Laborer	277.33 HR	13,856	0	0	0	13,856	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	277.33 HR	0	5,104	0	0	5,104	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	277.33 HR	0	449	0	0	449	1.62
Hydroseeder	277.33 HR	0	2,989	0	0	2,989	10.78
SMALL TOOLS	277.33 HR	0	559	0	0	559	2.02
Seed, Mulch, Fertlizer	173333 SY	0	0	63,789	0	63,789	0.37
TOTAL Shoreline Protection <2'	173333 SY	63,092	9,101	63,789	0	135,983	0.78
TOTAL Shoreline Protect <2'-Hydroseed		63,092	9,101	63,789	0	135,983	
TOTAL Shoreline Protect <2'-Hydroseed	78000 LF	63,092	9,101	63,789	0	135,983	1.74
Shoreline Protect 2'-3' Mat							
Shoreline Protection 2'-3' ** OVERTIME ** Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr							
Boat Captain	240.74 HR	11,275	0	0	0	11,275	46.84
Deckhand	240.74 HR	9,801	0	0	0	9,801	40.71
Labor Foreman	240.74 HR	9,651	0	0	0	9,651	40.09
Laborer	722.22 HR	28,525	0	0	0	28,525	39.50

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	240.74	HR	0	3,502	0	0	3,502	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	240.74	HR	0	308	0	0	308	1.28
SMALL TOOLS	240.74	HR	0	384	0	0	384	1.59
Staples	19259	EA	0	0	1,793	0	1,793	0.09
Erosion Control Mat w/seeds	28889	SY	0	0	43,703	0	43,703	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	28889	SY	59,252	4,194	46,194	0	109,640	3.80
TOTAL Shoreline Protect 2'-3' Mat			59,252	4,194	46,194	0	109,640	
TOTAL Shoreline Protect 2'-3' Mat	13000	LF	59,252	4,194	46,194	0	109,640	8.43
TOTAL River Bank Restoration	91000	LF	122,344	13,295	109,984	0	245,623	2.70
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	12343	HR	1,127,078	0	0	0	1,127,078	91.31
Engineers, Project	12343	HR	787,407	0	0	0	787,407	63.79
Inspectors	12343	HR	364,188	0	0	0	364,188	29.51
Engineers, Quality Control	12343	HR	599,125	0	0	0	599,125	48.54
Clerks, Typists, Bookkeepers & Receptionist	9874.25	HR	257,074	0	0	0	257,074	26.03
Per Diem 5men/10hr/day = .5 multiplier	6171.41	MDY	0	0	0	451,438	451,438	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	343.54	EA	0	0	0	171,771	171,771	500.00
TOTAL Field Office Labor Requirements			3,134,871	0	0	623,209	3,758,080	
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	11,582	0	0	11,582	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	71,506	0	0	71,506	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	24686	HR	0	62,021	0	0	62,021	2.51
TOTAL Field Equipment Requirements	48.00	MO	0	145,109	0	0	145,109	3023.10
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL HTRW/Remediation/Construction	1732820	CY	65,742,574	48,709,051	5,548,980	231,059,944	351,060,549	202.59
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	25,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00	EA	0	0	0	0	0	0.00
Cost included in float surveys								
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp cost of one boat included with weekly monitoring	2.00	EA	0	2,694	0	0	2,694	1347.23
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9,14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.18
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Shallow Sediment Inventory (5YR)								
Labor/Equipment								
Chemist	525.00	HR	36,399	0	0	0	36,399	69.33
Chemist, Jr.	1050.00	HR	64,221	0	0	0	64,221	61.16
Sampling Technician	1050.00	HR	44,705	0	0	0	44,705	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	525.00	HR	0	24,994	0	0	24,994	47.61
TOTAL Labor/Equipment	500.00	HR	145,326	24,994	0	0	170,320	340.64
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	263.00	EA	0	0	29,036	0	29,036	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	250.00	EA	0	0	172,048	0	172,048	688.19
TOTAL Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
Annual Reporting (1 YR)								
Lbr/Matls for Quarterly Report								
Project Manager	24.00	HR	2,772	0	0	0	2,772	115.51
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00	HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	527	0	0	0	527	32.93
Reproduction Operators	8.00	HR	169	0	0	0	169	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00	WK	12,146	0	383	0	12,529	12529.22

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Lbr/Matls for Annual Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00	WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
TOTAL Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Aquablock Cap-Visual Inspecton								
Labor/Equipment								
Chemist	240.00	HR	13,154	0	0	0	13,154	54.81
Technician	240.00	HR	8,078	0	0	0	8,078	33.66
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	240.00	HR	0	2,581	0	0	2,581	10.75
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,065	0	0	1,065	1065.00
TOTAL Labor/Equipment	240.00	HR	21,232	3,646	0	0	24,878	103.66
TOTAL Aquablock Cap-Visual Inspecton	1.00	EA	21,232	3,646	0	0	24,878	24877.87
Aquablock-Sidescan Radar Survey								
Labor/Equipment								
Chemist	490.00	HR	26,856	0	0	0	26,856	54.81
Survey Crew	49.00	DAY	159,152	0	0	0	159,152	3248.00
Post Processing	85.75	HR	2,886	0	0	0	2,886	33.66
Per Diem	49.00	DAY	0	0	15,396	0	15,396	314.20
Mob/Demob	1.00	EA	2,842	0	0	0	2,842	2842.00
TOTAL Labor/Equipment	490.00	HR	191,736	0	15,396	0	207,132	422.72
TOTAL Aquablock-Sidescan Radar Survey	49.00	DAY	191,736	0	15,396	0	207,132	4227.18
TOTAL Aquablock- Patch	5.00	AC	0	0	0	800,000	800,000	160000.00
Geophysical Surveys 3/10/10 (c)								
Labor/Equipment								
Chemist	490.00	HR	33,973	0	0	0	33,973	69.33
Survey Crew	49.00	DAY	201,327	0	0	0	201,327	4108.72
Post Processing	85.75	HR	3,651	0	0	0	3,651	42.58
Per Diem	49.00	DAY	0	0	19,475	0	19,475	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	490.00	HR	242,546	0	19,475	0	262,021	534.74
TOTAL Geophysical Surveys 3/10/10 (c)	49.00	DAY	242,546	0	19,475	0	262,021	5347.38
TOTAL O & M	1.00	EA	1,462,438	94,895	997,122	1,450,000	4,004,455	4004455.23
TOTAL Alt Cap 3/10/Select-Benficial	1732820	BCY	70,573,630	49,524,259	13,763,201	243,009,944	376,871,034	217.49

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HUDSON RIVER PCBs REASSESSMENT FS

APPENDIX I

COST ESTIMATES

I.7 Detailed Estimate - Alternative REM-3/10/Select

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Removal 3/10/Select-Benificl								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 3/10/10 (d)								
Labor/Equipment								
Chemist	15130	HR	1,048,994	0	0	0	1,048,994	69.33
Chemist, Jr.	15130	HR	925,393	0	0	0	925,393	61.16
Sampling Technician	15130	HR	644,184	0	0	0	644,184	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15130	HR	0	720,313	0	0	720,313	47.61
TOTAL Labor/Equipment	15130	HR	2,618,572	720,313	0	0	3,338,884	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22695	EA	0	0	6,013,531	0	6,013,531	264.97
Cesium - 137/Beryllium -7	7565.00	EA	0	0	835,213	0	835,213	110.40
Organic Carbon	2270.00	EA	0	0	167,079	0	167,079	73.60
Cation Exchange Capacity	2270.00	EA	0	0	167,079	0	167,079	73.60
TOTAL Analytical	7565.00	EA	0	0	7,182,903	0	7,182,903	949.49
TOTAL Sediment Inventory 3/10/10 (d)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
Geophysical Surveys 3/10/10 (d)								
Labor/Equipment								
Chemist	500.00	HR	34,666	0	0	0	34,666	69.33
Survey Crew	50.00	DAY	205,436	0	0	0	205,436	4108.72
Post Processing	87.50	HR	10,111	0	0	0	10,111	115.56
Per Diem	50.00	DAY	0	0	19,873	0	19,873	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	500.00	HR	253,808	0	19,873	0	273,681	547.36
TOTAL Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63

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Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,379,880	720,313	7,217,496	10,500,000	21,817,689	21817689.02
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	40.00	MON	0	0	23,351	0	23,351	583.79
TOTAL Health & Safety Equipment	40.00	MO	0	0	23,351	0	23,351	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25) Unit Measure Of	343.00	EA	0	0	65,061	0	65,061	189.68
Boot Covers, Tyvek (Bag Of 10Pr) Unit Measure Of	858.00	EA	0	0	11,482	0	11,482	13.38
Gloves, Latex (Box Of 100) (Single Hand) Unit Measure Of	42.86	EA	0	0	604	0	604	14.10
Pvc/Nitrile Blend (Package Of 12 Pr) Unit Measure	42.86	EA	0	0	2,580	0	2,580	60.21
TOTAL Health & Safety Stores	171.43	WKS	0	0	82,542	0	82,542	481.50

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	20571	HR	1,229,828	0	0	0	1,229,828	59.78
Industrial Hygiene Technician	20571	HR	793,437	0	0	0	793,437	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1028.57	MDY	0	0	0	75,240	75,240	73.15
Air Fare (Round Trip)	57.00	EA	0	0	0	28,500	28,500	500.00
TOTAL Health & Safety Labor			2,023,265	0	0	103,740	2,127,005	
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn,trailer,8'x36',2 showers	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety Decon Trailer	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements								
Project Manager	10286	HR	939,231	0	0	0	939,231	91.31
General Superintendents (South)	10286	HR	539,141	0	0	0	539,141	52.42
General Superintendents (North)	10286	HR	539,141	0	0	0	539,141	52.42
Engineers, Project	10286	HR	656,173	0	0	0	656,173	63.79
Chemist	10286	HR	563,737	0	0	0	563,737	54.81
Industrial Hygiene Technician	10286	HR	396,719	0	0	0	396,719	38.57
Engineers, Quality Control	10286	HR	499,270	0	0	0	499,270	48.54
Schedulers	10286	HR	499,270	0	0	0	499,270	48.54
Clerks, Typists, Bookkeepers & Receptionist	8228.54	HR	214,228	0	0	0	214,228	26.03
Janitors	8228.54	HR	69,180	0	0	0	69,180	8.41
Per Diem	8228.54	MDY	0	0	0	601,918	601,918	73.15
8men/10hr/day = .8 multiplier								
Air Fare (Round Trip)	457.71	EA	0	0	0	228,856	228,856	500.00
8 men/3wks = 2.67 multiplier								
TOTAL Field Office Labor Requirements			4,916,091	0	0	830,774	5,746,865	
Home Office Labor Requirements								
Program Managers	686.00	HR	64,825	0	0	0	64,825	94.50
Operations Managers	1371.00	HR	50,764	0	0	0	50,764	37.03
Certified Industrial Hygienist	343.00	HR	23,482	0	0	0	23,482	68.46
Contract Administrators	686.00	HR	25,149	0	0	0	25,149	36.66
Purchasing Agents, Chief	1371.00	HR	50,262	0	0	0	50,262	36.66
Engineers, Quality Control	686.00	HR	33,299	0	0	0	33,299	48.54
Chief Scheduler & Planning Eng.	343.00	HR	12,039	0	0	0	12,039	35.10
Accountants	686.00	HR	13,878	0	0	0	13,878	20.23
Operations Managers	343.00	HR	12,700	0	0	0	12,700	37.03
Clerks, Typists, Bookkeepers & Receptionist	343.00	HR	8,930	0	0	0	8,930	26.03
Air Fare (Round Trip)	171.00	EA	0	0	0	85,500	85,500	500.00
Per Diem & Lodging	343.00	DAY	0	0	0	45,619	45,619	133.00
Car Rental (Air Port to Site)	343.00	DAY	0	0	0	18,865	18,865	55.00
TOTAL Home Office Labor Requirements	171.43	WKS	295,328	0	0	149,984	445,312	2597.66
Field Equipment Requirements								
Trailer: Contractor	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Contracting Officer	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Storage	80.00	MO	0	0	14,430	0	14,430	180.37
Furniture Rental	160.00	MO	0	0	32,583	0	32,583	203.65
Telephone System Rental	160.00	MO	0	0	29,790	0	29,790	186.19
Sanitary Facility: Temporary	160.00	MO	0	0	16,757	0	16,757	104.73
Portable Radios (4 Ea)	160.00	WKS	0	0	9,310	0	9,310	58.18
Personal Computer	160.00	MO	0	0	20,481	0	20,481	128.01
Printer for PC	160.00	MO	0	0	12,102	0	12,102	75.64
Copy Machine	160.00	MO	0	0	30,721	0	30,721	192.01
Fax Machine	160.00	MO	0	0	3,724	0	3,724	23.27

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	9,652	0	0	9,652	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	59,588	0	0	59,588	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	12,813	0	0	12,813	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	74,567	0	0	74,567	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	20571	HR	0	51,684	0	0	51,684	2.51
TOTAL Field Equipment Requirements	40.00	MO	0	208,305	224,824	0	433,129	10828.23
Field Support Utilities								
Electricity	80.00	MO	0	0	0	15,200	15,200	190.00
Telephone (2 Lines)	80.00	MO	0	0	0	20,000	20,000	250.00
Bottled Water Service	343.00	WKS	0	0	0	15,435	15,435	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	80.00	MO	0	0	0	33,200	33,200	415.00
TOTAL Field Support Utilities	171.43	WKS	0	0	0	83,835	83,835	489.04
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	80.00	WK	0	0	3,258	0	3,258	40.73
Water Kegs (5 Gallon)	43.00	EA	0	0	998	0	998	23.22
Water Cups (Conical)	3429.00	BOX	0	0	15,762	0	15,762	4.60
Co2 Extinguisher (10Lb)	29.00	EA	0	0	4,759	0	4,759	164.11
Video Tape	171.00	EA	0	0	895	0	895	5.24
Camera Film and Development	40.00	MO	0	0	1,396	0	1,396	34.91
TOTAL Field Support Stores/Supplies	171.43	WKS	0	0	27,069	0	27,069	157.91
TOTAL Construction Management			5,257,423	208,305	251,894	1,064,593	6,782,215	
TOTAL Construction Management			5,257,423	208,305	251,894	1,064,593	6,782,215	
TOTAL Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	5.00	EA	0	0	0	425,000	425,000	85000.00
Long Arm Purchase	3.00	EA	0	0	0	234,000	234,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	240.00	HR	8,614	0	0	0	8,614	35.89
Dredge Engineer	120.00	HR	5,649	0	0	0	5,649	47.08
Oiler	120.00	HR	4,403	0	0	0	4,403	36.69
Excavator Dredge Operator	120.00	HR	6,514	0	0	0	6,514	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	120.00	HR	0	3,494	0	0	3,494	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	120.00	HR	0	857	0	0	857	7.14
SMALL TOOLS	120.00	HR	0	201	0	0	201	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	120.00	HR	0	876	0	0	876	7.30
Command/Control System	120.00	HR	0	1,917	0	0	1,917	15.98
TOTAL Shallow Dredge Crew	3.00	HR	25,180	7,345	0	0	32,525	10841.80
Deep Dredge Crew								
Deckhand for Dredge	240.00	HR	8,614	0	0	0	8,614	35.89
Dredge Engineer	120.00	HR	5,649	0	0	0	5,649	47.08
Oiler	120.00	HR	4,403	0	0	0	4,403	36.69
Excavator Dredge Operator	120.00	HR	6,514	0	0	0	6,514	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	120.00	HR	0	5,788	0	0	5,788	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	120.00	HR	0	857	0	0	857	7.14
SMALL TOOLS	120.00	HR	0	201	0	0	201	1.67

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	120.00	HR	0	1,267	0	0	1,267	10.56
Command/Control System	120.00	HR	0	1,917	0	0	1,917	15.98
TOTAL Deep Dredge Crew	3.00	CRW	25,180	10,030	0	0	35,210	11736.57
North Barge Crew Rate								
Deckhand for Tug	120.00	HR	4,183	0	0	0	4,183	34.86
Boat Captain	120.00	HR	4,939	0	0	0	4,939	41.16
500 TO 800 Hp TUG BOAT	120.00	HR	0	8,138	0	0	8,138	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	120.00	HR	0	1,897	0	0	1,897	15.80
TOTAL North Barge Crew Rate	3.00	CRW	9,122	10,035	0	0	19,157	6385.58
South Barge Crew Rate								
Deckhand for Tug	80.00	HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00	HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00	HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00	HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	2.00	CRW	6,081	13,186	0	0	19,267	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.48
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			127,953	96,942	0	0	224,896	
TOTAL Equipment Mobilization	1.00	EA	127,953	96,942	0	0	224,896	224895.65

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	480.00	HR	0	13,978	0	0	13,978	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	480.00	HR	0	3,503	0	0	3,503	7.30
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Shallow Dredge Crew	3.00	CRW	100,720	29,381	0	0	130,102	43367.21
Deep Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	480.00	HR	0	23,150	0	0	23,150	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	480.00	HR	0	5,068	0	0	5,068	10.56
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Deep Dredge Crew	3.00	HR	100,720	40,118	0	0	140,839	46946.28
North Barge Crew Rate								
Deckhand for Tug	480.00	HR	16,732	0	0	0	16,732	34.86
Boat Captain	480.00	HR	19,756	0	0	0	19,756	41.16
500 TO 800 Hp TUG BOAT	480.00	HR	0	32,553	0	0	32,553	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	480.00	HR	0	7,586	0	0	7,586	15.80

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	3.00	CRW	36,488	40,139	0	0	76,627	25542.33
South Barge Crew Rate								
Deckhand for Tug	320.00	HR	11,155	0	0	0	11,155	34.86
Boat Captain	320.00	HR	13,171	0	0	0	13,171	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	320.00	HR	0	42,786	0	0	42,786	133.70
DREDGE BARGE, 1000 TON	320.00	HR	0	9,958	0	0	9,958	31.12
TOTAL South Barge Crew Rate	2.00	CRW	24,325	52,744	0	0	77,069	38534.38
Spare Tug Crew Rate								
Spare Tug Crew	320.00	HR	27,631	21,702	0	0	49,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	27,631	21,702	0	0	49,333	24666.44
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	40.00	HR	15,432	20,090	0	0	35,523	888.06
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	40.00	HR	15,432	32,604	0	0	48,037	1200.92

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Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Removal 3/10/Select								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 3/10/10 (d)								
Labor/Equipment								
Chemist	15130	HR	1,048,994	0	0	0	1,048,994	69.33
Chemist, Jr.	15130	HR	925,393	0	0	0	925,393	61.16
Sampling Technician	15130	HR	644,184	0	0	0	644,184	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15130	HR	0	720,313	0	0	720,313	47.61
TOTAL Labor/Equipment	15130	HR	2,618,572	720,313	0	0	3,338,884	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22695	EA	0	0	6,013,531	0	6,013,531	264.97
Cesium - 137/Beryllium -7	7565.00	EA	0	0	835,213	0	835,213	110.40
Organic Carbon	2270.00	EA	0	0	167,079	0	167,079	73.60
Cation Exchange Capacity	2270.00	EA	0	0	167,079	0	167,079	73.60
TOTAL Analytical	7565.00	EA	0	0	7,182,903	0	7,182,903	949.49
TOTAL Sediment Inventory 3/10/10 (d)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
Geophysical Surveys 3/10/10 (d)								
Labor/Equipment								
Chemist	500.00	HR	34,666	0	0	0	34,666	69.33
Survey Crew	50.00	DAY	205,436	0	0	0	205,436	4108.72
Post Processing	87.50	HR	10,111	0	0	0	10,111	115.56
Per Diem	50.00	DAY	0	0	19,873	0	19,873	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	500.00	HR	253,808	0	19,873	0	273,681	547.36
TOTAL Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,379,880	720,313	7,217,496	10,500,000	21,817,689	21817689.02
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	40.00	MON	0	0	23,351	0	23,351	583.79
TOTAL Health & Safety Equipment	40.00	MO	0	0	23,351	0	23,351	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25) Unit Measure Of	343.00	EA	0	0	65,061	0	65,061	189.68
Boot Covers, Tyvek (Bag Of 10Pr) Unit Measure Of	858.00	EA	0	0	11,482	0	11,482	13.38
Gloves, Latex (Box Of 100) (Single Hand) Unit Measure Of	42.86	EA	0	0	604	0	604	14.10
Pvc/Nitrile Blend (Package Of 12 Pr) Unit Measure	42.86	EA	0	0	2,580	0	2,580	60.21
TOTAL Health & Safety Stores	171.43	WKS	0	0	82,542	0	82,542	481.50

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	20571	HR	1,229,828	0	0	0	1,229,828	59.78
Industrial Hygiene Technician	20571	HR	793,437	0	0	0	793,437	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1028.57	MDY	0	0	0	75,240	75,240	73.15
Air Fare (Round Trip)	57.00	EA	0	0	0	28,500	28,500	500.00
TOTAL Health & Safety Labor			2,023,265	0	0	103,740	2,127,005	
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn,trailer,8'x36',2 showers	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety Decon Trailer	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements								
Project Manager	10286	HR	939,231	0	0	0	939,231	91.31
General Superintendents (South)	10286	HR	539,141	0	0	0	539,141	52.42
General Superintendents (North)	10286	HR	539,141	0	0	0	539,141	52.42
Engineers, Project	10286	HR	656,173	0	0	0	656,173	63.79
Chemist	10286	HR	563,737	0	0	0	563,737	54.81
Industrial Hygiene Technician	10286	HR	396,719	0	0	0	396,719	38.57
Engineers, Quality Control	10286	HR	499,270	0	0	0	499,270	48.54
Schedulers	10286	HR	499,270	0	0	0	499,270	48.54
Clerks, Typists, Bookkeepers & Receptionist	8228.54	HR	214,228	0	0	0	214,228	26.03
Janitors	8228.54	HR	69,180	0	0	0	69,180	8.41
Per Diem	8228.54	MDY	0	0	0	601,918	601,918	73.15
8men/10hr/day = .8 multiplier								
Air Fare (Round Trip)	457.71	EA	0	0	0	228,856	228,856	500.00
8 men/3wks = 2.67 multiplier								
TOTAL Field Office Labor Requirements			4,916,091	0	0	830,774	5,746,865	
Home Office Labor Requirements								
Program Managers	686.00	HR	64,825	0	0	0	64,825	94.50
Operations Managers	1371.00	HR	50,764	0	0	0	50,764	37.03
Certified Industrial Hygienist	343.00	HR	23,482	0	0	0	23,482	68.46
Contract Administrators	686.00	HR	25,149	0	0	0	25,149	36.66
Purchasing Agents, Chief	1371.00	HR	50,262	0	0	0	50,262	36.66
Engineers, Quality Control	686.00	HR	33,299	0	0	0	33,299	48.54
Chief Scheduler & Planning Eng.	343.00	HR	12,039	0	0	0	12,039	35.10
Accountants	686.00	HR	13,878	0	0	0	13,878	20.23
Operations Managers	343.00	HR	12,700	0	0	0	12,700	37.03
Clerks, Typists, Bookkeepers & Receptionist	343.00	HR	8,930	0	0	0	8,930	26.03
Air Fare (Round Trip)	171.00	EA	0	0	0	85,500	85,500	500.00
Per Diem & Lodging	343.00	DAY	0	0	0	45,619	45,619	133.00
Car Rental (Air Port to Site)	343.00	DAY	0	0	0	18,865	18,865	55.00
TOTAL Home Office Labor Requirements	171.43	WKS	295,328	0	0	149,984	445,312	2597.66
Field Equipment Requirements								
Trailer: Contractor	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Contracting Officer	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Storage	80.00	MO	0	0	14,430	0	14,430	180.37
Furniture Rental	160.00	MO	0	0	32,583	0	32,583	203.65
Telephone System Rental	160.00	MO	0	0	29,790	0	29,790	186.19
Sanitary Facility: Temporary	160.00	MO	0	0	16,757	0	16,757	104.73
Portable Radios (4 Ea)	160.00	WKS	0	0	9,310	0	9,310	58.18
Personal Computer	160.00	MO	0	0	20,481	0	20,481	128.01
Printer for PC	160.00	MO	0	0	12,102	0	12,102	75.64
Copy Machine	160.00	MO	0	0	30,721	0	30,721	192.01
Fax Machine	160.00	MO	0	0	3,724	0	3,724	23.27

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	9,652	0	0	9,652	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	59,588	0	0	59,588	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	12,813	0	0	12,813	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	74,567	0	0	74,567	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	20571	HR	0	51,684	0	0	51,684	2.51
TOTAL Field Equipment Requirements	40.00	MO	0	208,305	224,824	0	433,129	10828.23
Field Support Utilities								
Electricity	80.00	MO	0	0	0	15,200	15,200	190.00
Telephone (2 Lines)	80.00	MO	0	0	0	20,000	20,000	250.00
Bottled Water Service	343.00	WKS	0	0	0	15,435	15,435	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	80.00	MO	0	0	0	33,200	33,200	415.00
TOTAL Field Support Utilities	171.43	WKS	0	0	0	83,835	83,835	489.04
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	80.00	WK	0	0	3,258	0	3,258	40.73
Water Kegs (5 Gallon)	43.00	EA	0	0	998	0	998	23.22
Water Cups (Conical)	3429.00	BOX	0	0	15,762	0	15,762	4.60
Co2 Extinguisher (10Lb)	29.00	EA	0	0	4,759	0	4,759	164.11
Video Tape	171.00	EA	0	0	895	0	895	5.24
Camera Film and Development	40.00	MO	0	0	1,396	0	1,396	34.91
TOTAL Field Support Stores/Supplies	171.43	WKS	0	0	27,069	0	27,069	157.91
TOTAL Construction Management			5,257,423	208,305	251,894	1,064,593	6,782,215	
TOTAL Construction Management			5,257,423	208,305	251,894	1,064,593	6,782,215	
TOTAL Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	5.00	EA	0	0	0	425,000	425,000	85000.00
Long Arm Purchase	3.00	EA	0	0	0	234,000	234,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	240.00	HR	8,614	0	0	0	8,614	35.89
Dredge Engineer	120.00	HR	5,649	0	0	0	5,649	47.08
Oiler	120.00	HR	4,403	0	0	0	4,403	36.69
Excavator Dredge Operator	120.00	HR	6,514	0	0	0	6,514	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	120.00	HR	0	3,494	0	0	3,494	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	120.00	HR	0	857	0	0	857	7.14
SMALL TOOLS	120.00	HR	0	201	0	0	201	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	120.00	HR	0	876	0	0	876	7.30
Command/Control System	120.00	HR	0	1,917	0	0	1,917	15.98
TOTAL Shallow Dredge Crew	3.00	HR	25,180	7,345	0	0	32,525	10841.80
Deep Dredge Crew								
Deckhand for Dredge	240.00	HR	8,614	0	0	0	8,614	35.89
Dredge Engineer	120.00	HR	5,649	0	0	0	5,649	47.08
Oiler	120.00	HR	4,403	0	0	0	4,403	36.69
Excavator Dredge Operator	120.00	HR	6,514	0	0	0	6,514	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	120.00	HR	0	5,788	0	0	5,788	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	120.00	HR	0	857	0	0	857	7.14
SMALL TOOLS	120.00	HR	0	201	0	0	201	1.67

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	120.00	HR	0	1,267	0	0	1,267	10.56
Command/Control System	120.00	HR	0	1,917	0	0	1,917	15.98
TOTAL Deep Dredge Crew	3.00	CRW	25,180	10,030	0	0	35,210	11736.57
North Barge Crew Rate								
Deckhand for Tug	120.00	HR	4,183	0	0	0	4,183	34.86
Boat Captain	120.00	HR	4,939	0	0	0	4,939	41.16
500 TO 800 Hp TUG BOAT	120.00	HR	0	8,138	0	0	8,138	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	120.00	HR	0	1,897	0	0	1,897	15.80
TOTAL North Barge Crew Rate	3.00	CRW	9,122	10,035	0	0	19,157	6385.58
South Barge Crew Rate								
Deckhand for Tug	80.00	HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00	HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00	HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00	HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	2.00	CRW	6,081	13,186	0	0	19,267	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.48
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			127,953	96,942	0	0	224,896	
TOTAL Equipment Mobilization	1.00	EA	127,953	96,942	0	0	224,896	224895.65

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	480.00	HR	0	13,978	0	0	13,978	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	480.00	HR	0	3,503	0	0	3,503	7.30
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Shallow Dredge Crew	3.00	CRW	100,720	29,381	0	0	130,102	43367.21
Deep Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	480.00	HR	0	23,150	0	0	23,150	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	480.00	HR	0	5,068	0	0	5,068	10.56
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Deep Dredge Crew	3.00	HR	100,720	40,118	0	0	140,839	46946.28
North Barge Crew Rate								
Deckhand for Tug	480.00	HR	16,732	0	0	0	16,732	34.86
Boat Captain	480.00	HR	19,756	0	0	0	19,756	41.16
500 TO 800 Hp TUG BOAT	480.00	HR	0	32,553	0	0	32,553	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	480.00	HR	0	7,586	0	0	7,586	15.80

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	3.00	CRW	36,488	40,139	0	0	76,627	25542.33
South Barge Crew Rate								
Deckhand for Tug	320.00	HR	11,155	0	0	0	11,155	34.86
Boat Captain	320.00	HR	13,171	0	0	0	13,171	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	320.00	HR	0	42,786	0	0	42,786	133.70
DREDGE BARGE, 1000 TON	320.00	HR	0	9,958	0	0	9,958	31.12
TOTAL South Barge Crew Rate	2.00	CRW	24,325	52,744	0	0	77,069	38534.38
Spare Tug Crew Rate								
Spare Tug Crew	320.00	HR	27,631	21,702	0	0	49,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	27,631	21,702	0	0	49,333	24666.44
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	40.00	HR	15,432	20,090	0	0	35,523	888.06
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	40.00	HR	15,432	32,604	0	0	48,037	1200.92

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	40.00	HR	17,138	14,430	0	0	31,568	789.20
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL South Truck Crew	40.00	HR	17,138	17,538	0	0	34,676	866.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	40.00	HR	37,446	17,180	0	0	54,626	1365.66
TOTAL Equipment Mobilization			392,471	285,927	0	0	678,399	
Process Equipment								
Master Mechanic	1280.00	HR	63,029	0	0	0	63,029	49.24
Outside Equip. Operators, Heavy	1280.00	HR	60,431	0	0	0	60,431	47.21
TOTAL Process Equipment	160.00	HR	123,460	0	0	0	123,460	771.62
TOTAL Process Equipment Start Up			123,460	0	0	0	123,460	
TOTAL Annual Remobilization & Startup	1.00	EA	515,931	285,927	0	0	801,858	801858.45
Annual Demobilization								
Shallow Dredge Crew								
Deckhand for Dredge	480.00	HR	17,227	0	0	0	17,227	35.89
Dredge Engineer	240.00	HR	11,298	0	0	0	11,298	47.08
Oiler	240.00	HR	8,806	0	0	0	8,806	36.69
Excavator Dredge Operator	240.00	HR	13,029	0	0	0	13,029	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	240.00	HR	0	6,989	0	0	6,989	29.12

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	240.00	HR	0	1,715	0	0	1,715	7.14
SMALL TOOLS	240.00	HR	0	401	0	0	401	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	240.00	HR	0	1,752	0	0	1,752	7.30
Command/Control System	240.00	HR	0	3,834	0	0	3,834	15.98
TOTAL Shallow Dredge Crew	3.00	CRW	50,360	14,691	0	0	65,051	21683.61
Deep Dredge Crew								
Deckhand for Dredge	480.00	HR	17,227	0	0	0	17,227	35.89
Dredge Engineer	240.00	HR	11,298	0	0	0	11,298	47.08
Oiler	240.00	HR	8,806	0	0	0	8,806	36.69
Excavator Dredge Operator	240.00	HR	13,029	0	0	0	13,029	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	240.00	HR	0	11,575	0	0	11,575	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	240.00	HR	0	1,715	0	0	1,715	7.14
SMALL TOOLS	240.00	HR	0	401	0	0	401	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	240.00	HR	0	2,534	0	0	2,534	10.56
Command/Control System	240.00	HR	0	3,834	0	0	3,834	15.98
TOTAL Deep Dredge Crew	3.00	CRW	50,360	20,059	0	0	70,419	23473.14
North Barge Crew Rate								
Deckhand for Tug	240.00	HR	8,366	0	0	0	8,366	34.86
Boat Captain	240.00	HR	9,878	0	0	0	9,878	41.16
500 TO 800 Hp TUG BOAT	240.00	HR	0	16,277	0	0	16,277	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	240.00	HR	0	3,793	0	0	3,793	15.80
TOTAL North Barge Crew Rate	3.00	CRW	18,244	20,070	0	0	38,314	12771.17
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	2.00	CRW	12,163	26,372	0	0	38,534	19267.19

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate								
Spare Tug Crew	160.00	HR	13,815	10,851	0	0	24,666	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	13,815	10,851	0	0	24,666	12333.22
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00	HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00	HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00	HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00	HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00	HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization			247,529	193,885	0	0	441,414	
TOTAL Annual Demobilization	1.00	EA	247,529	193,885	0	0	441,414	441414.29
Final Demob Site Restoration								
Shallow Dredge Crew								
Deckhand for Dredge	120.00	HR	4,307	0	0	0	4,307	35.89
Dredge Engineer	60.00	HR	2,825	0	0	0	2,825	47.08
Oiler	60.00	HR	2,201	0	0	0	2,201	36.69
Excavator Dredge Operator	60.00	HR	3,257	0	0	0	3,257	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	60.00	HR	0	1,747	0	0	1,747	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	60.00	HR	0	429	0	0	429	7.14
SMALL TOOLS	60.00	HR	0	100	0	0	100	1.67
Environmental Bucket	60.00	HR	0	438	0	0	438	7.30
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	60.00	HR	0	959	0	0	959	15.98
TOTAL Shallow Dredge Crew	3.00	HR	12,590	3,673	0	0	16,263	5420.90
Deep Dredge Crew								
Deckhand for Dredge	120.00	HR	4,307	0	0	0	4,307	35.89
Dredge Engineer	60.00	HR	2,825	0	0	0	2,825	47.08
Oiler	60.00	HR	2,201	0	0	0	2,201	36.69
Excavator Dredge Operator	60.00	HR	3,257	0	0	0	3,257	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	60.00	HR	0	2,894	0	0	2,894	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	60.00	HR	0	429	0	0	429	7.14
SMALL TOOLS	60.00	HR	0	100	0	0	100	1.67
Environmental Bucket	60.00	HR	0	634	0	0	634	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of								

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.								
Command/Control System	60.00	HR	0	959	0	0	959	15.98
TOTAL Deep Dredge Crew	3.00	HR	12,590	5,015	0	0	17,605	5868.28
North Barge Crew Rate								
Deckhand for Tug	60.00	HR	2,091	0	0	0	2,091	34.86
Boat Captain	60.00	HR	2,469	0	0	0	2,469	41.16
500 TO 800 Hp TUG BOAT	60.00	HR	0	4,069	0	0	4,069	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	60.00	HR	0	948	0	0	948	15.80
TOTAL North Barge Crew Rate	3.00	HR	4,561	5,017	0	0	9,578	3192.79
South Barge Crew Rate								
Deckhand for Tug	40.00	HR	1,394	0	0	0	1,394	34.86
Boat Captain	40.00	HR	1,646	0	0	0	1,646	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	40.00	HR	0	5,348	0	0	5,348	133.70
DREDGE BARGE, 1000 TON	40.00	HR	0	1,245	0	0	1,245	31.12
TOTAL South Barge Crew Rate	2.00	HR	3,041	6,593	0	0	9,634	4816.80
Spare Tug Crew Rate								
Spare Tug Crew	40.00	HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00	HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew								
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00	HR	0	4,731	0	0	4,731	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	40.00	HR	0	292	0	0	292	7.30
TOTAL North Unloading Crew -	80.00	HR	3,858	5,023	0	0	8,881	111.01

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			63,977	48,471	0	0	112,448	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	63,977	48,471	0	500,000	612,448	612447.83
TOTAL Mobilization/Demobilization	1.00	EA	955,390	625,226	0	1,175,560	2,756,176	2756176.22

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket	107.25	HR	0	877	0	0	877	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Cover Building #2 This building is a rain cover for railroad cars.	5000.00	SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00	SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000	SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale								
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	- 0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL North Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61
Testing Laboratory								
Capital Costs					** OVERTIME **			
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	40.00	HR	2,602	0	0	0	2,602	65.04
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	204.80	HR	13,321	0	0	0	13,321	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Repair Road/Work Area	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	600.00	LF	31,977	0	0	103,488	135,465	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	100.00	LF	5,330	0	0	12,320	17,650	176.50
Hopper - Mechanized-200 CY	4.00	EA	0	0	0	197,120	197,120	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Storage Building #1 This building is a rain cover for material.	22500	SF	0	0	0	1,663,200	1,663,200	73.92
Cover Building #2 This building is a rain cover for railroad cars.	4000.00	SF	0	0	0	295,680	295,680	73.92
Concrete Slab and Hardstand	7500.00	SY	0	0	0	462,000	462,000	61.60
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,665	0	0	8,624	11,289	225.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.2
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL North Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	351,221	630,628	419,748	5,317,076	6,718,673	6718672.67
Dredging								
Deep Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	42714	HR	2,031,772	0	0	0	2,031,772	47.57
Dredge Engineer	21357	HR	1,332,772	0	0	0	1,332,772	62.40
Oiler	21357	HR	1,038,813	0	0	0	1,038,813	48.64
Excavator Dredge Operator	21357	HR	1,539,753	0	0	0	1,539,753	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	18306	HR	0	4,029,451	0	0	4,029,451	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	3051.01	HR	0	178,050	0	0	178,050	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	21357	HR	0	171,257	0	0	171,257	8.02
SMALL TOOLS	21357	HR	0	39,758	0	0	39,758	1.86
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	21357	HR	0	252,752	0	0	252,752	11.83
Command/Control System	21357	HR	0	412,827	0	0	412,827	19.33
Per Diem	10679	MDY	0	0	0	945,173	945,173	88.51
TOTAL Dredging Reach 1	1331363	BCY	5,943,111	5,084,095	0	945,173	11,972,379	8.99
TOTAL Reach #1	1331363	BCY	5,943,111	5,084,095	0	945,173	11,972,379	8.99

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	16068	HR	764,323	0	0	0	764,323	47.57
Dredge Engineer	8034.21	HR	501,369	0	0	0	501,369	62.40
Oiler	8034.21	HR	390,786	0	0	0	390,786	48.64
Excavator Dredge Operator	8034.21	HR	579,232	0	0	0	579,232	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	6886.47	HR	0	1,515,820	0	0	1,515,820	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	1147.74	HR	0	66,980	0	0	66,980	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	8034.21	HR	0	64,424	0	0	64,424	8.02
SMALL TOOLS	8034.21	HR	0	14,956	0	0	14,956	1.86
Command/Control System	8034.21	HR	0	155,299	0	0	155,299	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	8034.21	HR	0	95,081	0	0	95,081	11.83
Per Diem	4017.11	MDY	0	0	0	355,560	355,560	88.51
TOTAL Dredging Reach 2	500839	BCY	2,235,710	1,912,561	0	355,560	4,503,831	8.99
TOTAL Reach #2	500839	BCY	2,235,710	1,912,561	0	355,560	4,503,831	8.99
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	6313.49	HR	300,312	0	0	0	300,312	47.57
Dredge Engineer	3156.74	HR	196,994	0	0	0	196,994	62.40
Oiler	3156.74	HR	153,545	0	0	0	153,545	48.64
Excavator Dredge Operator	3156.74	HR	227,588	0	0	0	227,588	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	2705.78	HR	0	595,585	0	0	595,585	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	450.96	HR	0	26,317	0	0	26,317	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3156.74	HR	0	25,313	0	0	25,313	8.02
SMALL TOOLS	3156.74	HR	0	5,877	0	0	5,877	1.86
Command/Control System	3156.74	HR	0	61,019	0	0	61,019	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3156.74	HR	0	37,359	0	0	37,359	11.83
Per Diem	1578.37	MDY	0	0	0	139,704	139,704	88.51
TOTAL Dredging Reach 3	196786	BCY	878,439	751,470	0	139,704	1,769,612	8.99
TOTAL Reach #3	196786	BCY	878,439	751,470	0	139,704	1,769,612	8.99
TOTAL Deep Draft Dredging	2028988	BCY	9,057,260	7,748,126	0	1,440,437	18,245,823	8.99

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Shallow Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	22140	HR	1,053,120	0	0	0	1,053,120	47.57
Dredge Engineer	11070	HR	690,810	0	0	0	690,810	62.40
Oiler	11070	HR	538,444	0	0	0	538,444	48.64
Excavator Dredge Operator	11070	HR	798,094	0	0	0	798,094	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	9488.51	HR	0	1,279,437	0	0	1,279,437	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1581.42	HR	0	55,723	0	0	55,723	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	11070	HR	0	88,767	0	0	88,767	8.02
SMALL TOOLS	11070	HR	0	20,608	0	0	20,608	1.86
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	11070	HR	0	90,559	0	0	90,559	8.18
Command/Control System	11070	HR	0	213,979	0	0	213,979	19.33
Per Diem	5534.96	MDY	0	0	0	489,908	489,908	88.51
TOTAL Dredging Reach 1	230027	BCY	3,080,469	1,749,072	0	489,908	5,319,448	23.13
TOTAL Reach 1	230027	BCY	3,080,469	1,749,072	0	489,908	5,319,448	23.13
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	2454.15	HR	116,736	0	0	0	116,736	47.57
Dredge Engineer	1227.08	HR	76,575	0	0	0	76,575	62.40
Oiler	1227.08	HR	59,685	0	0	0	59,685	48.64
Excavator Dredge Operator	1227.08	HR	88,467	0	0	0	88,467	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1051.78	HR	0	141,823	0	0	141,823	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	175.30	HR	0	6,177	0	0	6,177	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	1227.08	HR	0	9,840	0	0	9,840	8.02
SMALL TOOLS	1227.08	HR	0	2,284	0	0	2,284	1.86
Command/Control System	1227.08	HR	0	23,719	0	0	23,719	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	1227.08	HR	0	10,038	0	0	10,038	8.18
Per Diem	613.54	MDY	0	0	0	54,305	54,305	88.51
TOTAL Dredging Reach 2	25498	BCY	341,463	193,881	0	54,305	589,649	23.13
TOTAL Reach 2	25498	BCY	341,463	193,881	0	54,305	589,649	23.13

MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	30166	HR	1,434,900	0	0	0	1,434,900	47.57
Dredge Engineer	15083	HR	941,245	0	0	0	941,245	62.40
Oiler	15083	HR	733,642	0	0	0	733,642	48.64
Excavator Dredge Operator	15083	HR	1,087,421	0	0	0	1,087,421	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12928	HR	0	1,743,262	0	0	1,743,262	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2154.72	HR	0	75,923	0	0	75,923	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	15083	HR	0	120,947	0	0	120,947	8.02
SMALL TOOLS	15083	HR	0	28,078	0	0	28,078	1.86
Command/Control System	15083	HR	0	291,551	0	0	291,551	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	15083	HR	0	123,388	0	0	123,388	8.18
Per Diem	7541.51	MDY	0	0	0	667,510	667,510	88.51
TOTAL Dredging Reach 3	313417	BCY	4,197,209	2,383,150	0	667,510	7,247,869	23.13
TOTAL Reach 3	313417	BCY	4,197,209	2,383,150	0	667,510	7,247,869	23.13
TOTAL Shallow Draft Dredging	568942	BCY	7,619,141	4,326,102	0	1,211,723	13,156,967	23.13
Land Locked Area								
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	4315.17	HR	205,258	0	0	0	205,258	47.57
Dredge Engineer	2157.58	HR	134,642	0	0	0	134,642	62.40
Oiler	2157.58	HR	104,945	0	0	0	104,945	48.64
Excavator Dredge Operator	2157.58	HR	155,552	0	0	0	155,552	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1849.36	HR	0	249,369	0	0	249,369	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	308.23	HR	0	10,861	0	0	10,861	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	2157.58	HR	0	5,336	0	0	5,336	2.47
SMALL TOOLS	2157.58	HR	0	4,017	0	0	4,017	1.86
Command/Control System	2157.58	HR	0	41,706	0	0	41,706	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2157.58	MDY	0	17,650	0	0	17,650	8.18
Per Diem	1078.79	MDY	0	0	0	95,485	95,485	88.51
TOTAL Dredging Reach 2	53800	BCY	600,399	328,938	0	95,485	1,024,822	19.05

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shallow Draft Dredging	53796	BCY	600,399	328,938	0	95,485	1,024,822	19.05
Reach 2					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	6472.75	HR	0	118,888	0	0	118,888	18.37
Spare Tug Crew	2157.58	HR	225,421	93,587	0	0	319,009	147.85
Spare Tug Crew Per Diem days	308.00	MDY	0	0	0	27,262	27,262	88.51
TOTAL Reach 2	53800	BCY	225,421	212,475	0	27,262	465,158	8.65
TOTAL Small Barging to Transfer Site			225,421	212,475	0	27,262	465,158	
Transfer of Mat'l to Large barge					** OVERTIME **			
Oiler	1087.86	HR	54,803	0	0	0	54,803	50.38
Excavator Dredge Operator	1087.86	HR	81,282	0	0	0	81,282	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	870.29	HR	0	120,334	0	0	120,334	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	217.57	HR	0	7,666	0	0	7,666	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	1087.86	HR	0	2,752	0	0	2,752	2.53
PUMP SUBM, 4"D, SKID W/P-UNIT INCLUDES POWER UNIT	1087.86	HR	0	5,751	0	0	5,751	5.29
SMALL TOOLS	1087.86	HR	0	2,098	0	0	2,098	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	1087.86	HR	0	9,193	0	0	9,193	8.45
Per Diem	217.57	MDY	0	0	0	19,258	19,258	88.51
TOTAL Transfer of Mat'l to Large barge	53800	BCY	136,085	147,794	0	19,258	303,137	5.63
TOTAL Transfer of Mat'l to 200T Barge			136,085	147,794	0	19,258	303,137	
Mobilization								
Mob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Clearing and Grubbing	2.00	AC	0	0	0	12,100	12,100	6050.00
Mob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Mob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40	2.00	EA	0	0	0	60,984	60,984	30492.00

HTRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
hours = $7200 . Total mob = $25,200 x 2 barges = $50,400							
Mob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00 EA	0	0	0	91,476	91,476	30492.00
Mob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00 EA	0	0	0	5,808	5,808	5808.00
TOTAL Mobilization		0	0	0	176,176	176,176	
Demobilization							
Demob Dozer with Barge/Tug	8.00 HR	0	0	0	1,936	1,936	242.00
Demob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00 HR	0	0	0	3,872	3,872	242.00
Demob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00 EA	0	0	0	60,984	60,984	30492.00
Demob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00 EA	0	0	0	91,476	91,476	30492.00
Demob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00 EA	0	0	0	5,808	5,808	5808.00

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Demobilization			0	0	0	164,076	164,076	
TOTAL Mobilization/Demobilization			0	0	0	340,252	340,252	
TOTAL Land Locked Area	53796	BCY	961,905	689,208	0	482,257	2,133,370	39.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	19800	HR	0	896,872	0	0	896,872	45.30
SMALL TOOLS	1979.99	HR	0	3,819	0	0	3,819	1.93
Deckhand for Tug	19800	HR	946,487	0	0	0	946,487	47.80
Boat Captain	19800	HR	1,122,099	0	0	0	1,122,099	56.67
TOTAL Shallow Turbidity Control	2.20	CRW	2,068,587	900,690	14,081	0	2,983,358	1356071.66
Deep Turbidity Control					** OVERTIME **			
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	4800.00	LF	0	0	87,863	0	87,863	18.30
Anchoring System	96.00	EA	0	0	32,442	0	32,442	337.93
Mooring Buoy Light w/Photocell	48.00	EA	0	0	8,448	0	8,448	176.01
Freight to Site	2.40	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	21600	HR	0	978,405	0	0	978,405	45.30
SMALL TOOLS	2159.99	HR	0	4,166	0	0	4,166	1.93
Deckhand for Tug	21600	HR	1,032,532	0	0	0	1,032,532	47.80
Boat Captain	21600	HR	1,224,108	0	0	0	1,224,108	56.67
TOTAL Deep Turbidity Control	2.40	CRW	2,256,640	982,571	128,753	0	3,367,964	1403318.53
TOTAL Turbidity Control			4,325,227	1,883,262	142,834	0	6,351,322	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	4,325,227	1,883,262	142,834	0	6,351,322	6351322.12
TOTAL Dredging	2651730	BCY	21,963,533	14,646,697	142,834	3,134,417	39,887,482	15.04
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	12012	HR	832,817	0	0	0	832,817	69.33
Sampling Technician	12012	HR	511,430	0	0	0	511,430	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	12012	HR	0	163,423	0	0	163,423	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,344,247	164,770	0	0	1,509,017	829.13

Tue 28 Nov 2000 TAMS Consultants, Inc. TIME 18:35:08
Eff. Date 04/01/00 PROJECT HUD00S: HUDSON RIVER PCB 2000 R-11/21/00 - Dredging of Hudson River to
DETAILED ESTIMATE Hudson River PCB DETAIL PAGE 175
42. Alt Removal 3/10/Select

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	2496.00	EA	0	0	661,369	0	661,369	264.97
Total Suspended Solids	2496.00	EA	0	0	91,857	0	91,857	36.80
Fraction Organic Carbon On TSS	2496.00	EA	0	0	183,714	0	183,714	73.60
TOTAL Analytical	416.00	EA	0	0	936,940	0	936,940	2252.26
TOTAL Weekly Field Sampling	52.00	WKS	1,344,247	164,770	945,772	0	2,454,789	47207.49
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores- 3/10/10 (dg)								
Chemist	3090.00	HR	214,236	0	0	0	214,236	69.33
Chemist, Jr.	3090.00	HR	188,993	0	0	0	188,993	61.16
Sampling Technician	3090.00	HR	131,562	0	0	0	131,562	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	3090.00	HR	0	147,109	0	0	147,109	47.61
TOTAL Labor/Equipment	3090.00	HR	534,791	147,109	0	0	681,900	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	3893.00	EA	0	0	114,615	0	114,615	29.44
Total PCB's	973.00	EA	0	0	257,817	0	257,817	264.97
Cesium - 137	973.00	EA	0	0	107,424	0	107,424	110.40
Organic Carbon	973.00	EA	0	0	71,616	0	71,616	73.60

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical	3090.00	EA	0	0	551,472	0	551,472	178.47
TOTAL Confirmation Cores- 3/10/10 (dg)	309.00	DAY	534,791	147,109	566,193	0	1,248,093	4039.14
Confirmation Cores- 3/10/10 (bk)								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Chemist, Jr.	1170.00	HR	71,560	0	0	0	71,560	61.16
Sampling Technician	1170.00	HR	49,815	0	0	0	49,815	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	1170.00	HR	0	55,702	0	0	55,702	47.61
TOTAL Labor/Equipment	1170.00	HR	202,494	55,702	0	0	258,195	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	1474.00	EA	0	0	43,396	0	43,396	29.44
Total PCB's	369.00	EA	0	0	97,775	0	97,775	264.97
Organic Carbon	369.00	EA	0	0	27,160	0	27,160	73.60
TOTAL Analytical	1170.00	EA	0	0	168,331	0	168,331	143.87
TOTAL Confirmation Cores- 3/10/10 (bk)	117.00	DAY	202,494	55,702	183,051	0	441,247	3771.34
Geophysical Surveys 3/10/10 (dg)								
Chemist	860.00	HR	59,626	0	0	0	59,626	69.33
Survey Crew	86.00	DAY	353,350	0	0	0	353,350	4108.72
Post Processing	150.50	HR	17,391	0	0	0	17,391	115.56
Per Diem	86.00	DAY	0	0	34,181	0	34,181	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	860.00	HR	433,962	0	34,181	0	468,143	544.35
TOTAL Geophysical Surveys 3/10/10 (dg)	86.00	DAY	433,962	0	34,181	0	468,143	5443.53
TOTAL Fish Sample Analysis	5.00	EA	0	0	0	3,250,000	3,250,000	650000.00
Annual Reporting								
Project Manager	120.00	HR	13,862	0	0	0	13,862	115.51
Chemist	200.00	HR	13,866	0	0	0	13,866	69.33
Engineers, Quality Control	120.00	HR	7,368	0	0	0	7,368	61.40
Clerks, Typists, Bookkeepers & Receptionist	80.00	HR	2,635	0	0	0	2,635	32.93
Reproduction Operators	40.00	HR	844	0	0	0	844	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Lbr/Matls for Quarterly Report	5.00	WK	43,007	0	383	0	43,389	8677.87
Project Manager	240.00	HR	27,723	0	0	0	27,723	115.51
Chemist	400.00	HR	27,733	0	0	0	27,733	69.33
Engineers, Quality Control	240.00	HR	14,737	0	0	0	14,737	61.40
Clerks, Typists, Bookkeepers & Receptionist	160.00	HR	5,269	0	0	0	5,269	32.93
Reproduction Operators	80.00	HR	1,688	0	0	0	1,688	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	10.00	WK	81,582	0	383	0	81,965	8196.45
TOTAL Annual Reporting	5.00	YR	124,588	0	765	0	125,354	25070.78
TOTAL Testing and Monitoring (remed)	1.00	EA	3,932,628	526,065	1,888,946	3,250,000	9,597,639	9597639.12
Barging								
Barging to North - 1000T Hopper								
Reach 1					** OVERTIME **			
Spare Tug Crew	5501.63	HR	574,803	451,470	0	0	1,026,274	186.54
Spare Tug Crew Per Diem days	1100.00	MDY	0	0	0	97,363	97,363	88.51
DREDGE BARGE, 1000 TON	16505	HR	0	621,481	0	0	621,481	37.65
TOTAL Reach 1	320098	BCY	574,803	1,072,951	0	97,363	1,745,117	5.45
TOTAL Reach 1	320098	BCY	574,803	1,072,951	0	97,363	1,745,117	5.45
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 1000T Hopper	320098	BCY	574,803	1,072,951	0	97,363	1,745,117	5.45
Barging to North - 200T Deck								
Reach 1					** OVERTIME **			
Deckhand for Tug	11861	HR	566,968	0	0	0	566,968	47.80
Boat Captain	11861	HR	672,164	0	0	0	672,164	56.67
500 TO 800 Hp TUG BOAT	11861	HR	0	934,679	0	0	934,679	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	35582	HR	0	653,551	0	0	653,551	18.37
Per Diem for tug crew	2372.13	MDY	0	0	0	209,960	209,960	88.51
Spare Tug Crew	2965.16	HR	309,796	243,325	0	0	553,120	186.54
Spare Tug Crew Per Diem days	594.00	MDY	0	0	0	52,576	52,576	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	230027	BCY	1,548,929	1,831,555	0	262,536	3,643,020	15.84
TOTAL Reach 1	230027	BCY	1,548,929	1,831,555	0	262,536	3,643,020	15.84
Reach 2					** OVERTIME **			
Deckhand for Tug	4088.76	HR	195,453	0	0	0	195,453	47.80
Boat Captain	4088.76	HR	231,718	0	0	0	231,718	56.67
500 TO 800 Hp TUG BOAT	4088.76	HR	0	322,215	0	0	322,215	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	12266	HR	0	225,301	0	0	225,301	18.37
Per Diem	817.75	DAY	0	0	0	72,380	72,380	88.51
Spare Tug Crew	1022.19	HR	106,797	83,882	0	0	190,679	186.54
Spare Tug Crew Per Diem days	204.00	MDY	0	0	0	18,056	18,056	88.51
TOTAL Reach 2	79298	BCY	533,968	631,398	0	90,437	1,255,803	15.84
TOTAL Reach 2	79298	BCY	533,968	631,398	0	90,437	1,255,803	15.84
Reach 3					** OVERTIME **			
Deckhand for Tug	45249	HR	2,163,020	0	0	0	2,163,020	47.80
Boat Captain	45249	HR	2,564,349	0	0	0	2,564,349	56.67
500 TO 800 Hp TUG BOAT	45249	HR	0	3,565,862	0	0	3,565,862	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	75415	HR	0	1,385,188	0	0	1,385,188	18.37
Per Diem	6464.15	MDY	0	0	0	572,152	572,152	88.51
Spare Tug Crew	5027.67	HR	525,285	412,577	0	0	937,862	186.54
Spare Tug Crew Per Diem days	718.00	MDY	0	0	0	63,551	63,551	88.51
TOTAL Reach 3	313417	BCY	5,252,655	5,363,627	0	635,703	11,251,985	35.90
TOTAL Reach 3	313417	BCY	5,252,655	5,363,627	0	635,703	11,251,985	35.90
TOTAL Barging to North - 200T Deck	622742	BCY	7,335,551	7,826,580	0	988,676	16,150,807	25.93
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	34762	HR	1,661,707	0	0	0	1,661,707	47.80
Boat Captain	34762	HR	1,970,021	0	0	0	1,970,021	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	34762	HR	0	5,459,622	0	0	5,459,622	157.06
DREDGE BARGE, 1000 TON	104286	HR	0	3,926,809	0	0	3,926,809	37.65
Per Diem	6952.38	DAY	0	0	0	615,365	615,365	88.51
Spare Tug Crew	4345.24	HR	453,985	356,575	0	0	810,560	186.54
Spare Tug Crew Per Diem days	870.00	MDY	0	0	0	77,005	77,005	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	1011265	BCY	4,085,713	9,743,006	0	692,370	14,521,089	14.36
TOTAL Reach 1	1011265	BCY	4,085,713	9,743,006	0	692,370	14,521,089	14.36
Reach 2					** OVERTIME **			
Deckhand for Tug	17216	HR	822,977	0	0	0	822,977	47.80
Boat Captain	17216	HR	975,673	0	0	0	975,673	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	17216	HR	0	2,703,932	0	0	2,703,932	157.06
DREDGE BARGE, 1000 TON	51649	HR	0	1,944,791	0	0	1,944,791	37.65
Per Diem	3443.23	DAY	0	0	0	304,766	304,766	88.51
Spare Tug Crew	2152.02	HR	224,840	176,598	0	0	401,438	186.54
Spare Tug Crew Per Diem days	430.00	MDY	0	0	0	38,060	38,060	88.51
TOTAL Reach 2	500839	BCY	2,023,490	4,825,320	0	342,826	7,191,636	14.36
TOTAL Reach 2	500839	BCY	2,023,490	4,825,320	0	342,826	7,191,636	14.36
Reach 3					** OVERTIME **			
Deckhand for Tug	3382.23	HR	161,679	0	0	0	161,679	47.80
Boat Captain	3382.23	HR	191,677	0	0	0	191,677	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3382.23	HR	0	531,205	0	0	531,205	157.06
DREDGE BARGE, 1000 TON	16911	HR	0	636,778	0	0	636,778	37.65
Per Diem	676.45	DAY	0	0	0	59,873	59,873	88.51
Spare Tug Crew	845.56	HR	88,343	69,387	0	0	157,730	186.54
Spare Tug Crew Per Diem days	170.00	MDY	0	0	0	15,047	15,047	88.51
TOTAL Reach 3	196786	BCY	441,699	1,237,370	0	74,920	1,753,988	8.91
TOTAL Reach 3	196786	BCY	441,699	1,237,370	0	74,920	1,753,988	8.91
TOTAL Barging to South - 1000T Hopper	1708890	BCY	6,550,901	15,805,696	0	1,110,116	23,466,713	13.73
TOTAL Barging to South - 200T Deck	1.00	EA	0	0	0	0	0	0.00
TOTAL Canal/Lock Usage Fees			0	0	0	100,000	100,000	
TOTAL Barging	2651730	BCY	14,461,255	24,705,228	0	2,296,155	41,462,638	15.64

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Stabilization								
Transfer from Barge to Pugmil								
Unloading at Northern Facility					** OVERTIME **			
Outside Equip. Operators, Heavy	12201	HR	814,875	0	0	0	814,875	66.79
Master Mechanic	12201	HR	851,418	0	0	0	851,418	69.78
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12201	HR	0	1,763,752	0	0	1,763,752	144.55
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	12201	HR	0	107,798	0	0	107,798	8.83
TOTAL Unloading at Northern Facility	942840	BCY	1,666,293	1,871,551	0	0	3,537,843	3.75
TOTAL Unload Barge - North	942840	BCY	1,666,293	1,871,551	0	0	3,537,843	3.75
Unloading at Southern Facility					** OVERTIME **			
Master Mechanic	11057	HR	771,610	0	0	0	771,610	69.78
Outside Equip. Operators, Heavy	11057	HR	738,491	0	0	0	738,491	66.79
HYD EXCAV, CRWLR, 4.75 CY BKT	11057	HR	0	2,610,180	0	0	2,610,180	236.06
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	11057	HR	0	141,328	0	0	141,328	12.78
TOTAL Unloading at Southern Facility	1708890	BCY	1,510,101	2,751,507	0	0	4,261,608	2.49
TOTAL Unload Barge - South	1335929	BCY	1,510,101	2,751,507	0	0	4,261,608	3.19
TOTAL Transfer from Barge to Pugmil	2651730	BCY	3,176,394	4,623,058	0	0	7,799,452	2.94
Stabilization Processing								
Soil Stabilization (30) To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.					** OVERTIME **			
LDR,FE, WH, 3.25 CY, ARTIC, 950F	26517	HR	0	1,631,147	0	0	1,631,147	61.51
Mixing Equipment	26517	HR	0	5,358,715	0	0	5,358,715	202.08
Outside Equip. Oper Light	26517	HR	1,599,714	0	0	0	1,599,714	60.33
Outside Equip. Oper Med	26517	HR	1,746,282	0	0	0	1,746,282	65.85
Outside Laborer (Semi-Skilled)	53035	HR	2,649,744	0	0	0	2,649,744	49.96

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Soil Stabilization	2651730	BCY	5,995,740	6,989,862	0	0	12,985,602	4.90
TOTAL Soil Stabilization			5,995,740	6,989,862	0	0	12,985,602	
TOTAL Stabilization Processing	2651730	BCY	5,995,740	6,989,862	0	0	12,985,602	4.90
Stabilization Agents/Chemical								
Stabilization Agents/Chemical					** OVERTIME **			
Portland Cement - Material Cost BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sale tax = $90.93	296994	TNS	0	0	0	27,005,643	27,005,643	90.93
TOTAL Stabilization Agents/Chemical	2651730	BCY	0	0	0	27,005,643	27,005,643	10.18
TOTAL Stabilization Agents/Chemical	1.00	EA	0	0	0	27,005,643	27,005,643	27005642.60
TOTAL Stabilization Agents/Chemical	2651730	BCY	0	0	0	27,005,643	27,005,643	10.18
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	12202	HR	609,637	0	0	0	609,637	49.96
Outside Truck Drivers, Heavy	39534	HR	1,842,029	0	0	0	1,842,029	46.59
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	39534	HR	0	159,070	0	0	159,070	4.02
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	39534	HR	0	1,309,031	0	0	1,309,031	33.11
TOTAL Truck Cycle Times-North Facility	1018267	BCY	2,451,667	1,468,101	0	0	3,919,768	3.85
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	11057	HR	552,446	0	0	0	552,446	49.96
Outside Truck Drivers, Heavy	33172	HR	1,545,577	0	0	0	1,545,577	46.59
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	33172	HR	0	393,626	0	0	393,626	11.87
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	33172	HR	0	1,098,359	0	0	1,098,359	33.11
TOTAL Truck Cycle Times-South Facility	1845601	BCY	2,098,023	1,491,985	0	0	3,590,008	1.95
TOTAL Truck Cycle Times	1.00	EA	4,549,690	2,960,086	0	0	7,509,776	7509775.82
TOTAL Transfer to RR Holding Area	2863864	BCY	4,549,690	2,960,086	0	0	7,509,776	2.62

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Stabilization	2651730	BCY	13,721,823	14,573,006	0	27,005,643	55,300,471	20.85
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	7786.23	HR	0	478,951	0	0	478,951	61.51
Outside Equip. Operators, Heavy	7786.23	HR	520,019	0	0	0	520,019	66.79
Laborer	15572	HR	778,039	0	0	0	778,039	49.96
SMALL TOOLS	15572	HR	0	31,400	0	0	31,400	2.02
TOTAL Loader Cycle Time - North Site	1018267	BCY	1,298,058	510,351	0	0	1,808,409	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	14112	HR	0	868,094	0	0	868,094	61.51
Outside Equip. Operators, Heavy	14112	HR	942,530	0	0	0	942,530	66.79
Laborer	28225	HR	1,410,190	0	0	0	1,410,190	49.96
SMALL TOOLS	28225	HR	0	56,913	0	0	56,913	2.02
TOTAL Loader Cycle Time - South Site	1845601	BCY	2,352,720	925,007	0	0	3,277,726	1.78
TOTAL Load RR Car	2863868	BCY	3,650,778	1,435,357	0	0	5,086,135	1.78
Transp/Disposal >33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	18696	TRP	0	0	0	93,481,056	93,481,056	5000.00
TOTAL Rail Transport Fee (>33ppm)	1682659	TNS	0	0	0	93,481,056	93,481,056	55.56
TOTAL Rail Transport Fee (>33ppm)	1682659	TNS	0	0	0	93,481,056	93,481,056	55.56
Sediment Disposal (>-50 ppm)								
Disposal Fee/Taxes - Texas	1682659	TNS	0	0	0	88,339,598	88,339,598	52.50
TOTAL Sediment Disposal (>-50 ppm)	1682659	EA	0	0	0	88,339,598	88,339,598	52.50
TOTAL Sediment Disposal (>33 ppm)	1682659	TNS	0	0	0	88,339,598	88,339,598	52.50
TOTAL Transp/Disposal >33 ppm - Texas	1682659	TNS	0	0	0	181,820,653	181,820,653	108.06
Transp/Disposal(0-33) Norhteast								
Transp/Disposal(0-33) Northeast								
Transp/disposal at Northeast This includes both the total transportation and disposal costs for northeaster disposal facility.	813002	TON	0	0	0	40,650,100	40,650,100	50.00

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transp/Disposal(0-33) Northeast	813001	TNS	0	0	0	40,650,100	40,650,100	50.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	40,650,100	40,650,100	40650100.00
TOTAL Transp/Disposal(0-33) Norhteast	813002	TNS	0	0	0	40,650,100	40,650,100	50.00
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
Transp/disposal at Southeast This includes both the total transportation and disposal costs for southeastern disposal facility.	1513754	TNS	0	0	0	75,687,700	75,687,700	50.00
TOTAL Transp/Disposal(0-33) Southeast	1952037	TNS	0	0	0	75,687,700	75,687,700	38.77
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	75,687,700	75,687,700	75687700.00
TOTAL Transp/Disposal(0-33) Southeast	1513754	TNS	0	0	0	75,687,700	75,687,700	50.00
Sediment Sample & Analysis								
Analytical costs for Disposal								
Total PCB's - Sediment Assume 1 test/1000 tns	4011.69	EA	0	0	0	601,754	601,754	150.00
Total TCLP Assume 1 test/10000 tns	400.93	EA	0	0	0	481,112	481,112	1200.00
Paint Filter Test Assume 1 test/1000 tns	4011.69	EA	0	0	0	80,234	80,234	20.00
Duplicates Assume 5% of Total PCB's	200.58	EA	0	0	0	30,088	30,088	150.00
Quality Assurance Assume 5% of Total PCB's	200.58	EA	0	0	0	30,088	30,088	150.00
TOTAL Analytical costs for Disposal	2651730	BCY	0	0	0	1,223,276	1,223,276	0.46
TOTAL Analytical costs for Disposal			0	0	0	1,223,276	1,223,276	
TOTAL Sediment Sample & Analysis	4099416	TNS	0	0	0	1,223,276	1,223,276	0.30
TOTAL Transport/Landfill Fee	2651730	BCY	3,650,778	1,435,357	0	299,381,729	304,467,864	114.82

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant					** OVERTIME **			
Wastewater Treatment Operator	1500.00	HR	55,797	0	0	0	55,797	37.20
Laborer	1500.00	HR	74,944	0	0	0	74,944	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	2855.98	LB	0	0	378	0	378	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	7014.03	LB	0	0	1,169	0	1,169	0.17
TOTAL O&M at North Plant	42000000	GAL	130,741	674	81,407	0	212,821	0.01
O&M at South Plant					** OVERTIME **			
Wastewater Treatment Operator	2999.99	HR	111,595	0	0	0	111,595	37.20
Laborer	2999.99	HR	149,887	0	0	0	149,887	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	5174.76	LB	0	0	686	0	686	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	12709	LB	0	0	2,118	0	2,118	0.17
TOTAL O&M at South Plant	76100000	GAL	261,482	674	82,663	0	344,819	0.00
TOTAL Water Plant Operation			392,223	1,347	164,070	0	557,640	
TOTAL Water Treatment Process	1.00	EA	392,223	1,347	164,070	0	557,640	557639.84
Effluent Monitoring								
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Southern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Northern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	248,446	248,446	248446.00
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	392,223	1,347	164,070	248,446	806,086	806085.84
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	276315	TNS	0	0	0	4,012,094	4,012,094	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,094	4,012,094	4012093.80
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,094	4,012,094	4012093.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Material 1 (topsoil type)	276315	TNS	0	0	0	4,012,094	4,012,094	14.52
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	457986	TNS	0	0	0	3,879,141	3,879,141	8.47
Graded Gravel (at Plant)	457986	TNS	0	0	0	3,879,141	3,879,141	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	7,758,283	7,758,283	7758282.84
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	7,758,283	7,758,283	7758282.84
TOTAL Material 2 (sand, gravel)	915972	TNS	0	0	0	7,758,283	7,758,283	8.47
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	4435.59	HR	211,978	0	0	0	211,978	47.79
Outside Truck Drivers, Heavy	31049	HR	1,383,786	0	0	0	1,383,786	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	31049	HR	0	352,421	0	0	352,421	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	31049	HR	0	983,383	0	0	983,383	31.67
TOTAL Truck Cycle Times-North Facility	851634	BCY	1,595,765	1,335,804	0	0	2,931,568	3.44
TOTAL Truck Cycle Times			1,595,765	1,335,804	0	0	2,931,568	
TOTAL Transportation to River	851634	CY	1,595,765	1,335,804	0	0	2,931,568	3.44

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	3787.28	HR	0	298,059	0	0	298,059	78.70
Outside Equip. Operators, Heavy	3787.28	HR	241,943	0	0	0	241,943	63.88
Laborer	7574.55	HR	361,990	0	0	0	361,990	47.79
SMALL TOOLS	7574.55	HR	0	14,609	0	0	14,609	1.93
TOTAL Loader Cycle Time - North Site	851634	BCY	603,933	312,668	0	0	916,601	1.08
TOTAL Barge Loading	1.00	EA	603,933	312,668	0	0	916,601	916601.42
TOTAL Barge Loading	851634	CY	603,933	312,668	0	0	916,601	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	6479.32	HR	309,728	0	0	0	309,728	47.80
Boat Captain	6479.32	HR	367,195	0	0	0	367,195	56.67
500 TO 800 Hp TUG BOAT	6479.32	HR	0	510,604	0	0	510,604	78.8[illegible]
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	10367	HR	0	190,414	0	0	190,414	18.37
Per Diem for tug crew	1295.86	MDY	0	0	0	114,699	114,699	88.51
Spare Tug Crew	1295.86	HR	135,390	106,340	0	0	241,730	186.54
Spare Tug Crew Per Diem days	260.00	MDY	0	0	0	23,013	23,013	88.51
TOTAL Reach 1	161573	BCY	812,313	807,358	0	137,712	1,757,383	10.88
Reach 2					** OVERTIME **			
Deckhand for Tug	2268.25	HR	108,428	0	0	0	108,428	47.80
Boat Captain	2268.25	HR	128,546	0	0	0	128,546	56.67
500 TO 800 Hp TUG BOAT	2268.25	HR	0	178,750	0	0	178,750	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	3240.36	HR	0	59,517	0	0	59,517	18.37
Per Diem for tug crew	453.65	MDY	0	0	0	40,153	40,153	88.51
Spare Tug Crew	324.04	HR	33,855	26,591	0	0	60,446	186.54
Spare Tug Crew Per Diem days	64.00	MDY	0	0	0	5,665	5,665	88.51
TOTAL Reach 2	40402	BCY	270,829	264,858	0	45,818	581,505	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	41388	HR	1,978,461	0	0	0	1,978,461	47.80
Boat Captain	41388	HR	2,345,547	0	0	0	2,345,547	56.67
500 TO 800 Hp TUG BOAT	41388	HR	0	3,261,605	0	0	3,261,605	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	49148	HR	0	902,735	0	0	902,735	18.37
Per Diem for tug crew	8277.64	MDY	0	0	0	732,666	732,666	88.51
Spare Tug Crew	2586.76	HR	270,262	212,273	0	0	482,534	186.54

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Per Diem days	518.00	MDY	0	0	0	45,849	45,849	88.51
TOTAL Reach 3	322527	BCY	4,594,269	4,376,613	0	778,515	9,749,397	30.23
TOTAL Barging for Shallow Backfill	524501	BCY	5,677,411	5,448,829	0	962,045	12,088,286	23.05
Reach 1					** OVERTIME **			
Deckhand for Tug	1154.64	HR	55,195	0	0	0	55,195	47.80
Boat Captain	1154.64	HR	65,436	0	0	0	65,436	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1154.64	HR	0	181,346	0	0	181,346	157.06
DREDGE BARGE, 1000 TON	2309.29	HR	0	86,955	0	0	86,955	37.65
Per Diem for tug crew	230.93	MDY	0	0	0	20,440	20,440	88.51
Spare Tug Crew	577.32	HR	60,318	47,376	0	0	107,694	186.54
Spare Tug Crew Per Diem days	116.00	MDY	0	0	0	10,267	10,267	88.51
TOTAL Reach 1	100774	BCY	180,949	315,676	0	30,707	527,332	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	288.72	HR	13,802	0	0	0	13,802	47.80
Boat Captain	288.72	HR	16,363	0	0	0	16,363	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	288.72	HR	0	45,346	0	0	45,346	157.06
DREDGE BARGE, 1000 TON	721.81	HR	0	27,179	0	0	27,179	37.65
Per Diem for tug crew	57.74	MDY	0	0	0	5,111	5,111	88.51
Spare Tug Crew	144.36	HR	15,083	11,847	0	0	26,929	186.54
Spare Tug Crew Per Diem days	28.00	MDY	0	0	0	2,478	2,478	88.51
TOTAL Reach 2	25199	BCY	45,247	84,372	0	7,589	137,209	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	5762.14	HR	275,445	0	0	0	275,445	47.80
Boat Captain	5762.14	HR	326,551	0	0	0	326,551	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	5762.14	HR	0	904,988	0	0	904,988	157.06
DREDGE BARGE, 1000 TON	9219.42	HR	0	347,151	0	0	347,151	37.65
Per Diem for tug crew	1152.43	MDY	0	0	0	102,003	102,003	88.51
Spare Tug Crew	1152.43	HR	120,404	94,570	0	0	214,974	186.54
Spare Tug Crew Per Diem days	230.00	MDY	0	0	0	20,358	20,358	88.51
TOTAL Reach 3	201161	BCY	722,400	1,346,709	0	122,361	2,191,469	10.89
TOTAL Barging for Deep Backfill	327133	BCY	948,596	1,746,757	0	160,657	2,856,010	8.73
TOTAL Barging to Backfill Site	851634	BCY	6,626,007	7,195,587	0	1,122,702	14,944,296	17.55

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	5427.57	HR	267,363	0	0	0	267,363	49.26
Dredge Engineer	2713.78	HR	175,393	0	0	0	175,393	64.63
Oiler	2713.78	HR	136,712	0	0	0	136,712	50.38
Excavator Dredge Operator	2713.78	HR	202,768	0	0	0	202,768	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2171.03	HR	0	300,186	0	0	300,186	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	542.76	HR	0	19,124	0	0	19,124	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2713.78	HR	0	22,467	0	0	22,467	8.28
SMALL TOOLS	2713.78	HR	0	5,234	0	0	5,234	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2713.78	HR	0	22,934	0	0	22,934	8.45
Command/Control System	2713.78	HR	0	52,457	0	0	52,457	19.33
Per Diem	1696.11	MDY	0	0	0	150,126	150,126	88.51
TOTAL Backfill - Fines	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines			782,237	422,401	0	150,126	1,354,764	
TOTAL Material Placement (Fines)	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
Material Placement (Material 2)								
Shallow Draft Backfilling					** OVERTIME **			
Deckhand for Dredge	5247.41	HR	258,489	0	0	0	258,489	49.26
Dredge Engineer	2623.70	HR	169,571	0	0	0	169,571	64.63
Oiler	2623.70	HR	132,174	0	0	0	132,174	50.38
Excavator Dredge Operator	2623.70	HR	196,038	0	0	0	196,038	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2098.96	HR	0	290,222	0	0	290,222	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	524.74	HR	0	18,490	0	0	18,490	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2623.70	HR	0	21,721	0	0	21,721	8.28
SMALL TOOLS	2623.70	HR	0	5,060	0	0	5,060	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2623.70	HR	0	22,172	0	0	22,172	8.45
Command/Control System	2623.70	HR	0	50,716	0	0	50,716	19.33

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Per Diem	1639.81	MDY	0	0	0	145,142	145,142	88.51
TOTAL Shallow Draft Backfilling	327133	BCY	756,272	408,380	0	145,142	1,309,795	4.00
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Shallow Draft Backfilling			756,272	408,380	0	145,142	1,309,795	
Backfill Reach 1					** OVERTIME **			
Deckhand for Dredge	3748.21	HR	184,638	0	0	0	184,638	49.26
Dredge Engineer	1874.11	HR	121,124	0	0	0	121,124	64.63
Oiler	1874.11	HR	94,412	0	0	0	94,412	50.38
Excavator Dredge Operator	1874.11	HR	140,029	0	0	0	140,029	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	1499.28	HR	0	338,529	0	0	338,529	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	374.82	HR	0	21,874	0	0	21,874	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	1874.11	HR	0	15,515	0	0	15,515	8.28
SMALL TOOLS	1874.11	HR	0	3,615	0	0	3,615	1.93
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	1874.11	HR	0	22,912	0	0	22,912	12.23
Command/Control System	1874.11	HR	0	36,226	0	0	36,226	19.33
Per Diem	1171.32	MDY	0	0	0	103,675	103,675	88.51
TOTAL Backfill Reach 1	327133	BCY	540,203	438,670	0	103,675	1,082,549	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			540,203	438,670	0	103,675	1,082,549	
TOTAL Material Placement (Material 2)	654266	EA	1,296,475	847,051	0	248,817	2,392,343	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.17
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88
TOTAL Backfilling	851634	BCY	11,656,629	10,441,035	67,728	13,304,122	35,469,514	41.65
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	22.00	AC	0	0	0	726,000	726,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	22.00	AC	0	0	0	176,000	176,000	8000.00
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	55.00	AC	0	0	0	1,815,000	1,815,000	33000.00
TOTAL Habitat & Vegetation Restoration	99.00	AC	0	0	0	2,717,000	2,717,000	27444.44
TOTAL Habitat & Vegetation Restoration			0	0	0	2,717,000	2,717,000	
TOTAL Habitat & Vegetation Restoration			0	0	0	2,717,000	2,717,000	
TOTAL Habitat & Vegetation Restoration	99.00	AC	0	0	0	2,717,000	2,717,000	27444.44

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
River Bank Restoration								
Shoreline Protect <2'-Hydroseed								
Shoreline Protection <2' ** OVERTIME ** Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr								
Boat Captain	60.44	HR	3,581	0	0	0	3,581	59.25
Deckhand	60.44	HR	3,113	0	0	0	3,113	51.50
Outside Equip. Operators, Heavy	60.44	HR	4,037	0	0	0	4,037	66.79
Laborer	60.44	HR	3,020	0	0	0	3,020	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	60.44	HR	0	1,112	0	0	1,112	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	60.44	HR	0	98	0	0	98	1.62
Hydroseeder	60.44	HR	0	651	0	0	651	10.78
SMALL TOOLS	60.44	HR	0	122	0	0	122	2.02
Seed, Mulch, Fertlizer	37778	SY	0	0	13,903	0	13,903	0.37
TOTAL Shoreline Protection <2'	37778	SY	13,751	1,984	13,903	0	29,637	0.78
TOTAL Shoreline Protect <2'-Hydroseed			13,751	1,984	13,903	0	29,637	
TOTAL Shoreline Protect <2'-Hydroseed	17000	LF	13,751	1,984	13,903	0	29,637	1.74
Shoreline Protect 2'-3' Mat								
Shoreline Protection 2'-3' ** OVERTIME ** Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr								
Boat Captain	870.37	HR	40,765	0	0	0	40,765	46.84
Deckhand	870.37	HR	35,434	0	0	0	35,434	40.71
Labor Foreman	870.37	HR	34,892	0	0	0	34,892	40.09
Laborer	2611.11	HR	103,129	0	0	0	103,129	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	870.37	HR	0	12,662	0	0	12,662	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	870.37	HR	0	1,114	0	0	1,114	1.28
SMALL TOOLS	870.37	HR	0	1,387	0	0	1,387	1.59
Staples	69630	EA	0	0	6,482	0	6,482	0.09
Erosion Control Mat w/seeds	104444	SY	0	0	158,003	0	158,003	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	104444	SY	214,219	15,163	165,183	0	394,565	3.78
TOTAL Shoreline Protect 2'-3' Mat			214,219	15,163	165,183	0	394,565	

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protect 2'-3' Mat	47000	LF	214,219	15,163	165,183	0	394,565	8.40
Shoreline Protect >3' Logs								
Shoreline Protection >3'					** OVERTIME **			
Assume 50% reduction in productivity due to site accessibility, underwater work, and travel between sites. Therefore, 2500lf/day * .50 = 1250lf/day/10hr/day = 125lf/hr								
Boat Captain	216.00	HR	10,116	0	0	0	10,116	46.84
Deckhand	216.00	HR	8,793	0	0	0	8,793	40.71
Labor Foreman	216.00	HR	8,659	0	0	0	8,659	40.09
Laborer	648.00	HR	25,593	0	0	0	25,593	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	216.00	HR	0	3,142	0	0	3,142	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	216.00	HR	0	277	0	0	277	1.28
SMALL TOOLS	216.00	HR	0	344	0	0	344	1.59
Stakes	18000	EA	0	0	10,473	0	10,473	0.58
Biologs - 12" dia	27000	LF	0	0	157,098	0	157,098	5.82
BioLogs - 16" dia	27000	LF	0	0	188,517	0	188,517	6.98
TOTAL Shoreline Protection >3'	27000	LF	53,162	3,763	356,088	0	413,013	15.30
TOTAL Shoreline Protect >3' Logs			53,162	3,763	356,088	0	413,013	
TOTAL Shoreline Protect >3' Logs	27000	LF	53,162	3,763	356,088	0	413,013	15.30
TOTAL River Bank Restoration	91000	LF	281,131	20,910	535,174	0	837,216	9.20
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	12343	HR	1,127,078	0	0	0	1,127,078	91.31
Engineers, Project	12343	HR	787,407	0	0	0	787,407	63.79
Inspectors	12343	HR	364,188	0	0	0	364,188	29.51
Engineers, Quality Control	12343	HR	599,125	0	0	0	599,125	48.54
Clerks, Typists, Bookkeepers & Receptionist	9874.25	HR	257,074	0	0	0	257,074	26.03
Per Diem 5men/10hr/day = .5 multiplier	6171.41	MDY	0	0	0	451,438	451,438	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	343.54	EA	0	0	0	171,771	171,771	500.00
TOTAL Field Office Labor Requirements			3,134,871	0	0	623,209	3,758,080	

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	11,582	0	0	11,582	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	71,506	0	0	71,506	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	24686	HR	0	62,021	0	0	62,021	2.51
TOTAL Field Equipment Requirements	48.00	MO	0	145,109	0	0	145,109	3023.10
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL HTRW/Remediation/Construction	2651730	BCY	82,550,614	68,723,171	4,967,965	368,144,315	524,386,065	197.75
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89

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D & M	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Monthly Field Sampling (1 YR)							
Labor/Equipment							
Chemist	528.00 HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00 HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00 HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00 HR	59,088	7,183	0	0	66,271	138.07
Materials							
Sampling Equipment/Materials	1.00 LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials		0	0	1,472	0	1,472	
Analytical							
Congener Specific PCB's	60.00 EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00 EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00 EA	0	0	4,416	0	4,416	73.60
TOTAL Analytical	60.00 EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00 MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)							
Labor/Equipment							
Chemist	960.00 HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00 HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00 HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00 HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00 EA	0	0	0	0	0	0.00
Cost included in float surveys							
TOTAL Labor/Equipment	4.00 QTR	265,738	13,061	0	0	278,799	69699.80
Materials							
Sampling Equipment/Materials	1.00 LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials		0	0	1,472	0	1,472	
Analytical							
Total Suspended Solids	1144.00 EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00 EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00 QTR	0	0	126,303	0	126,303	31575.79

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp cost of one boat included with weekly monitoring	2.00	EA	0	2,694	0	0	2,694	1347.23
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9,14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.18
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67
TOTAL Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Shallow Sediment Inventory (5YR)								
Labor/Equipment								
Chemist	525.00	HR	36,399	0	0	0	36,399	69.33
Chemist, Jr.	1050.00	HR	64,221	0	0	0	64,221	61.16
Sampling Technician	1050.00	HR	44,705	0	0	0	44,705	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	525.00	HR	0	24,994	0	0	24,994	47.61
TOTAL Labor/Equipment	500.00	HR	145,326	24,994	0	0	170,320	340.64
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	263.00	EA	0	0	29,036	0	29,036	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	250.00	EA	0	0	172,048	0	172,048	688.19
TOTAL Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66

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D & M	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Annual Reporting (1 YR)							
Lbr/Matls for Quarterly Report							
Project Manager	24.00 HR	2,772	0	0	0	2,772	115.51
Chemist	40.00 HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00 HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00 HR	527	0	0	0	527	32.93
Reproduction Operators	8.00 HR	169	0	0	0	169	21.10
Copies	200.00 EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00 EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00 WK	12,146	0	383	0	12,529	12529.22
Lbr/Matls for Annual Report							
Project Manager	48.00 HR	5,545	0	0	0	5,545	115.51
Chemist	80.00 HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00 HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00 HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00 HR	338	0	0	0	338	21.10
Copies	200.00 EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00 EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00 WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting (1 YR)	1.00 YR	32,008	0	765	0	32,773	32773.48
5 Year Review							
Lbr/Matls for Quarterly Report							
Project Manager	48.00 HR	5,545	0	0	0	5,545	115.51
Chemist	80.00 HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00 HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00 HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00 HR	338	0	0	0	338	21.10
Copies	200.00 EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00 EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00 WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report							
Project Manager	96.00 HR	11,089	0	0	0	11,089	115.51
Chemist	160.00 HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00 HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00 HR	2,108	0	0	0	2,108	32.93

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
TOTAL Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
Geophysical Surveys 3/10/10 (d)								
Labor/Equipment								
Chemist	500.00	HR	34,666	0	0	0	34,666	69.33
Survey Crew	50.00	DAY	205,436	0	0	0	205,436	4108.72
Post Processing	87.50	HR	10,111	0	0	0	10,111	115.56
Per Diem	50.00	DAY	0	0	19,873	0	19,873	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	500.00	HR	253,808	0	19,873	0	273,681	547.36
TOTAL Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
TOTAL O & M	1.00	EA	1,260,733	91,249	982,123	650,000	2,984,106	2984105.60
TOTAL Alt Removal 3/10/Select	2651730	BCY	87,191,227	69,534,733	13,167,585	379,294,315	549,187,860	207.11

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APPENDIX I

COST ESTIMATES

I.8 Detailed Estimate - Alternative REM-3/10/Select - Beneficial Use

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	40.00	HR	17,138	14,430	0	0	31,568	789.20
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL South Truck Crew	40.00	HR	17,138	17,538	0	0	34,676	866.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	40.00	HR	37,446	17,180	0	0	54,626	1365.66
TOTAL Equipment Mobilization			392,471	285,927	0	0	678,399	
Process Equipment								
Master Mechanic	1280.00	HR	63,029	0	0	0	63,029	49.24
Outside Equip. Operators, Heavy	1280.00	HR	60,431	0	0	0	60,431	47.21
TOTAL Process Equipment	160.00	HR	123,460	0	0	0	123,460	771.62
TOTAL Process Equipment Start Up			123,460	0	0	0	123,460	
TOTAL Annual Remobilization & Startup	1.00	EA	515,931	285,927	0	0	801,858	801858.45
Annual Demobilization								
Shallow Dredge Crew								
Deckhand for Dredge	480.00	HR	17,227	0	0	0	17,227	35.89
Dredge Engineer	240.00	HR	11,298	0	0	0	11,298	47.08
Oiler	240.00	HR	8,806	0	0	0	8,806	36.69
Excavator Dredge Operator	240.00	HR	13,029	0	0	0	13,029	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	240.00	HR	0	6,989	0	0	6,989	29.12

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	240.00	HR	0	1,715	0	0	1,715	7.14
SMALL TOOLS	240.00	HR	0	401	0	0	401	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	240.00	HR	0	1,752	0	0	1,752	7.30
Command/Control System	240.00	HR	0	3,834	0	0	3,834	15.98
TOTAL Shallow Dredge Crew	3.00	CRW	50,360	14,691	0	0	65,051	21683.61
Deep Dredge Crew								
Deckhand for Dredge	480.00	HR	17,227	0	0	0	17,227	35.89
Dredge Engineer	240.00	HR	11,298	0	0	0	11,298	47.08
Oiler	240.00	HR	8,806	0	0	0	8,806	36.69
Excavator Dredge Operator	240.00	HR	13,029	0	0	0	13,029	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	240.00	HR	0	11,575	0	0	11,575	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	240.00	HR	0	1,715	0	0	1,715	7.14
SMALL TOOLS	240.00	HR	0	401	0	0	401	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	240.00	HR	0	2,534	0	0	2,534	10.56
Command/Control System	240.00	HR	0	3,834	0	0	3,834	15.98
TOTAL Deep Dredge Crew	3.00	CRW	50,360	20,059	0	0	70,419	23473.14
North Barge Crew Rate								
Deckhand for Tug	240.00	HR	8,366	0	0	0	8,366	34.86
Boat Captain	240.00	HR	9,878	0	0	0	9,878	41.16
500 TO 800 Hp TUG BOAT	240.00	HR	0	16,277	0	0	16,277	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	240.00	HR	0	3,793	0	0	3,793	15.80
TOTAL North Barge Crew Rate	3.00	CRW	18,244	20,070	0	0	38,314	12771.17
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	2.00	CRW	12,163	26,372	0	0	38,534	19267.19

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate								
Spare Tug Crew	160.00	HR	13,815	10,851	0	0	24,666	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	13,815	10,851	0	0	24,666	12333.22
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00	HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00	HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00	HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00	HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00	HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization			247,529	193,885	0	0	441,414	
TOTAL Annual Demobilization	1.00	EA	247,529	193,885	0	0	441,414	441414.29
Final Demob Site Restoration								
Shallow Dredge Crew								
Deckhand for Dredge	120.00	HR	4,307	0	0	0	4,307	35.89
Dredge Engineer	60.00	HR	2,825	0	0	0	2,825	47.08
Oiler	60.00	HR	2,201	0	0	0	2,201	36.69
Excavator Dredge Operator	60.00	HR	3,257	0	0	0	3,257	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	60.00	HR	0	1,747	0	0	1,747	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	60.00	HR	0	429	0	0	429	7.14
SMALL TOOLS	60.00	HR	0	100	0	0	100	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	60.00	HR	0	438	0	0	438	7.30
Command/Control System	60.00	HR	0	959	0	0	959	15.98
TOTAL Shallow Dredge Crew	3.00	HR	12,590	3,673	0	0	16,263	5420.90
Deep Dredge Crew								
Deckhand for Dredge	120.00	HR	4,307	0	0	0	4,307	35.89
Dredge Engineer	60.00	HR	2,825	0	0	0	2,825	47.08
Oiler	60.00	HR	2,201	0	0	0	2,201	36.69
Excavator Dredge Operator	60.00	HR	3,257	0	0	0	3,257	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	60.00	HR	0	2,894	0	0	2,894	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	60.00	HR	0	429	0	0	429	7.14
SMALL TOOLS	60.00	HR	0	100	0	0	100	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of	60.00	HR	0	634	0	0	634	10.56

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TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.								
Command/Control System	60.00	HR	0	959	0	0	959	15.98
TOTAL Deep Dredge Crew	3.00	HR	12,590	5,015	0	0	17,605	5868.28
North Barge Crew Rate								
Deckhand for Tug	60.00	HR	2,091	0	0	0	2,091	34.86
Boat Captain	60.00	HR	2,469	0	0	0	2,469	41.16
500 TO 800 Hp TUG BOAT	60.00	HR	0	4,069	0	0	4,069	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	60.00	HR	0	948	0	0	948	15.80
TOTAL North Barge Crew Rate	3.00	HR	4,561	5,017	0	0	9,578	3192.79
South Barge Crew Rate								
Deckhand for Tug	40.00	HR	1,394	0	0	0	1,394	34.86
Boat Captain	40.00	HR	1,646	0	0	0	1,646	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	40.00	HR	0	5,348	0	0	5,348	133.70
DREDGE BARGE, 1000 TON	40.00	HR	0	1,245	0	0	1,245	31.12
TOTAL South Barge Crew Rate	2.00	HR	3,041	6,593	0	0	9,634	4816.80
Spare Tug Crew Rate								
Spare Tug Crew	40.00	HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00	HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew								
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00	HR	0	4,731	0	0	4,731	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	40.00	HR	0	292	0	0	292	7.30
TOTAL North Unloading Crew	80.00	HR	3,858	5,023	0	0	8,881	111.01

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			63,977	48,471	0	0	112,448	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	63,977	48,471	0	500,000	612,448	612447.83
TOTAL Mobilization/Demobilization	1.00	EA	955,390	625,226	0	1,175,560	2,756,176	2756176.22

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket	107.25	HR	0	877	0	0	877	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Cover Building #2 This building is a rain cover for railroad cars.	5000.00	SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00	SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000	SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale								
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL North Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61
Testing Laboratory								
Capital Costs					** OVERTIME **			
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	40.00	HR	2,602	0	0	0	2,602	65.04
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	204.80	HR	13,321	0	0	0	13,321	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Repair Road/Work Area	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	600.00	LF	31,977	0	0	103,488	135,465	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	100.00	LF	5,330	0	0	12,320	17,650	176.50
Hopper - Mechanized-200 CY	4.00	EA	0	0	0	197,120	197,120	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Storage Building #1 This building is a rain cover for material..	22500	SF	0	0	0	1,663,200	1,663,200	73.92
Cover Building #2 This building is a rain cover for railroad cars.	4000.00	SF	0	0	0	295,680	295,680	73.92
Concrete Slab and Hardstand	7500.00	SY	0	0	0	462,000	462,000	61.60
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,665	0	0	8,624	11,289	225.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL North Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	351,221	630,628	419,748	5,317,076	6,718,673	6718672.67
Dredging								
Deep Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	42714	HR	2,031,772	0	0	0	2,031,772	47.57
Dredge Engineer	21357	HR	1,332,772	0	0	0	1,332,772	62.40
Oiler	21357	HR	1,038,813	0	0	0	1,038,813	48.64
Excavator Dredge Operator	21357	HR	1,539,753	0	0	0	1,539,753	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	18306	HR	0	4,029,451	0	0	4,029,451	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	3051.01	HR	0	178,050	0	0	178,050	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	21357	HR	0	171,257	0	0	171,257	8.02
SMALL TOOLS	21357	HR	0	39,758	0	0	39,758	1.86
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	21357	HR	0	252,752	0	0	252,752	11.83
Command/Control System	21357	HR	0	412,827	0	0	412,827	19.33
Per Diem	10679	MDY	0	0	0	945,173	945,173	88.51
TOTAL Dredging Reach 1	1331363	BCY	5,943,111	5,084,095	0	945,173	11,972,379	8.99
TOTAL Reach #1	1331363	BCY	5,943,111	5,084,095	0	945,173	11,972,379	8.99

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	16068	HR	764,323	0	0	0	764,323	47.57
Dredge Engineer	8034.21	HR	501,369	0	0	0	501,369	62.40
Oiler	8034.21	HR	390,786	0	0	0	390,786	48.64
Excavator Dredge Operator	8034.21	HR	579,232	0	0	0	579,232	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	6886.47	HR	0	1,515,820	0	0	1,515,820	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	1147.74	HR	0	66,980	0	0	66,980	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	8034.21	HR	0	64,424	0	0	64,424	8.02
SMALL TOOLS	8034.21	HR	0	14,956	0	0	14,956	1.86
Command/Control System	8034.21	HR	0	155,299	0	0	155,299	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	8034.21	HR	0	95,081	0	0	95,081	11.83
Per Diem	4017.11	MDY	0	0	0	355,560	355,560	88.51
TOTAL Dredging Reach 2	500839	BCY	2,235,710	1,912,561	0	355,560	4,503,831	8.99
TOTAL Reach #2	500839	BCY	2,235,710	1,912,561	0	355,560	4,503,831	8.99
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	6313.49	HR	300,312	0	0	0	300,312	47.57
Dredge Engineer	3156.74	HR	196,994	0	0	0	196,994	62.40
Oiler	3156.74	HR	153,545	0	0	0	153,545	48.64
Excavator Dredge Operator	3156.74	HR	227,588	0	0	0	227,588	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	2705.78	HR	0	595,585	0	0	595,585	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	450.96	HR	0	26,317	0	0	26,317	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3156.74	HR	0	25,313	0	0	25,313	8.02
SMALL TOOLS	3156.74	HR	0	5,877	0	0	5,877	1.86
Command/Control System	3156.74	HR	0	61,019	0	0	61,019	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3156.74	HR	0	37,359	0	0	37,359	11.83
Per Diem	1578.37	MDY	0	0	0	139,704	139,704	88.51
TOTAL Dredging Reach 3	196786	BCY	878,439	751,470	0	139,704	1,769,612	8.99
TOTAL Reach #3	196786	BCY	878,439	751,470	0	139,704	1,769,612	8.99
TOTAL Deep Draft Dredging	2028988	BCY	9,057,260	7,748,126	0	1,440,437	18,245,823	8.99

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Shallow Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	22140	HR	1,053,120	0	0	0	1,053,120	47.57
Dredge Engineer	11070	HR	690,810	0	0	0	690,810	62.40
Oiler	11070	HR	538,444	0	0	0	538,444	48.64
Excavator Dredge Operator	11070	HR	798,094	0	0	0	798,094	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	9488.51	HR	0	1,279,437	0	0	1,279,437	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1581.42	HR	0	55,723	0	0	55,723	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	11070	HR	0	88,767	0	0	88,767	8.02
SMALL TOOLS	11070	HR	0	20,608	0	0	20,608	1.86
Environmental Bucket	11070	HR	0	90,559	0	0	90,559	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	11070	HR	0	213,979	0	0	213,979	19.33
Per Diem	5534.96	MDY	0	0	0	489,908	489,908	88.51
TOTAL Dredging Reach 1	230027	BCY	3,080,469	1,749,072	0	489,908	5,319,448	23.13
TOTAL Reach 1	230027	BCY	3,080,469	1,749,072	0	489,908	5,319,448	23.13
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	2454.15	HR	116,736	0	0	0	116,736	47.57
Dredge Engineer	1227.08	HR	76,575	0	0	0	76,575	62.40
Oiler	1227.08	HR	59,685	0	0	0	59,685	48.64
Excavator Dredge Operator	1227.08	HR	88,467	0	0	0	88,467	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1051.78	HR	0	141,823	0	0	141,823	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	175.30	HR	0	6,177	0	0	6,177	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	1227.08	HR	0	9,840	0	0	9,840	8.02
SMALL TOOLS	1227.08	HR	0	2,284	0	0	2,284	1.86
Command/Control System	1227.08	HR	0	23,719	0	0	23,719	19.33
Environmental Bucket	1227.08	HR	0	10,038	0	0	10,038	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Per Diem	613.54	MDY	0	0	0	54,305	54,305	88.51
TOTAL Dredging Reach 2	25498	BCY	341,463	193,881	0	54,305	589,649	23.13
TOTAL Reach 2	25498	BCY	341,463	193,881	0	54,305	589,649	23.13

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	30166	HR	1,434,900	0	0	0	1,434,900	47.57
Dredge Engineer	15083	HR	941,245	0	0	0	941,245	62.40
Oiler	15083	HR	733,642	0	0	0	733,642	48.64
Excavator Dredge Operator	15083	HR	1,087,421	0	0	0	1,087,421	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12928	HR	0	1,743,262	0	0	1,743,262	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2154.72	HR	0	75,923	0	0	75,923	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	15083	HR	0	120,947	0	0	120,947	8.02
SMALL TOOLS	15083	HR	0	28,078	0	0	28,078	1.86
Command/Control System	15083	HR	0	291,551	0	0	291,551	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	15083	HR	0	123,388	0	0	123,388	8.18
Per Diem	7541.51	MDY	0	0	0	667,510	667,510	88.51
TOTAL Dredging Reach 3	313417	BCY	4,197,209	2,383,150	0	667,510	7,247,869	23.13
TOTAL Reach 3	313417	BCY	4,197,209	2,383,150	0	667,510	7,247,869	23.13
TOTAL Shallow Draft Dredging	568942	BCY	7,619,141	4,326,102	0	1,211,723	13,156,967	23.13
Land Locked Area								
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	4315.17	HR	205,258	0	0	0	205,258	47.57
Dredge Engineer	2157.58	HR	134,642	0	0	0	134,642	62.40
Oiler	2157.58	HR	104,945	0	0	0	104,945	48.64
Excavator Dredge Operator	2157.58	HR	155,552	0	0	0	155,552	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1849.36	HR	0	249,369	0	0	249,369	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	308.23	HR	0	10,861	0	0	10,861	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	2157.58	HR	0	5,336	0	0	5,336	2.47
SMALL TOOLS	2157.58	HR	0	4,017	0	0	4,017	1.86
Command/Control System	2157.58	HR	0	41,706	0	0	41,706	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2157.58	MDY	0	17,650	0	0	17,650	8.18
Per Diem	1078.79	MDY	0	0	0	95,485	95,485	88.51
TOTAL Dredging Reach 2	53800	BCY	600,399	328,938	0	95,485	1,024,822	19.05

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shallow Draft Dredging	53796	BCY	600,399	328,938	0	95,485	1,024,822	19.05
Reach 2					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	6472.75	HR	0	118,888	0	0	118,888	18.37
Spare Tug Crew	2157.58	HR	225,421	93,587	0	0	319,009	147.85
Spare Tug Crew Per Diem days	308.00	MDY	0	0	0	27,262	27,262	88.51
TOTAL Reach 2	53800	BCY	225,421	212,475	0	27,262	465,158	8.65
TOTAL Small Barging to Transfer Site			225,421	212,475	0	27,262	465,158	
Transfer of Mat'l to Large barge					** OVERTIME **			
Oiler	1087.86	HR	54,803	0	0	0	54,803	50.38
Excavator Dredge Operator	1087.86	HR	81,282	0	0	0	81,282	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	870.29	HR	0	120,334	0	0	120,334	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	217.57	HR	0	7,666	0	0	7,666	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	1087.86	HR	0	2,752	0	0	2,752	2.53
PUMP SUBM, 4"D, SKID W/P-UNIT INCLUDES POWER UNIT	1087.86	HR	0	5,751	0	0	5,751	5.29
SMALL TOOLS	1087.86	HR	0	2,098	0	0	2,098	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	1087.86	HR	0	9,193	0	0	9,193	8.45
Per Diem	217.57	MDY	0	0	0	19,258	19,258	88.51
TOTAL Transfer of Mat'l to Large barge	53800	BCY	136,085	147,794	0	19,258	303,137	5.63
TOTAL Transfer of Mat'l to 200T Barge			136,085	147,794	0	19,258	303,137	
Mobilization								
Mob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Clearing and Grubbing	2.00	AC	0	0	0	12,100	12,100	6050.00
Mob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Mob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40	2.00	EA	0	0	0	60,984	60,984	30492.00

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
hours = $7200 . Total mob = $25,200 x 2 barges = $50,400								
Mob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Mob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00
TOTAL Mobilization			0	0	0	176,176	176,176	
Demobilization								
Demob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Demob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Demob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00	EA	0	0	0	60,984	60,984	30492.00
Demob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Demob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Demobilization			0	0	0	164,076	164,076	
TOTAL Mobilization/Demobilization			0	0	0	340,252	340,252	
TOTAL Land Locked Area	53796	BCY	961,905	689,208	0	482,257	2,133,370	39.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	19800	HR	0	896,872	0	0	896,872	45.30
SMALL TOOLS	1979.99	HR	0	3,819	0	0	3,819	1.93
Deckhand for Tug	19800	HR	946,487	0	0	0	946,487	47.80
Boat Captain	19800	HR	1,122,099	0	0	0	1,122,099	56.67
TOTAL Shallow Turbidity Control	2.20	CRW	2,068,587	900,690	14,081	0	2,983,358	1356071.66
Deep Turbidity Control					** OVERTIME **			
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	4800.00	LF	0	0	87,863	0	87,863	18.30
Anchoring System	96.00	EA	0	0	32,442	0	32,442	337.93
Mooring Buoy Light w/Photocell	48.00	EA	0	0	8,448	0	8,448	176.01
Freight to Site	2.40	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	21600	HR	0	978,405	0	0	978,405	45.30
SMALL TOOLS	2159.99	HR	0	4,166	0	0	4,166	1.93
Deckhand for Tug	21600	HR	1,032,532	0	0	0	1,032,532	47.80
Boat Captain	21600	HR	1,224,108	0	0	0	1,224,108	56.67
TOTAL Deep Turbidity Control	2.40	CRW	2,256,640	982,571	128,753	0	3,367,964	1403318.53
TOTAL Turbidity Control			4,325,227	1,883,262	142,834	0	6,351,322	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	4,325,227	1,883,262	142,834	0	6,351,322	6351322.12
TOTAL Dredging	2651730	BCY	21,963,533	14,646,697	142,834	3,134,417	39,887,482	15.04
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	12012	HR	832,817	0	0	0	832,817	69.33
Sampling Technician	12012	HR	511,430	0	0	0	511,430	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	12012	HR	0	163,423	0	0	163,423	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,344,247	164,770	0	0	1,509,017	829.13

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	2496.00	EA	0	0	661,369	0	661,369	264.97
Total Suspended Solids	2496.00	EA	0	0	91,857	0	91,857	36.80
Fraction Organic Carbon On TSS	2496.00	EA	0	0	183,714	0	183,714	73.60
TOTAL Analytical	416.00	EA	0	0	936,940	0	936,940	2252.26
TOTAL Weekly Field Sampling	52.00	WKS	1,344,247	164,770	945,772	0	2,454,789	47207.49
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores- 3/10/10 (dg)								
Chemist	3090.00	HR	214,236	0	0	0	214,236	69.33
Chemist, Jr.	3090.00	HR	188,993	0	0	0	188,993	61.16
Sampling Technician	3090.00	HR	131,562	0	0	0	131,562	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	3090.00	HR	0	147,109	0	0	147,109	47.61
TOTAL Labor/Equipment	3090.00	HR	534,791	147,109	0	0	681,900	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	3893.00	EA	0	0	114,615	0	114,615	29.44
Total PCB's	973.00	EA	0	0	257,817	0	257,817	264.97
Cesium - 137	973.00	EA	0	0	107,424	0	107,424	110.40
Organic Carbon	973.00	EA	0	0	71,616	0	71,616	73.60

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical	3090.00	EA	0	0	551,472	0	551,472	178.47
TOTAL Confirmation Cores- 3/10/10 (dg)	309.00	DAY	534,791	147,109	566,193	0	1,248,093	4039.14
Confirmation Cores- 3/10/10 (bk)								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Chemist, Jr.	1170.00	HR	71,560	0	0	0	71,560	61.16
Sampling Technician	1170.00	HR	49,815	0	0	0	49,815	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	1170.00	HR	0	55,702	0	0	55,702	47.61
TOTAL Labor/Equipment	1170.00	HR	202,494	55,702	0	0	258,195	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	1474.00	EA	0	0	43,396	0	43,396	29.44
Total PCB's	369.00	EA	0	0	97,775	0	97,775	264.97
Organic Carbon	369.00	EA	0	0	27,160	0	27,160	73.60
TOTAL Analytical	1170.00	EA	0	0	168,331	0	168,331	143.87
TOTAL Confirmation Cores- 3/10/10 (bk)	117.00	DAY	202,494	55,702	183,051	0	441,247	3771.34
Geophysical Surveys 3/10/10 (dg)								
Chemist	860.00	HR	59,626	0	0	0	59,626	69.33
Survey Crew	86.00	DAY	353,350	0	0	0	353,350	4108.72
Post Processing	150.50	HR	17,391	0	0	0	17,391	115.56
Per Diem	86.00	DAY	0	0	34,181	0	34,181	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	860.00	HR	433,962	0	34,181	0	468,143	544.35
TOTAL Geophysical Surveys 3/10/10 (dg)	86.00	DAY	433,962	0	34,181	0	468,143	5443.53
TOTAL Fish Sample Analysis	5.00	EA	0	0	0	3,250,000	3,250,000	650000.00
Annual Reporting								
Project Manager	120.00	HR	13,862	0	0	0	13,862	115.51
Chemist	200.00	HR	13,866	0	0	0	13,866	69.33
Engineers, Quality Control	120.00	HR	7,368	0	0	0	7,368	61.40
Clerks, Typists, Bookkeepers & Receptionist	80.00	HR	2,635	0	0	0	2,635	32.93
Reproduction Operators	40.00	HR	844	0	0	0	844	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Lbr/Matls for Quarterly Report	5.00	WK	43,007	0	383	0	43,389	8677.87
Project Manager	240.00	HR	27,723	0	0	0	27,723	115.51
Chemist	400.00	HR	27,733	0	0	0	27,733	69.33
Engineers, Quality Control	240.00	HR	14,737	0	0	0	14,737	61.40
Clerks, Typists, Bookkeepers & Receptionist	160.00	HR	5,269	0	0	0	5,269	32.93
Reproduction Operators	80.00	HR	1,688	0	0	0	1,688	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	10.00	WK	81,582	0	383	0	81,965	8196.45
TOTAL Annual Reporting	5.00	YR	124,588	0	765	0	125,354	25070.78
TOTAL Testing and Monitoring (remed)	1.00	EA	3,932,628	526,065	1,888,946	3,250,000	9,597,639	9597639.12
Barging								
Barging to North - 1000T Hopper								
Reach 1					** OVERTIME **			
Spare Tug Crew	5501.63	HR	574,803	451,470	0	0	1,026,274	186.54
Spare Tug Crew Per Diem days	1100.00	MDY	0	0	0	97,363	97,363	88.51
DREDGE BARGE, 1000 TON	16505	HR	0	621,481	0	0	621,481	37.65
TOTAL Reach 1	320098	BCY	574,803	1,072,951	0	97,363	1,745,117	5.45
TOTAL Reach 1	320098	BCY	574,803	1,072,951	0	97,363	1,745,117	5.45
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 1000T Hopper	320098	BCY	574,803	1,072,951	0	97,363	1,745,117	5.45
Barging to North - 200T Deck								
Reach 1					** OVERTIME **			
Deckhand for Tug	11861	HR	566,968	0	0	0	566,968	47.80
Boat Captain	11861	HR	672,164	0	0	0	672,164	56.67
500 TO 800 Hp TUG BOAT	11861	HR	0	934,679	0	0	934,679	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	35582	HR	0	653,551	0	0	653,551	18.37
Per Diem for tug crew	2372.13	MDY	0	0	0	209,960	209,960	88.51
Spare Tug Crew	2965.16	HR	309,796	243,325	0	0	553,120	186.54
Spare Tug Crew Per Diem days	594.00	MDY	0	0	0	52,576	52,576	88.51

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	230027	BCY	1,548,929	1,831,555	0	262,536	3,643,020	15.84
TOTAL Reach 1	230027	BCY	1,548,929	1,831,555	0	262,536	3,643,020	15.84
Reach 2					** OVERTIME **			
Deckhand for Tug	4088.76	HR	195,453	0	0	0	195,453	47.80
Boat Captain	4088.76	HR	231,718	0	0	0	231,718	56.67
500 TO 800 Hp TUG BOAT	4088.76	HR	0	322,215	0	0	322,215	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	12266	HR	0	225,301	0	0	225,301	18.37
Per Diem	817.75	DAY	0	0	0	72,380	72,380	88.51
Spare Tug Crew	1022.19	HR	106,797	83,882	0	0	190,679	186.54
Spare Tug Crew Per Diem days	204.00	MDY	0	0	0	18,056	18,056	88.51
TOTAL Reach 2	79298	BCY	533,968	631,398	0	90,437	1,255,803	15.84
TOTAL Reach 2	79298	BCY	533,968	631,398	0	90,437	1,255,803	15.84
Reach 3					** OVERTIME **			
Deckhand for Tug	45249	HR	2,163,020	0	0	0	2,163,020	47.80
Boat Captain	45249	HR	2,564,349	0	0	0	2,564,349	56.67
500 TO 800 Hp TUG BOAT	45249	HR	0	3,565,862	0	0	3,565,862	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	75415	HR	0	1,385,188	0	0	1,385,188	18.37
Per Diem	6464.15	MDY	0	0	0	572,152	572,152	88.51
Spare Tug Crew	5027.67	HR	525,285	412,577	0	0	937,862	186.54
Spare Tug Crew Per Diem days	718.00	MDY	0	0	0	63,551	63,551	88.51
TOTAL Reach 3	313417	BCY	5,252,655	5,363,627	0	635,703	11,251,985	35.90
TOTAL Reach 3	313417	BCY	5,252,655	5,363,627	0	635,703	11,251,985	35.90
TOTAL Barging to North - 200T Deck	622742	BCY	7,335,551	7,826,580	0	988,676	16,150,807	25.93
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	13769	HR	658,182	0	0	0	658,182	47.80
Boat Captain	13769	HR	780,302	0	0	0	780,302	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	13769	HR	0	2,162,491	0	0	2,162,491	157.06
DREDGE BARGE, 1000 TON	41306	HR	0	1,555,362	0	0	1,555,362	37.65
Per Diem	2753.75	DAY	0	0	0	243,739	243,739	88.51
Spare Tug Crew	2294.79	HR	239,757	188,314	0	0	428,071	186.54
Spare Tug Crew Per Diem days	458.00	MDY	0	0	0	40,538	40,538	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	400550	BCY	1,678,241	3,906,167	0	284,277	5,868,685	14.65
TOTAL Reach 1	400550	BCY	1,678,241	3,906,167	0	284,277	5,868,685	14.65
Reach 2					** OVERTIME **			
Deckhand for Tug	17216	HR	822,977	0	0	0	822,977	47.80
Boat Captain	17216	HR	975,673	0	0	0	975,673	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	17216	HR	0	2,703,932	0	0	2,703,932	157.06
DREDGE BARGE, 1000 TON	51649	HR	0	1,944,791	0	0	1,944,791	37.65
Per Diem	3443.23	DAY	0	0	0	304,766	304,766	88.51
Spare Tug Crew	2869.36	HR	299,787	235,463	0	0	535,251	186.54
Spare Tug Crew Per Diem days	574.00	MDY	0	0	0	50,806	50,806	88.51
TOTAL Reach 2	500839	BCY	2,098,436	4,884,186	0	355,571	7,338,194	14.65
TOTAL Reach 2	500839	BCY	2,098,436	4,884,186	0	355,571	7,338,194	14.65
Reach 3					** OVERTIME **			
Deckhand for Tug	3382.23	HR	161,679	0	0	0	161,679	47.80
Boat Captain	3382.23	HR	191,677	0	0	0	191,677	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3382.23	HR	0	531,205	0	0	531,205	157.06
DREDGE BARGE, 1000 TON	16911	HR	0	636,778	0	0	636,778	37.65
Per Diem	676.45	DAY	0	0	0	59,873	59,873	88.51
Spare Tug Crew	1127.41	HR	117,790	92,517	0	0	210,307	186.54
Spare Tug Crew Per Diem days	226.00	MDY	0	0	0	20,004	20,004	88.51
TOTAL Reach 3	196786	BCY	471,146	1,260,499	0	79,877	1,811,522	9.21
TOTAL Reach 3	196786	BCY	471,146	1,260,499	0	79,877	1,811,522	9.21
TOTAL Barging to South - 1000T Hopper	1098175	BCY	4,247,824	10,050,852	0	719,725	15,018,401	13.68
TOTAL Barging to South - 200T Deck	1.00	EA	0	0	0	0	0	0.00
TOTAL Canal/Lock Usage Fees			0	0	0	100,000	100,000	
TOTAL Barging	2041015	BCY	12,158,178	18,950,383	0	1,905,764	33,014,326	16.18

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Stabilization								
Transfer from Barge to Pugmil								
Unloading at Northern Facility					** OVERTIME **			
Outside Equip. Operators, Heavy	12201	HR	814,875	0	0	0	814,875	66.79
Master Mechanic	12201	HR	851,418	0	0	0	851,418	69.78
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12201	HR	0	1,763,752	0	0	1,763,752	144.55
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	12201	HR	0	107,798	0	0	107,798	8.83
TOTAL Unloading at Northern Facility	942840	BCY	1,666,293	1,871,551	0	0	3,537,843	3.75
TOTAL Unload Barge - North	942840	BCY	1,666,293	1,871,551	0	0	3,537,843	3.75
Unloading at Southern Facility					** OVERTIME **			
Master Mechanic	7105.77	HR	495,855	0	0	0	495,855	69.78
Outside Equip. Operators, Heavy	7105.77	HR	474,573	0	0	0	474,573	66.79
HYD EXCAV, CRWLR, 4.75 CY BKT	7105.77	HR	0	1,677,366	0	0	1,677,366	236.06
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	7105.77	HR	0	90,821	0	0	90,821	12.78
TOTAL Unloading at Southern Facility	1098175	BCY	970,428	1,768,187	0	0	2,738,615	2.49
TOTAL Unload Barge - South	1098175	BCY	970,428	1,768,187	0	0	2,738,615	2.49
TOTAL Transfer from Barge to Pugmil	2041015	BCY	2,636,721	3,639,737	0	0	6,276,458	3.08
Stabilization Processing								
Soil Stabilization (30) To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.					** OVERTIME **			
LDR,FE, WH, 3.25 CY, ARTIC, 950F	20410	HR	0	1,255,480	0	0	1,255,480	61.51
Mixing Equipment	20410	HR	0	4,124,560	0	0	4,124,560	202.08
Outside Equip. Oper Light	20410	HR	1,231,266	0	0	0	1,231,266	60.33
Outside Equip. Oper Med	20410	HR	1,344,073	0	0	0	1,344,073	65.85
Outside Laborer (Semi-Skilled)	40820	HR	2,039,444	0	0	0	2,039,444	49.96

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Soil Stabilization	2041015	BCY	4,614,783	5,380,040	0	0	9,994,823	4.90
TOTAL Soil Stabilization			4,614,783	5,380,040	0	0	9,994,823	
TOTAL Stabilization Processing	2041015	BCY	4,614,783	5,380,040	0	0	9,994,823	4.90
Stabilization Agents/Chemical								
Stabilization Agents/Chemical					** OVERTIME **			
Portland Cement - Material Cost BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sale tax = $90.93	228594	TNS	0	0	0	20,786,023	20,786,023	90.93
TOTAL Stabilization Agents/Chemical	2041015	BCY	0	0	0	20,786,023	20,786,023	10.18
TOTAL Stabilization Agents/Chemical	1.00	EA	0	0	0	20,786,023	20,786,023	20786023.32
TOTAL Stabilization Agents/Chemical	2041015	BCY	0	0	0	20,786,023	20,786,023	10.18
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	12202	HR	609,637	0	0	0	609,637	49.96
Outside Truck Drivers, Heavy	39534	HR	1,842,029	0	0	0	1,842,029	46.59
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	39534	HR	0	159,070	0	0	159,070	4.02
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	39534	HR	0	1,309,031	0	0	1,309,031	33.11
TOTAL Truck Cycle Times-North Facility	1018267	BCY	2,451,667	1,468,101	0	0	3,919,768	3.85
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	7105.63	HR	355,015	0	0	0	355,015	49.96
Outside Truck Drivers, Heavy	21317	HR	993,226	0	0	0	993,226	46.59
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	21317	HR	0	252,954	0	0	252,954	11.87
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	21317	HR	0	705,832	0	0	705,832	33.11
TOTAL Truck Cycle Times-South Facility	1186029	BCY	1,348,242	958,786	0	0	2,307,028	1.95
TOTAL Truck Cycle Times	1.00	EA	3,799,908	2,426,888	0	0	6,226,796	6226795.84
TOTAL Transfer to RR Holding Area	2041015	BCY	3,799,908	2,426,888	0	0	6,226,796	3.05

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Stabilization	2041015	BCY	11,051,412	11,446,665	0	20,786,023	43,284,100	21.21
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	7786.23	HR	0	478,951	0	0	478,951	61.51
Outside Equip. Operators, Heavy	7786.23	HR	520,019	0	0	0	520,019	66.79
Laborer	15572	HR	778,039	0	0	0	778,039	49.96
SMALL TOOLS	15572	HR	0	31,400	0	0	31,400	2.02
TOTAL Loader Cycle Time - North Site	1018267	BCY	1,298,058	510,351	0	0	1,808,409	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	9069.03	HR	0	557,859	0	0	557,859	61.51
Outside Equip. Operators, Heavy	9069.03	HR	605,693	0	0	0	605,693	66.79
Laborer	18138	HR	906,223	0	0	0	906,223	49.96
SMALL TOOLS	18138	HR	0	36,573	0	0	36,573	2.02
TOTAL Loader Cycle Time - South Site	1186029	BCY	1,511,916	594,432	0	0	2,106,348	1.78
TOTAL Load RR Car	2204296	BCY	2,809,974	1,104,783	0	0	3,914,757	1.78
Transp/Disposal >33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	18696	TRP	0	0	0	93,481,056	93,481,056	5000.00
TOTAL Rail Transport Fee (>33ppm)	1682659	TNS	0	0	0	93,481,056	93,481,056	55.56
TOTAL Rail Transport Fee (>33ppm)	1682659	TNS	0	0	0	93,481,056	93,481,056	55.56
Sediment Disposal (>-33 ppm)								
Disposal Fee/Taxes - Texas	1682659	TNS	0	0	0	88,339,598	88,339,598	52.50
TOTAL Sediment Disposal (>-33 ppm)	1682659	EA	0	0	0	88,339,598	88,339,598	52.50
TOTAL Sediment Disposal (>33 ppm)	1682659	TNS	0	0	0	88,339,598	88,339,598	52.50
TOTAL Transp/Disposal >33 ppm - Texas	1682659	TNS	0	0	0	181,820,653	181,820,653	108.06
Transp/Disposal(0-33) Norhteast								
Transp/Disposal(0-33) Northeast								
TOTAL Transp/Disposal(0-33) Northeast		TON	0	0	0	0	0	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Norhteast			0	0	0	0	0	
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
TOTAL Transp/Disposal(0-33) Southeast		TNS	0	0	0	0	0	
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Southeast			0	0	0	0	0	
Disposal(10-33) Benifical								
Disposal(10-33) Benifical								
Disposal - 200 miles This includes both the total transportation and disposal costs for southeastern dispoal facility.	855001	TNS	0	0	0	25,650,030	25,650,030	30.00
TOTAL Disposal(10-33) Benifical	855001	TNS	0	0	0	25,650,030	25,650,030	30.00
TOTAL Disposal(10-33) Benifical	1.00	EA	0	0	0	25,650,030	25,650,030	25650030.00
Barge to Benificial					** OVERTIME **			
Deckhand for Tug	31490	HR	1,244,013	0	0	0	1,244,013	39.51
Boat Captain	31490	HR	1,474,827	0	0	0	1,474,827	46.84
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	31490	HR	0	4,087,352	0	0	4,087,352	129.80
DREDGE BARGE, 1000 TON	94469	HR	0	2,939,810	0	0	2,939,810	31.12
Per Diem	6297.94	DAY	0	0	0	460,694	460,694	73.15
Spare Tug Crew	5248.28	HR	453,168	355,934	0	0	809,102	154.17
Spare Tug Crew Per Diem days	1050.00	MDY	0	0	0	76,808	76,808	73.15
TOTAL Barge to Benificial	610715	BCY	3,172,008	7,383,097	0	537,501	11,092,606	18.16
TOTAL Barge to Benificial	610715	BCY	3,172,008	7,383,097	0	537,501	11,092,606	18.16
TOTAL Disposal(10-33) Benifical	855001	TNS	3,172,008	7,383,097	0	26,187,531	36,742,636	42.97

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Tramsportation(<10ppm) Benifical								
Transportation(<10ppm) Benifical								
Transportation for <10 ppm This includes both the total transportation and disposal costs for southeastern dispoal facility.	1403355	TNS	0	0	0	39,293,940	39,293,940	28.00
TOTAL Transportation(<10ppm) Benifical	1403355	TNS	0	0	0	39,293,940	39,293,940	28.00
TOTAL Transportation(<10ppm) Benifical	1.00	EA	0	0	0	39,293,940	39,293,940	39293940.00
TOTAL Tramsportation(<10ppm) Benifical	1403355	TNS	0	0	0	39,293,940	39,293,940	28.00
Sediment Sample & Analysis								
Analytical costs for Disposal								
Total PCB's - Sediment Assume 1 test/1000 tns	3087.77	EA	0	0	0	463,165	463,165	150.00
Total TCLP Assume 1 test/10000 tns	308.59	EA	0	0	0	370,308	370,308	1200.00
Paint Filter Test Assume 1 test/1000 tns	3087.77	EA	0	0	0	61,755	61,755	20.00
Duplicates Assume 5% of Total PCB's	154.39	EA	0	0	0	23,158	23,158	150.00
Quality Assurance Assume 5% of Total PCB's	154.39	EA	0	0	0	23,158	23,158	150.00
TOTAL Analytical costs for Disposal	2041015	BCY	0	0	0	941,545	941,545	0.46
TOTAL Analytical costs for Disposal			0	0	0	941,545	941,545	
TOTAL Sediment Sample & Analysis	3941016	TNS	0	0	0	941,545	941,545	0.24
TOTAL Transport/Landfill Fee	2651730	BCY	5,981,982	8,487,879	0	248,243,670	262,713,531	99.07
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant					** OVERTIME **			
Wastewater Treatment Operator	1500.00	HR	55,797	0	0	0	55,797	37.20
Laborer	1500.00	HR	74,944	0	0	0	74,944	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	2855.98	LB	0	0	378	0	378	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	7014.03	LB	0	0	1,169	0	1,169	0.17
TOTAL O&M at North Plant	42000000	GAL	130,741	674	81,407	0	212,821	0.01
O&M at South Plant					** OVERTIME **			
Wastewater Treatment Operator	2999.99	HR	111,595	0	0	0	111,595	37.20
Laborer	2999.99	HR	149,887	0	0	0	149,887	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	3325.17	LB	0	0	441	0	441	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	8166.33	LB	0	0	1,361	0	1,361	0.17
TOTAL O&M at South Plant	48900000	GAL	261,482	674	81,661	0	343,817	0.01
TOTAL Water Plant Operation			392,223	1,347	163,068	0	556,638	
TOTAL Water Treatment Process	1.00	EA	392,223	1,347	163,068	0	556,638	556637.85
Effluent Monitoring								
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Southern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Total Suspended Solids assume 1 test per 25000 gallons	100.00	EA	0	0	0	3,163	3,163	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	100.00	EA	0	0	0	8,223	8,223	82.22
COD assume 1 test per 25000 gallons	100.00	EA	0	0	0	2,151	2,151	21.51
PCB assume 1 test/25000 gallons	100.00	EA	0	0	0	18,975	18,975	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	100.00	EA	0	0	0	25,300	25,300	253.00
Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	23,403	23,403	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	100.00	EA	0	0	0	43,010	43,010	430.10
TOTAL Discharge at Northern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	248,446	248,446	248446.00
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	392,223	1,347	163,068	248,446	805,084	805083.85
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	276315	TNS	0	0	0	4,012,094	4,012,094	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,094	4,012,094	4012093.80
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,094	4,012,094	4012093.80
TOTAL Material 1 (topsoil type)	276315	TNS	0	0	0	4,012,094	4,012,094	14.52

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	457986	TNS	0	0	0	3,879,141	3,879,141	8.47
Graded Gravel (at Plant)	457986	TNS	0	0	0	3,879,141	3,879,141	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	7,758,283	7,758,283	7758282.84
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	7,758,283	7,758,283	7758282.84
TOTAL Material 2 (sand, gravel)	915972	TNS	0	0	0	7,758,283	7,758,283	8.47
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	4435.59	HR	211,978	0	0	0	211,978	47.79
Outside Truck Drivers, Heavy	31049	HR	1,383,786	0	0	0	1,383,786	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	31049	HR	0	352,421	0	0	352,421	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	31049	HR	0	983,383	0	0	983,383	31.67
TOTAL Truck Cycle Times-North Facility	851634	BCY	1,595,765	1,335,804	0	0	2,931,568	3.44
TOTAL Truck Cycle Times			1,595,765	1,335,804	0	0	2,931,568	
TOTAL Transportation to River	851634	CY	1,595,765	1,335,804	0	0	2,931,568	3.44
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	3787.28	HR	0	298,059	0	0	298,059	78.70
Outside Equip. Operators, Heavy	3787.28	HR	241,943	0	0	0	241,943	63.88
Laborer	7574.55	HR	361,990	0	0	0	361,990	47.79
SMALL TOOLS	7574.55	HR	0	14,609	0	0	14,609	1.93
TOTAL Loader Cycle Time - North Site	851634	BCY	603,933	312,668	0	0	916,601	1.08

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barge Loading	1.00	EA	603,933	312,668	0	0	916,601	916601.42
TOTAL Barge Loading	851634	CY	603,933	312,668	0	0	916,601	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	6479.32	HR	309,728	0	0	0	309,728	47.80
Boat Captain	6479.32	HR	367,195	0	0	0	367,195	56.67
500 TO 800 Hp TUG BOAT	6479.32	HR	0	510,604	0	0	510,604	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	10367	HR	0	190,414	0	0	190,414	18.37
Per Diem for tug crew	1295.86	MDY	0	0	0	114,699	114,699	88.51
Spare Tug Crew	1295.86	HR	135,390	106,340	0	0	241,730	186.54
Spare Tug Crew Per Diem days	260.00	MDY	0	0	0	23,013	23,013	88.51
TOTAL Reach 1	161573	BCY	812,313	807,358	0	137,712	1,757,383	10.88
Reach 2					** OVERTIME **			
Deckhand for Tug	2268.25	HR	108,428	0	0	0	108,428	47.80
Boat Captain	2268.25	HR	128,546	0	0	0	128,546	56.67
500 TO 800 Hp TUG BOAT	2268.25	HR	0	178,750	0	0	178,750	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	3240.36	HR	0	59,517	0	0	59,517	18.37
Per Diem for tug crew	453.65	MDY	0	0	0	40,153	40,153	88.51
Spare Tug Crew	324.04	HR	33,855	26,591	0	0	60,446	186.54
Spare Tug Crew Per Diem days	64.00	MDY	0	0	0	5,665	5,665	88.51
TOTAL Reach 2	40402	BCY	270,829	264,858	0	45,818	581,505	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	41388	HR	1,978,461	0	0	0	1,978,461	47.80
Boat Captain	41388	HR	2,345,547	0	0	0	2,345,547	56.67
500 TO 800 Hp TUG BOAT	41388	HR	0	3,261,605	0	0	3,261,605	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	49148	HR	0	902,735	0	0	902,735	18.37
Per Diem for tug crew	8277.64	MDY	0	0	0	732,666	732,666	88.51
Spare Tug Crew	2586.76	HR	270,262	212,273	0	0	482,534	186.54
Spare Tug Crew Per Diem days	518.00	MDY	0	0	0	45,849	45,849	88.51
TOTAL Reach 3	322527	BCY	4,594,269	4,376,613	0	778,515	9,749,397	30:23
TOTAL Barging for Shallow Backfill	524501	BCY	5,677,411	5,448,829	0	962,045	12,088,286	23.05

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 1					** OVERTIME **			
Deckhand for Tug	1154.64	HR	55,195	0	0	0	55,195	47.80
Boat Captain	1154.64	HR	65,436	0	0	0	65,436	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1154.64	HR	0	181,346	0	0	181,346	157.06
DREDGE BARGE, 1000 TON	2309.29	HR	0	86,955	0	0	86,955	37.65
Per Diem for tug crew	230.93	MDY	0	0	0	20,440	20,440	88.51
Spare Tug Crew	577.32	HR	60,318	47,376	0	0	107,694	186.54
Spare Tug Crew Per Diem days	116.00	MDY	0	0	0	10,267	10,267	88.51
TOTAL Reach 1	100774	BCY	180,949	315,676	0	30,707	527,332	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	288.72	HR	13,802	0	0	0	13,802	47.80
Boat Captain	288.72	HR	16,363	0	0	0	16,363	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	288.72	HR	0	45,346	0	0	45,346	157.06
DREDGE BARGE, 1000 TON	721.81	HR	0	27,179	0	0	27,179	37.65
Per Diem for tug crew	57.74	MDY	0	0	0	5,111	5,111	88.51
Spare Tug Crew	144.36	HR	15,083	11,847	0	0	26,929	186.54
Spare Tug Crew Per Diem days	28.00	MDY	0	0	0	2,478	2,478	88.51
TOTAL Reach 2	25199	BCY	45,247	84,372	0	7,589	137,209	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	5762.14	HR	275,445	0	0	0	275,445	47.80
Boat Captain	5762.14	HR	326,551	0	0	0	326,551	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	5762.14	HR	0	904,988	0	0	904,988	157.06
DREDGE BARGE, 1000 TON	9219.42	HR	0	347,151	0	0	347,151	37.65
Per Diem for tug crew	1152.43	MDY	0	0	0	102,003	102,003	88.51
Spare Tug Crew	1152.43	HR	120,404	94,570	0	0	214,974	186.54
Spare Tug Crew Per Diem days	230.00	MDY	0	0	0	20,358	20,358	88.51
TOTAL Reach 3	201161	BCY	722,400	1,346,709	0	122,361	2,191,469	10.89
TOTAL Barging for Deep Backfill	327133	BCY	948,596	1,746,757	0	160,657	2,856,010	8.73
TOTAL Barging to Backfill Site	851634	BCY	6,626,007	7,195,587	0	1,122,702	14,944,296	17.55
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	5427.57	HR	267,363	0	0	0	267,363	49.26
Dredge Engineer	2713.78	HR	175,393	0	0	0	175,393	64.63
Oiler	2713.78	HR	136,712	0	0	0	136,712	50.38
Excavator Dredge Operator	2713.78	HR	202,768	0	0	0	202,768	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2171.03	HR	0	300,186	0	0	300,186	138.27

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	542.76	HR	0	19,124	0	0	19,124	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2713.78	HR	0	22,467	0	0	22,467	8.28
SMALL TOOLS	2713.78	HR	0	5,234	0	0	5,234	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2713.78	HR	0	22,934	0	0	22,934	8.45
Command/Control System	2713.78	HR	0	52,457	0	0	52,457	19.33
Per Diem	1696.11	MDY	0	0	0	150,126	150,126	88.51
TOTAL Backfill - Fines	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines			782,237	422,401	0	150,126	1,354,764	
TOTAL Material Placement (Fines)	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
Material Placement (Material 2)								
Shallow Draft Backfilling					** OVERTIME **			
Deckhand for Dredge	5247.41	HR	258,489	0	0	0	258,489	49.26
Dredge Engineer	2623.70	HR	169,571	0	0	0	169,571	64.63
Oiler	2623.70	HR	132,174	0	0	0	132,174	50.38
Excavator Dredge Operator	2623.70	HR	196,038	0	0	0	196,038	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2098.96	HR	0	290,222	0	0	290,222	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	524.74	HR	0	18,490	0	0	18,490	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2623.70	HR	0	21,721	0	0	21,721	8.28
SMALL TOOLS	2623.70	HR	0	5,060	0	0	5,060	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2623.70	HR	0	22,172	0	0	22,172	8.45
Command/Control System	2623.70	HR	0	50,716	0	0	50,716	19.33
Per Diem	1639.81	MDY	0	0	0	145,142	145,142	88.51
TOTAL Shallow Draft Backfilling	327133	BCY	756,272	408,380	0	145,142	1,309,795	4.00
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shallow Draft Backfilling			756,272	408,380	0	145,142	1,309,795	
Backfill Reach 1					** OVERTIME **			
Deckhand for Dredge	3748.21	HR	184,638	0	0	0	184,638	49.26
Dredge Engineer	1874.11	HR	121,124	0	0	0	121,124	64.63
Oiler	1874.11	HR	94,412	0	0	0	94,412	50.38
Excavator Dredge Operator	1874.11	HR	140,029	0	0	0	140,029	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	1499.28	HR	0	338,529	0	0	338,529	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	374.82	HR	0	21,874	0	0	21,874	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	1874.11	HR	0	15,515	0	0	15,515	8.28
SMALL TOOLS	1874.11	HR	0	3,615	0	0	3,615	1.93
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	1874.11	HR	0	22,912	0	0	22,912	12.23
Command/Control System	1874.11	HR	0	36,226	0	0	36,226	19.33
Per Diem	1171.32	MDY	0	0	0	103,675	103,675	88.51
TOTAL Backfill Reach 1	327133	BCY	540,203	438,670	0	103,675	1,082,549	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			540,203	438,670	0	103,675	1,082,549	
TOTAL Material Placement (Material 2)	654266	EA	1,296,475	847,051	0	248,817	2,392,343	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.17
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88
TOTAL Backfilling	851634	BCY	11,656,629	10,441,035	67,728	13,304,122	35,469,514	41.65
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	22.00	AC	0	0	0	726,000	726,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	22.00	AC	0	0	0	176,000	176,000	8000.00
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	55.00	AC	0	0	0	1,815,000	1,815,000	33000.00
TOTAL Habitat & Vegetation Restoration	99.00	AC	0	0	0	2,717,000	2,717,000	27444.44
TOTAL Habitat & Vegetation Restoration			0	0	0	2,717,000	2,717,000	
TOTAL Habitat & Vegetation Restoration			0	0	0	2,717,000	2,717,000	
TOTAL Habitat & Vegetation Restoration	99.00	AC	0	0	0	2,717,000	2,717,000	27444.44
River Bank Restoration								
Shoreline Protect <2'-Hydroseed								

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Shoreline Protection <2'					** OVERTIME **			
Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr								
Boat Captain	60.44	HR	3,581	0	0	0	3,581	59.25
Deckhand	60.44	HR	3,113	0	0	0	3,113	51.50
Outside Equip. Operators, Heavy	60.44	HR	4,037	0	0	0	4,037	66.79
Laborer	60.44	HR	3,020	0	0	0	3,020	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	60.44	HR	0	1,112	0	0	1,112	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	60.44	HR	0	98	0	0	98	1.62
Hydroseeder	60.44	HR	0	651	0	0	651	10.78
SMALL TOOLS	60.44	HR	0	122	0	0	122	2.02
Seed, Mulch, Fertlizer	37778	SY	0	0	13,903	0	13,903	0.37
TOTAL Shoreline Protection <2'	37778	SY	13,751	1,984	13,903	0	29,637	0.78
TOTAL Shoreline Protect <2'-Hydroseed			13,751	1,984	13,903	0	29,637	
TOTAL Shoreline Protect <2'-Hydroseed	17000	LF	13,751	1,984	13,903	0	29,637	1.74
Shoreline Protect 2'-3' Mat								
Shoreline Protection 2'-3'					** OVERTIME **			
Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr								
Boat Captain	870.37	HR	40,765	0	0	0	40,765	46.84
Deckhand	870.37	HR	35,434	0	0	0	35,434	40.71
Labor Foreman	870.37	HR	34,892	0	0	0	34,892	40.09
Laborer	2611.11	HR	103,129	0	0	0	103,129	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	870.37	HR	0	12,662	0	0	12,662	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	870.37	HR	0	1,114	0	0	1,114	1.28
SMALL TOOLS	870.37	HR	0	1,387	0	0	1,387	1.59
Staples	69630	EA	0	0	6,482	0	6,482	0.09
Erosion Control Mat w/seeds	104444	SY	0	0	158,003	0	158,003	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	104444	SY	214,219	15,163	165,183	0	394,565	3.78
TOTAL Shoreline Protect 2'-3' Mat			214,219	15,163	165,183	0	394,565	
TOTAL Shoreline Protect 2'-3' Mat	47000	LF	214,219	15,163	165,183	0	394,565	8.40

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Shoreline Protect >3' Logs								
Shoreline Protection >3' ** OVERTIME ** Assume 50% reduction in productivity due to site accessibility, underwater work, and travel between sites. Therefore, 2500lf/day * .50 = 1250lf/day/10hr/day = 125lf/hr								
Boat Captain	216.00	HR	10,116	0	0	0	10,116	46.84
Deckhand	216.00	HR	8,793	0	0	0	8,793	40.71
Labor Foreman	216.00	HR	8,659	0	0	0	8,659	40.09
Laborer	648.00	HR	25,593	0	0	0	25,593	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	216.00	HR	0	3,142	0	0	3,142	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	216.00	HR	0	277	0	0	277	1.28
SMALL TOOLS	216.00	HR	0	344	0	0	344	1.59
Stakes	18000	EA	0	0	10,473	0	10,473	0.58
Biologs - 12" dia	27000	LF	0	0	157,098	0	157,098	5.82
BioLogs - 16" dia	27000	LF	0	0	188,517	0	188,517	6.98
TOTAL Shoreline Protection >3'	27000	LF	53,162	3,763	356,088	0	413,013	15.30
TOTAL Shoreline Protect >3' Logs			53,162	3,763	356,088	0	413,013	
TOTAL Shoreline Protect >3' Logs	27000	LF	53,162	3,763	356,088	0	413,013	15.30
TOTAL River Bank Restoration	91000	LF	281,131	20,910	535,174	0	837,216	9.20
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	12343	HR	1,127,078	0	0	0	1,127,078	91.31
Engineers, Project	12343	HR	787,407	0	0	0	787,407	63.79
Inspectors	12343	HR	364,188	0	0	0	364,188	29.51
Engineers, Quality Control	12343	HR	599,125	0	0	0	599,125	48.54
Clerks, Typists, Bookkeepers & Receptionist	9874.25	HR	257,074	0	0	0	257,074	26.03
Per Diem 5men/10hr/day = .5 multiplier	6171.41	MDY	0	0	0	451,438	451,438	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	343.54	EA	0	0	0	171,771	171,771	500.00
TOTAL Field Office Labor Requirements			3,134,871	0	0	623,209	3,758,080	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	11,582	0	0	11,582	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	71,506	0	0	71,506	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	24686	HR	0	62,021	0	0	62,021	2.51
TOTAL Field Equipment Requirements	48.00	MO	0	145,109	0	0	145,109	3023.10
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL HTRW/Remediation/Construction	2651730	BCY	79,908,330	66,894,508	4,966,963	310,396,246	462,166,047	174.29
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89

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) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00	EA	0	0	0	0	0	0.00
Cost included in float surveys								
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp cost of one boat included with weekly monitoring	2.00	EA	0	2,694	0	0	2,694	1347.23
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9,14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson-								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63

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) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.18
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67
TOTAL Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Shallow Sediment Inventory (5YR)								
Labor/Equipment								
Chemist	525.00	HR	36,399	0	0	0	36,399	69.33
Chemist, Jr.	1050.00	HR	64,221	0	0	0	64,221	61.16
Sampling Technician	1050.00	HR	44,705	0	0	0	44,705	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	525.00	HR	0	24,994	0	0	24,994	47.61
TOTAL Labor/Equipment	500.00	HR	145,326	24,994	0	0	170,320	340.64
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	263.00	EA	0	0	29,036	0	29,036	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	250.00	EA	0	0	172,048	0	172,048	688.19
TOTAL Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66

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O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Annual Reporting (1 YR)								
Lbr/Matls for Quarterly Report								
Project Manager	24.00	HR	2,772	0	0	0	2,772	115.51
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00	HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	527	0	0	0	527	32.93
Reproduction Operators	8.00	HR	169	0	0	0	169	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00	WK	12,146	0	383	0	12,529	12529.22
Lbr/Matls for Annual Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00	WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
TOTAL Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
Geophysical Surveys 3/10/10 (d)								
Labor/Equipment								
Chemist	500.00	HR	34,666	0	0	0	34,666	69.33
Survey Crew	50.00	DAY	205,436	0	0	0	205,436	4108.72
Post Processing	87.50	HR	10,111	0	0	0	10,111	115.56
Per Diem	50.00	DAY	0	0	19,873	0	19,873	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	500.00	HR	253,808	0	19,873	0	273,681	547.36
TOTAL Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
TOTAL O & M	1.00	EA	1,260,733	91,249	982,123	650,000	2,984,106	2984105.60
TOTAL Alt Removal 3/10/Select-Benificl	2651730	BCY	84,548,943	67,706,070	13,166,583	321,546,246	486,967,842	183.64

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APPENDIX I

COST ESTIMATES

I.9 Detailed Estimate - Alternative REM-0/0/3

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Removal 0/0/3R								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 0/0/3(d)								
Labor/Equipment								
Chemist	15060	HR	1,044,141	0	0	0	1,044,141	69.33
Chemist, Jr.	15060	HR	921,112	0	0	0	921,112	61.16
Sampling Technician	15060	HR	641,204	0	0	0	641,204	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15060	HR	0	716,980	0	0	716,980	47.61
TOTAL Labor/Equipment	15060	HR	2,606,457	716,980	0	0	3,323,437	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22590	EA	0	0	5,985,709	0	5,985,709	264.97
Cesium - 137/Beryllium -7	7530.00	EA	0	0	831,349	0	831,349	110.40
Organic Carbon	2259.00	EA	0	0	166,270	0	166,270	73.60
Cation Exchange Capacity	2259.00	EA	0	0	166,270	0	166,270	73.60
TOTAL Analytical	7530.00	EA	0	0	7,149,597	0	7,149,597	949.48
TOTAL Sediment Inventory 0/0/3(d)	1506.00	DAY	2,606,457	716,980	7,164,318	0	10,487,755	6963.98
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Survey Crew	117.00	DAY	480,720	0	0	0	480,720	4108.72
Post Processing	204.75	HR	23,660	0	0	0	23,660	115.56
Per Diem	117.00	DAY	0	0	46,503	0	46,503	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1170.00	HR	589,094	0	46,503	0	635,597	543.25
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,703,051	716,980	7,210,821	10,500,000	22,130,852	22130851.50
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	56.00	MON	0	0	32,692	0	32,692	583.79
TOTAL Health & Safety Equipment	56.00	MO	0	0	32,692	0	32,692	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25) Unit Measure Of	480.00	EA	0	0	91,047	0	91,047	189.68
Boot Covers, Tyvek (Bag Of 10Pr) Unit Measure Of	858.00	EA	0	0	11,482	0	11,482	13.38
Gloves, Latex (Box Of 100) (Single Hand) Unit Measure Of	60.00	EA	0	0	846	0	846	14.10
Pvc/Nitrile Blend (Package Of 12 Pr) Unit Measure	60.00	EA	0	0	3,613	0	3,613	60.21
TOTAL Health & Safety Stores	240.00	WKS	0	0	109,802	0	109,802	457.51

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	28800	HR	1,721,759	0	0	0	1,721,759	59.78
Industrial Hygiene Technician	28800	HR	1,110,812	0	0	0	1,110,812	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1440.00	MDY	0	0	0	105,336	105,336	73.15
Air Fare (Round Trip)	80.00	EA	0	0	0	40,000	40,000	500.00
TOTAL Health & Safety Labor			2,832,571	0	0	145,336	2,977,907	
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn,trailer,8'x36',2 showers	112.00	MO	0	0	286,733	0	286,733	2560.11
TOTAL Health & Safety Decon Trailer	112.00	MO	0	0	286,733	0	286,733	2560.11
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements								
Project Manager	14400	HR	1,314,924	0	0	0	1,314,924	91.31
General Superintendents (South)	14400	HR	754,797	0	0	0	754,797	52.42
General Superintendents (North)	14400	HR	754,797	0	0	0	754,797	52.42
Engineers, Project	14400	HR	918,642	0	0	0	918,642	63.79
Chemist	14400	HR	789,232	0	0	0	789,232	54.81
Industrial Hygiene Technician	14400	HR	555,406	0	0	0	555,406	38.57
Engineers, Quality Control	14400	HR	698,979	0	0	0	698,979	48.54
Schedulers	14400	HR	698,979	0	0	0	698,979	48.54
Clerks, Typists, Bookkeepers & Receptionist	11520	HR	299,919	0	0	0	299,919	26.03
Janitors	11520	HR	96,852	0	0	0	96,852	8.41
Per Diem	11520	MDY	0	0	0	842,685	842,685	73.15
8men/10hr/day = .8 multiplier								
Air Fare (Round Trip)	640.80	EA	0	0	0	320,399	320,399	500.00
8 men/3wks = 2.67 multiplier								
TOTAL Field Office Labor Requirements			6,882,527	0	0	1,163,084	8,045,611	
Home Office Labor Requirements								
Program Managers	960.00	HR	90,717	0	0	0	90,717	94.50
Operations Managers	1920.00	HR	71,092	0	0	0	71,092	37.03
Certified Industrial Hygienist	480.00	HR	32,862	0	0	0	32,862	68.46
Contract Administrators	960.00	HR	35,194	0	0	0	35,194	36.66
Purchasing Agents, Chief	1920.00	HR	70,389	0	0	0	70,389	36.66
Engineers, Quality Control	960.00	HR	46,599	0	0	0	46,599	48.54
Chief Scheduler & Planning Eng.	480.00	HR	16,847	0	0	0	16,847	35.10
Accountants	960.00	HR	19,421	0	0	0	19,421	20.23
Operations Managers	480.00	HR	17,773	0	0	0	17,773	37.03
Clerks, Typists, Bookkeepers & Receptionist	480.00	HR	12,497	0	0	0	12,497	26.03
Air Fare (Round Trip)	240.00	EA	0	0	0	120,000	120,000	500.00
Per Diem & Lodging	480.00	DAY	0	0	0	63,840	63,840	133.00
Car Rental (Air Port to Site)	480.00	DAY	0	0	0	26,400	26,400	55.00
TOTAL Home Office Labor Requirements	240.00	WKS	413,390	0	0	210,240	623,630	2598.47
Field Equipment Requirements								
Trailer: Contractor	112.00	MO	0	0	37,145	0	37,145	331.65
Trailer: Contracting Officer	112.00	MO	0	0	37,145	0	37,145	331.65
Trailer: Storage	112.00	MO	0	0	20,202	0	20,202	180.37
Furniture Rental	224.00	MO	0	0	45,617	0	45,617	203.65
Telephone System Rental	224.00	MO	0	0	41,707	0	41,707	186.19
Sanitary Facility: Temporary	224.00	MO	0	0	23,460	0	23,460	104.73
Portable Radios (4 Ea)	224.00	WKS	0	0	13,033	0	13,033	58.18
Personal Computer	224.00	MO	0	0	28,673	0	28,673	128.01
Printer for PC	224.00	MO	0	0	16,943	0	16,943	75.64
Copy Machine	224.00	MO	0	0	43,010	0	43,010	192.01
Fax Machine	224.00	MO	0	0	5,213	0	5,213	23.27

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	56.00	MO	0	13,512	0	0	13,512	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	56.00	MO	0	83,423	0	0	83,423	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	56.00	MO	0	17,939	0	0	17,939	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	56.00	MO	0	104,394	0	0	104,394	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	28800	HR	0	72,358	0	0	72,358	2.51
TOTAL Field Equipment Requirements	56.00	MO	0	291,626	314,009	0	605,636	10814.93
Field Support Utilities								
Electricity	112.00	MO	0	0	0	21,280	21,280	190.00
Telephone (2 Lines)	112.00	MO	0	0	0	28,000	28,000	250.00
Bottled Water Service	480.00	WKS	0	0	0	21,600	21,600	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	112.00	MO	0	0	0	46,480	46,480	415.00
TOTAL Field Support Utilities	240.00	WKS	0	0	0	117,360	117,360	489.00
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	112.00	WK	0	0	4,562	0	4,562	40.73
Water Kegs (5 Gallon)	60.00	EA	0	0	1,393	0	1,393	23.22
Water Cups (Conical)	4800.00	BOX	0	0	22,064	0	22,064	4.60
Co2 Extinguisher (10Lb)	40.00	EA	0	0	6,565	0	6,565	164.11
Video Tape	240.00	EA	0	0	1,257	0	1,257	5.24
Camera Film and Development	55.00	MO	0	0	1,920	0	1,920	34.91
TOTAL Field Support Stores/Supplies	240.00	WKS	0	0	37,760	0	37,760	157.33
TOTAL Construction Management			7,341,922	291,626	351,769	1,490,684	9,476,001	
TOTAL Construction Management			7,341,922	291,626	351,769	1,490,684	9,476,001	
TOTAL Construction Management	40.00	MON	7,341,922	291,626	351,769	1,490,684	9,476,001	236900.03
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	6.00	EA	0	0	0	510,000	510,000	85000.00
Long Arm Purchase	4.00	EA	0	0	0	312,000	312,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	4,659	0	0	4,659	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Shallow Dredge Crew	4.00	HR	33,573	9,794	0	0	43,367	10841.80
Deep Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	160.00	HR	0	7,717	0	0	7,717	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Deep Dredge Crew	4.00	CRW	33,573	13,373	0	0	46,946	11736.57
North Barge Crew Rate								
Deckhand for Tug	200.00	HR	6,972	0	0	0	6,972	34.86
Boat Captain	200.00	HR	8,232	0	0	0	8,232	41.16
500 TO 800 Hp TUG BOAT	200.00	HR	0	13,564	0	0	13,564	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	200.00	HR	0	3,161	0	0	3,161	15.80
TOTAL North Barge Crew Rate	5.00	CRW	15,203	16,725	0	0	31,928	6385.58
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	4.00	CRW	12,163	26,372	0	0	38,534	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 - $4000 for seals = $49,300. Bucket of similar value was selected from database.	80.00	HR	0	845	0	0	845	10.56
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.48
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			156,902	122,610	0	0	279,512	
TOTAL Equipment Mobilization	1.00	EA	156,902	122,610	0	0	279,512	279512.38

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MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	1920.00	HR	68,910	0	0	0	68,910	35.89
Dredge Engineer	960.00	HR	45,194	0	0	0	45,194	47.08
Oiler	960.00	HR	35,223	0	0	0	35,223	36.69
Excavator Dredge Operator	960.00	HR	52,115	0	0	0	52,115	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	960.00	HR	0	27,956	0	0	27,956	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	960.00	HR	0	6,859	0	0	6,859	7.14
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	960.00	HR	0	7,007	0	0	7,007	7.30
Command/Control System	960.00	HR	0	15,336	0	0	15,336	15.98
TOTAL Shallow Dredge Crew	4.00	CRW	201,441	58,763	0	0	260,203	65050.82
Deep Dredge Crew								
Deckhand for Dredge	1920.00	HR	68,910	0	0	0	68,910	35.89
Dredge Engineer	960.00	HR	45,194	0	0	0	45,194	47.08
Oiler	960.00	HR	35,223	0	0	0	35,223	36.69
Excavator Dredge Operator	960.00	HR	52,115	0	0	0	52,115	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	960.00	HR	0	46,300	0	0	46,300	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	960.00	HR	0	6,859	0	0	6,859	7.14
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	960.00	HR	0	10,137	0	0	10,137	10.56
Command/Control System	960.00	HR	0	15,336	0	0	15,336	15.98
TOTAL Deep Dredge Crew	4.00	HR	201,441	80,237	0	0	281,678	70419.42
North Barge Crew Rate								
Deckhand for Tug	1200.00	HR	41,829	0	0	0	41,829	34.86
Boat Captain	1200.00	HR	49,390	0	0	0	49,390	41.16
500 TO 800 Hp TUG BOAT	1200.00	HR	0	81,383	0	0	81,383	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	1200.00	HR	0	18,966	0	0	18,966	15.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	5.00	CRW	91,219	100,349	0	0	191,568	38313.50
South Barge Crew Rate								
Deckhand for Tug	960.00	HR	33,464	0	0	0	33,464	34.86
Boat Captain	960.00	HR	39,512	0	0	0	39,512	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	960.00	HR	0	128,357	0	0	128,357	133.70
DREDGE BARGE, 1000 TON	960.00	HR	0	29,875	0	0	29,875	31.12
TOTAL South Barge Crew Rate	4.00	CRW	72,975	158,231	0	0	231,206	57801.57
Spare Tug Crew Rate								
Spare Tug Crew	480.00	HR	41,446	32,553	0	0	73,999	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	41,446	32,553	0	0	73,999	36999.66
North Unloading Crew								
Outside Equip. Operators, Heavy	240.00	HR	11,331	0	0	0	11,331	47.21
Master Mechanic	240.00	HR	11,818	0	0	0	11,818	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	240.00	HR	0	28,383	0	0	28,383	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	240.00	HR	0	1,752	0	0	1,752	7.30
TOTAL North Unloading Crew	40.00	HR	23,149	30,135	0	0	53,284	1332.10
South Unloading Crew								
Master Mechanic	240.00	HR	11,818	0	0	0	11,818	49.24
Outside Equip. Operators, Heavy	240.00	HR	11,331	0	0	0	11,331	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	240.00	HR	0	46,372	0	0	46,372	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	240.00	HR	0	2,534	0	0	2,534	10.56
TOTAL South Unloading Crew	40.00	HR	23,149	48,907	0	0	72,055	1801.38

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	720.00	HR	23,613	0	0	0	23,613	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	720.00	HR	0	2,377	0	0	2,377	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	720.00	HR	0	19,268	0	0	19,268	26.76
TOTAL North Truck Crew	40.00	HR	25,009	21,645	0	0	46,654	1166.35
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	720.00	HR	23,613	0	0	0	23,613	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	720.00	HR	0	7,039	0	0	7,039	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	720.00	HR	0	19,268	0	0	19,268	26.76
TOTAL South Truck Crew	40.00	HR	25,009	26,307	0	0	51,316	1282.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	480.00	HR	0	24,164	0	0	24,164	50.34
Outside Equip. Operators, Heavy	480.00	HR	22,662	0	0	0	22,662	47.21
Laborer	960.00	HR	33,508	0	0	0	33,508	34.90
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
TOTAL Boxcar Loading Crew	40.00	HR	56,170	25,770	0	0	81,939	2048.48
TOTAL Equipment Mobilization			761,006	582,896	0	0	1,343,902	
Process Equipment								
Master Mechanic	1920.00	HR	94,543	0	0	0	94,543	49.24
Outside Equip. Operators, Heavy	1920.00	HR	90,646	0	0	0	90,646	47.21
TOTAL Process Equipment	160.00	HR	185,189	0	0	0	185,189	1157.43
TOTAL Process Equipment Start Up			185,189	0	0	0	185,189	
TOTAL Annual Remobilization & Startup	1.00	EA	946,196	582,896	0	0	1,529,092	1529091.87
Annual Demobilization								
Shallow Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	480.00	HR	0	13,978	0	0	13,978	29.12

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket	480.00	HR	0	3,503	0	0	3,503	7.30
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Shallow Dredge Crew	4.00	CRW	100,720	29,381	0	0	130,102	32525.41
Deep Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	480.00	HR	0	23,150	0	0	23,150	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket	480.00	HR	0	5,068	0	0	5,068	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Deep Dredge Crew	4.00	CRW	100,720	40,118	0	0	140,839	35209.71
North Barge Crew Rate								
Deckhand for Tug	600.00	HR	20,915	0	0	0	20,915	34.86
Boat Captain	600.00	HR	24,695	0	0	0	24,695	41.16
500 TO 800 Hp TUG BOAT	600.00	HR	0	40,692	0	0	40,692	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	600.00	HR	0	9,483	0	0	9,483	15.80
TOTAL North Barge Crew Rate	5.00	CRW	45,609	50,174	0	0	95,784	19156.75
South Barge Crew Rate								
Deckhand for Tug	480.00	HR	16,732	0	0	0	16,732	34.86
Boat Captain	480.00	HR	19,756	0	0	0	19,756	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	480.00	HR	0	64,178	0	0	64,178	133.70
DREDGE BARGE, 1000 TON	480.00	HR	0	14,937	0	0	14,937	31.12
TOTAL South Barge Crew Rate	4.00	CRW	36,488	79,116	0	0	115,603	28900.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate								
Spare Tug Crew	240.00	HR	20,723	16,277	0	0	37,000	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	20,723	16,277	0	0	37,000	18499.83
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00	HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00	HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00	HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00	HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00	HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization			406,848	316,909	0	0	723,757	
TOTAL Annual Demobilization	1.00	EA	406,848	316,909	0	0	723,757	723756.76
Final Demob Site Restoration								
Shallow Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	2,330	0	0	2,330	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket	80.00	HR	0	584	0	0	584	7.30
Capital cost of bucket is approx. $30,500 - $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	80.00	HR	0	1,278	0	0	1,278	15.98
TOTAL Shallow Dredge Crew	4.00	HR	16,787	4,897	0	0	21,684	5420.90
Deep Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	80.00	HR	0	3,858	0	0	3,858	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of								

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.								
Command/Control System	80.00	HR	0	1,278	0	0	1,278	15.98
TOTAL Deep Dredge Crew	4.00	HR	16,787	6,686	0	0	23,473	5868.28
North Barge Crew Rate								
Deckhand for Tug	100.00	HR	3,486	0	0	0	3,486	34.86
Boat Captain	100.00	HR	4,116	0	0	0	4,116	41.16
500 TO 800 Hp TUG BOAT	100.00	HR	0	6,782	0	0	6,782	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	100.00	HR	0	1,580	0	0	1,580	15.80
TOTAL North Barge Crew Rate	5.00	HR	7,602	8,362	0	0	15,964	3192.79
South Barge Crew Rate								
Deckhand for Tug	80.00	HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00	HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00	HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00	HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	4.00	HR	6,081	13,186	0	0	19,267	4816.80
Spare Tug Crew Rate								
Spare Tug Crew	40.00	HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00	HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew								
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00	HR	0	4,731	0	0	4,731	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	40.00	HR	0	292	0	0	292	7.30
TOTAL North Unloading Crew	80.00	HR	3,858	5,023	0	0	8,881	111.01

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			78,451	61,305	0	0	139,756	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	78,451	61,305	0	500,000	639,756	639756.19
TOTAL Mobilization/Demobilization	1.00	EA	1,588,398	1,083,719	0	1,338,560	4,010,677	4010677.20

RW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	107.25	HR	0	877	0	0	877	8.18
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

402401

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Cover Building #2 This building is a rain cover for railroad cars.	5000.00	SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00	SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000	SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

402403

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL North Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69

402404

CRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy	40.00	HR	2,602	0	0	0	2,602	65.04
1 - excavator								
1 - Front end Loader								
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy	204.80	HR	13,321	0	0	0	13,321	65.04
1 - dozer								
1 - Front end Loader								
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Repair Road/Work Area	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	600.00	LF	31,977	0	0	103,488	135,465	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	100.00	LF	5,330	0	0	12,320	17,650	176.50
Hopper - Mechanized-200 CY	4.00	EA	0	0	0	197,120	197,120	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.	2.00	EA	0	0	0	1,232,000	1,232,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	1,232,000	1,232,000	1232000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	1,232,000	1,232,000	1232000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl					** OVERTIME **			
Storage Building #1 This building is a rain cover for material.	30000	SF	0	0	0	2,217,600	2,217,600	73.92
Cover Building #2 This building is a rain cover for railroad cars.	4000.00	SF	0	0	0	295,680	295,680	73.92
Concrete Slab and Hardstand	10000	SY	0	0	0	616,000	616,000	61.60
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	3,129,280	3,129,280	3129280.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	3,129,280	3,129,280	3129280.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	3,129,280	3,129,280	3129280.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,665	0	0	8,624	11,289	225.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	152,250	0	0	0	152,250	152250.00
Skid Mounted WWTP	1.00	EA	0	0	0	350,000	350,000	350000.00
Influent Tanks, no pipe/pumps, 100000 gal, steel, gnd lvl, incl fdn	2.00	EA	0	0	0	200,000	200,000	100000.00
Effluent Tanks, no pipe/pumps, 100000 gal, steel, gnd lvl, incl fdn	3.00	EA	0	0	0	300,000	300,000	100000.00
TOTAL South Plant - 100 gpm			152,250	0	0	850,000	1,002,250	
TOTAL Water Treatment Facility	1.00	EA	152,250	0	0	850,000	1,002,250	1002250.00

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Testing Laboratory								
Capital Costs					** OVERTIME **			
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	315,899	630,628	419,748	6,976,195	8,342,470	8342470.06
Dredging								
Deep Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	60382	HR	2,872,190	0	0	0	2,872,190	47.57
Dredge Engineer	30191	HR	1,884,057	0	0	0	1,884,057	62.40
Oiler	30191	HR	1,468,506	0	0	0	1,468,506	48.64
Excavator Dredge Operator	30191	HR	2,176,653	0	0	0	2,176,653	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	25878	HR	0	5,696,184	0	0	5,696,184	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	4313.02	HR	0	251,699	0	0	251,699	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	30191	HR	0	242,095	0	0	242,095	8.02
SMALL TOOLS	30191	HR	0	56,203	0	0	56,203	1.86
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	30191	HR	0	357,300	0	0	357,300	11.83
Command/Control System	30191	HR	0	583,588	0	0	583,588	19.33
Per Diem	15096	MDY	0	0	0	1,336,132	1,336,132	88.51
TOTAL Dredging Reach 1	1882065	BCY	8,401,406	7,187,069	0	1,336,132	16,924,607	8.99
TOTAL Reach #1	1882065	BCY	8,401,406	7,187,069	0	1,336,132	16,924,607	8.99

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	16947	HR	806,136	0	0	0	806,136	47.57
Dredge Engineer	8473.73	HR	528,797	0	0	0	528,797	62.40
Oiler	8473.73	HR	412,165	0	0	0	412,165	48.64
Excavator Dredge Operator	8473.73	HR	610,920	0	0	0	610,920	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	7263.20	HR	0	1,598,745	0	0	1,598,745	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	1210.53	HR	0	70,644	0	0	70,644	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	8473.73	HR	0	67,949	0	0	67,949	8.02
SMALL TOOLS	8473.73	HR	0	15,775	0	0	15,775	1.86
Command/Control System	8473.73	HR	0	163,795	0	0	163,795	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	8473.73	HR	0	100,283	0	0	100,283	11.83
Per Diem	4236.87	MDY	0	0	0	375,011	375,011	88.51
TOTAL Dredging Reach 2	528238	BCY	2,358,017	2,017,190	0	375,011	4,750,219	8.99
TOTAL Reach #2	528238	BCY	2,358,017	2,017,190	0	375,011	4,750,219	8.99
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	7442.10	HR	353,997	0	0	0	353,997	47.57
Dredge Engineer	3721.05	HR	232,210	0	0	0	232,210	62.40
Oiler	3721.05	HR	180,993	0	0	0	180,993	48.64
Excavator Dredge Operator	3721.05	HR	268,272	0	0	0	268,272	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	3189.47	HR	0	702,053	0	0	702,053	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	531.58	HR	0	31,022	0	0	31,022	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3721.05	HR	0	29,838	0	0	29,838	8.02
SMALL TOOLS	3721.05	HR	0	6,927	0	0	6,927	1.86
Command/Control System	3721.05	HR	0	71,927	0	0	71,927	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3721.05	HR	0	44,037	0	0	44,037	11.83
Per Diem	1860.53	MDY	0	0	0	164,678	164,678	88.51
TOTAL Dredging Reach 3	231964	BCY	1,035,471	885,804	0	164,678	2,085,953	8.99
TOTAL Reach #3	231964	BCY	1,035,471	885,804	0	164,678	2,085,953	8.99
TOTAL Deep Draft Dredging	2642267	BCY	11,794,895	10,090,063	0	1,875,822	23,760,780	8.99

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Shallow Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	14189	HR	674,943	0	0	0	674,943	47.57
Dredge Engineer	7094.70	HR	442,739	0	0	0	442,739	62.40
Oiler	7094.70	HR	345,088	0	0	0	345,088	48.64
Excavator Dredge Operator	7094.70	HR	511,497	0	0	0	511,497	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	6081.17	HR	0	819,989	0	0	819,989	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1013.53	HR	0	35,712	0	0	35,712	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	7094.70	HR	0	56,891	0	0	56,891	8.02
SMALL TOOLS	7094.70	HR	0	13,207	0	0	13,207	1.86
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	7094.70	HR	0	58,039	0	0	58,039	8.18
Command/Control System	7094.70	HR	0	137,139	0	0	137,139	19.33
Per Diem	3547.35	MDY	0	0	0	313,981	313,981	88.51
TOTAL Dredging Reach 1	147424	BCY	1,974,268	1,120,978	0	313,981	3,409,227	23.13
TOTAL Reach 1	147424	BCY	1,974,268	1,120,978	0	313,981	3,409,227	23.13
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	22583	HR	1,074,194	0	0	0	1,074,194	47.57
Dredge Engineer	11291	HR	704,634	0	0	0	704,634	62.40
Oiler	11291	HR	549,219	0	0	0	549,219	48.64
Excavator Dredge Operator	11291	HR	814,065	0	0	0	814,065	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	9678.38	HR	0	1,305,039	0	0	1,305,039	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1613.06	HR	0	56,838	0	0	56,838	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	11291	HR	0	90,543	0	0	90,543	8.02
SMALL TOOLS	11291	HR	0	21,020	0	0	21,020	1.86
Command/Control System	11291	HR	0	218,261	0	0	218,261	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	11291	HR	0	92,371	0	0	92,371	8.18
Per Diem	5645.72	MDY	0	0	0	499,711	499,711	88.51
TOTAL Dredging Reach 2	234630	BCY	3,142,111	1,784,072	0	499,711	5,425,894	23.13
TOTAL Reach 2	234630	BCY	3,142,111	1,784,072	0	499,711	5,425,894	23.13

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	43927	HR	2,089,466	0	0	0	2,089,466	47.57
Dredge Engineer	21964	HR	1,370,617	0	0	0	1,370,617	62.40
Oiler	21964	HR	1,068,311	0	0	0	1,068,311	48.64
Excavator Dredge Operator	21964	HR	1,583,476	0	0	0	1,583,476	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	18826	HR	0	2,538,494	0	0	2,538,494	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	3137.65	HR	0	110,557	0	0	110,557	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	21964	HR	0	176,120	0	0	176,120	8.02
SMALL TOOLS	21964	HR	0	40,887	0	0	40,887	1.86
Command/Control System	21964	HR	0	424,549	0	0	424,549	19.33
Environmental Bucket	21964	HR	0	179,675	0	0	179,675	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Per Diem	10982	MDY	0	0	0	972,012	972,012	88.51
TOTAL Dredging Reach 3	456390	BCY	6,111,870	3,470,283	0	972,012	10,554,166	23.13
TOTAL Reach 3	456390	BCY	6,111,870	3,470,283	0	972,012	10,554,166	23.13
TOTAL Shallow Draft Dredging	838444	BCY	11,228,250	6,375,333	0	1,785,704	19,389,287	23.13
Land Locked Area								
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	27459	HR	1,306,134	0	0	0	1,306,134	47.57
Dredge Engineer	13729	HR	856,778	0	0	0	856,778	62.40
Oiler	13729	HR	667,806	0	0	0	667,806	48.64
Excavator Dredge Operator	13729	HR	989,837	0	0	0	989,837	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	11768	HR	0	1,586,823	0	0	1,586,823	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1961.35	HR	0	69,110	0	0	69,110	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	13729	HR	0	33,957	0	0	33,957	2.47
SMALL TOOLS	13729	HR	0	25,559	0	0	25,559	1.86
Command/Control System	13729	HR	0	265,387	0	0	265,387	19.33
Environmental Bucket	13729	MDY	0	112,316	0	0	112,316	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Per Diem	6864.74	MDY	0	0	0	607,609	607,609	88.51
TOTAL Dredging Reach 2	342349	BCY	3,820,555	2,093,152	0	607,609	6,521,315	19.05

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shallow Draft Dredging	342349	BCY	3,820,555	2,093,152	0	607,609	6,521,315	19.05
Reach 2					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	44130	HR	0	810,567	0	0	810,567	18.37
Spare Tug Crew	7355.08	HR	768,449	319,034	0	0	1,087,483	147.85
Spare Tug Crew Per Diem days	1472.00	MDY	0	0	0	130,289	130,289	88.51
TOTAL Reach 2	342349	BCY	768,449	1,129,601	0	130,289	2,028,339	5.92
TOTAL Small Barging to Transfer Site			768,449	1,129,601	0	130,289	2,028,339	
Transfer of Mat'l to Large barge					** OVERTIME **			
Oiler	6922.43	HR	348,731	0	0	0	348,731	50.38
Excavator Dredge Operator	6922.43	HR	517,230	0	0	0	517,230	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	5537.94	HR	0	765,726	0	0	765,726	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1384.49	HR	0	48,783	0	0	48,783	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	6922.43	HR	0	17,513	0	0	17,513	2.53
PUMP SUBM, 4"D, SKID W/P-UNIT INCLUDES POWER UNIT	6922.43	HR	0	36,594	0	0	36,594	5.29
SMALL TOOLS	6922.43	HR	0	13,351	0	0	13,351	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	6922.43	HR	0	58,500	0	0	58,500	8.45
Per Diem	1384.49	MDY	0	0	0	122,543	122,543	88.51
TOTAL Transfer of Mat'l to Large barge	342349	BCY	865,961	940,468	0	122,543	1,928,972	5.63
TOTAL Transfer of Mat'l to 200T Barge			865,961	940,468	0	122,543	1,928,972	
Mobilization								
Mob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Clearing and Grubbing	2.00	AC	0	0	0	12,100	12,100	6050.00
Mob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Mob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40	2.00	EA	0	0	0	60,984	60,984	30492.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
hours = $7200 . Total mob = $25,200 x 2 barges = $50,400								
Mob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Mob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00
TOTAL Mobilization			0	0	0	176,176	176,176	
Demobilization								
Demob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Demob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Demob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00	EA	0	0	0	60,984	60,984	30492.00
Demob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00	EA	0	0	0	91,476	91,476	30492.00
Demob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00	EA	0	0	0	5,808	5,808	5808.00

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Demobilization			0	0	0	164,076	164,076	
TOTAL Mobilization/Demobilization			0	0	0	340,252	340,252	
TOTAL Land Locked Area	342349	BCY	5,454,965	4,163,221	0	1,200,692	10,818,879	31.60
Turbidity Curtain/Resuspension								
Shallow Turbidity Control								
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	37800	HR	0	1,727,962	0	0	1,727,962	45.71
SMALL TOOLS	3779.99	HR	0	7,648	0	0	7,648	2.02
Deckhand for Tug	37800	HR	1,594,323	0	0	0	1,594,323	42.18
Boat Captain	37800	HR	1,882,476	0	0	0	1,882,476	49.80
TOTAL Shallow Turbidity Control	3.00	CRW	3,476,798	1,735,610	14,081	0	5,226,489	1742162.99
Deep Turbidity Control								
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	4600.00	LF	0	0	84,202	0	84,202	18.30
Anchoring System	92.00	EA	0	0	31,090	0	31,090	337.93
Mooring Buoy Light w/Photocell	46.00	EA	0	0	8,096	0	8,096	176.01
Freight to Site	2.30	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	28980	HR	0	1,324,771	0	0	1,324,771	45.71
SMALL TOOLS	2897.99	HR	0	5,863	0	0	5,863	2.02
Deckhand for Tug	28980	HR	1,222,314	0	0	0	1,222,314	42.18
Boat Captain	28980	HR	1,443,231	0	0	0	1,443,231	49.80
TOTAL Deep Turbidity Control	2.30	CRW	2,665,545	1,330,634	123,388	0	4,119,568	1791116.61
TOTAL Turbidity Control			6,142,344	3,066,244	137,469	0	9,346,057	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	6,142,344	3,066,244	137,469	0	9,346,057	9346057.16
TOTAL Dredging	3823060	BCY	34,620,454	23,694,861	137,469	4,862,219	63,315,003	16.56
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	15652	HR	1,085,186	0	0	0	1,085,186	69.33
Sampling Technician	15652	HR	666,409	0	0	0	666,409	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	15652	HR	0	212,945	0	0	212,945	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,751,595	214,292	0	0	1,965,887	1080.16

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sampling Equipment/Materials	8.00	LS	0	0	11,777	0	11,777	1472.06
TOTAL Materials			0	0	11,777	0	11,777	
Congener Specific PCB's	3328.00	EA	0	0	881,826	0	881,826	264.97
Total Suspended Solids	3328.00	EA	0	0	122,476	0	122,476	36.80
Fraction Organic Carbon On TSS	3328.00	EA	0	0	244,952	0	244,952	73.60
TOTAL Analytical	416.00	EA	0	0	1,249,253	0	1,249,253	3003.01
TOTAL Weekly Field Sampling	52.00	WKS	1,751,595	214,292	1,261,029	0	3,226,916	62056.08
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores- C/O/3 (dg)								
Chemist	7430.00	HR	515,137	0	0	0	515,137	69.33
Chemist, Jr.	7430.00	HR	454,440	0	0	0	454,440	61.16
Sampling Technician	7430.00	HR	316,344	0	0	0	316,344	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	7430.00	HR	0	353,729	0	0	353,729	47.61
TOTAL Labor/Equipment	7430.00	HR	1,285,921	353,729	0	0	1,639,650	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	9362.00	EA	0	0	275,629	0	275,629	29.44
Total PCB's	2341.00	EA	0	0	620,299	0	620,299	264.97
Cesium - 137	2341.00	EA	0	0	258,458	0	258,458	110.40
Organic Carbon	2341.00	EA	0	0	172,305	0	172,305	73.60

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical	7430.00	EA	0	0	1,326,691	0	1,326,691	178.56
TOTAL Confirmation Cores- 0/0/3 (dg)	743.00	DAY	1,285,921	353,729	1,341,412	0	2,981,062	4012.20
Confirmation Cores- 0/0/3 (bf)								
Chemist	2820.00	HR	195,516	0	0	0	195,516	69.33
Chemist, Jr.	2820.00	HR	172,479	0	0	0	172,479	61.16
Sampling Technician	2820.00	HR	120,066	0	0	0	120,066	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	2820.00	HR	0	134,255	0	0	134,255	47.61
TOTAL Labor/Equipment	2820.00	HR	488,062	134,255	0	0	622,317	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	3553.00	EA	0	0	104,605	0	104,605	29.44
Total PCB's	888.00	EA	0	0	235,295	0	235,295	264.97
Organic Carbon	888.00	EA	0	0	65,360	0	65,360	73.60
TOTAL Analytical	2820.00	EA	0	0	405,259	0	405,259	143.71
TOTAL Confirmation Cores- 0/0/3 (bf)	282.00	DAY	488,062	134,255	419,980	0	1,042,297	3696.09
Geophysical Surveys- 0/0/3 (dg)								
Chemist	2020.00	HR	140,051	0	0	0	140,051	69.33
Survey Crew	202.00	DAY	829,961	0	0	0	829,961	4108.72
Post Processing	353.50	HR	40,850	0	0	0	40,850	115.56
Per Diem	202.00	DAY	0	0	80,286	0	80,286	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	2020.00	HR	1,014,457	0	80,286	0	1,094,743	541.95
TOTAL Geophysical Surveys- 0/0/3 (dg)	202.00	DAY	1,014,457	0	80,286	0	1,094,743	5419.52
TOTAL Fish Sample Analysis	7.00	EA	0	0	0	4,550,000	4,550,000	650000.00
Annual Reporting								
Project Manager	168.00	HR	19,406	0	0	0	19,406	115.51
Chemist	280.00	HR	19,413	0	0	0	19,413	69.33
Engineers, Quality Control	168.00	HR	10,316	0	0	0	10,316	61.40
Clerks, Typists, Bookkeepers & Receptionist	112.00	HR	3,689	0	0	0	3,689	32.93
Reproduction Operators	56.00	HR	1,182	0	0	0	1,182	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Lbr/Matls for Quarterly Report	7.00	WK	58,437	0	383	0	58,819	8402.78
Project Manager	336.00	HR	38,812	0	0	0	38,812	115.51
Chemist	560.00	HR	38,826	0	0	0	38,826	69.33
Engineers, Quality Control	336.00	HR	20,632	0	0	0	20,632	61.40
Clerks, Typists, Bookkeepers & Receptionist	224.00	HR	7,377	0	0	0	7,377	32.93
Reproduction Operators	112.00	HR	2,363	0	0	0	2,363	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	14.00	WK	112,442	0	383	0	112,825	8058.91
TOTAL Annual Reporting	7.00	YR	170,879	0	765	0	171,644	24520.59
TOTAL Testing and Monitoring (remed)	1.00	EA	6,003,459	860,761	3,262,456	4,550,000	14,676,675	14676675.45
Barging								
Barging to North - 1000T Hopper								
Reach 1					** OVERTIME **			
Spare Tug Crew	2392.18	HR	249,932	196,306	0	0	446,238	186.54
Spare Tug Crew Per Diem days	478.00	MDY	0	0	0	42,308	42,308	88.51
DREDGE BARGE, 1000 TON	7176.55	HR	0	270,228	0	0	270,228	37.65
TOTAL Reach 1	139183	BCY	249,932	466,534	0	42,308	758,775	5.45
TOTAL Reach 1	139183	BCY	249,932	466,534	0	42,308	758,775	5.45
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 1000T Hopper	139183	BCY	249,932	466,534	0	42,308	758,775	5.45
Barging to North - 200T Deck								
Reach 1					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	22804	HR	0	418,860	0	0	418,860	18.37
Spare Tug Crew	1520.29	HR	158,838	124,757	0	0	283,595	186.54
Spare Tug Crew Per Diem days	304.00	MDY	0	0	0	26,907	26,907	88.51
TOTAL Reach 1	147424	BCY	158,838	543,617	0	26,907	729,363	4.95

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	147424	BCY	158,838	543,617	0	26,907	729,363	4.95
Reach 2					** OVERTIME **			
Deckhand for Tug	29750	HR	1,422,132	0	0	0	1,422,132	47.80
Boat Captain	29750	HR	1,685,996	0	0	0	1,685,996	56.67
500 TO 800 Hp TUG BOAT	29750	HR	0	2,344,466	0	0	2,344,466	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	89250	HR	0	1,639,308	0	0	1,639,308	18.37
Per Diem	5950.03	DAY	0	0	0	526,646	526,646	88.51
Spare Tug Crew	5950.03	HR	621,651	488,267	0	0	1,109,918	186.54
Spare Tug Crew Per Diem days	1190.00	MDY	0	0	0	105,329	105,329	88.51
TOTAL Reach 2	576979	BCY	3,729,780	4,472,041	0	631,975	8,833,796	15.31
TOTAL Reach 2	576979	BCY	3,729,780	4,472,041	0	631,975	8,833,796	15.31
Reach 3					** OVERTIME **			
Deckhand for Tug	70597	HR	3,374,718	0	0	0	3,374,718	47.80
Boat Captain	70597	HR	4,000,866	0	0	0	4,000,866	56.67
500 TO 800 Hp TUG BOAT	70597	HR	0	5,563,413	0	0	5,563,413	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	117662	HR	0	2,161,153	0	0	2,161,153	18.37
Per Diem	14119	MDY	0	0	0	1,249,730	1,249,730	88.51
Spare Tug Crew	4706.47	HR	491,726	386,219	0	0	877,944	186.54
Spare Tug Crew Per Diem days	942.00	MDY	0	0	0	83,378	83,378	88.51
TOTAL Reach 3	456390	BCY	7,867,309	8,110,785	0	1,333,108	17,311,201	37.93
TOTAL Reach 3	456390	BCY	7,867,309	8,110,785	0	1,333,108	17,311,201	37.93
TOTAL Barging to North - 200T Deck	1180793	BCY	11,755,928	13,126,443	0	1,991,990	26,874,360	22.76
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	59911	HR	2,863,897	0	0	0	2,863,897	47.80
Boat Captain	59911	HR	3,395,267	0	0	0	3,395,267	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	59911	HR	0	9,409,479	0	0	9,409,479	157.06
DREDGE BARGE, 1000 TON	179733	HR	0	6,767,726	0	0	6,767,726	37.65
Per Diem	11982	DAY	0	0	0	1,060,562	1,060,562	88.51
Spare Tug Crew	7488.87	HR	782,428	614,546	0	0	1,396,974	186.54
Spare Tug Crew Per Diem days	1498.00	MDY	0	0	0	132,590	132,590	88.51
TOTAL Reach 1	1742882	BCY	7,041,592	16,791,751	0	1,193,152	25,026,495	14.36

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	1742882	BCY	7,041,592	16,791,751	0	1,193,152	25,026,495	14.36
Reach 2					** OVERTIME **			
Deckhand for Tug	18158	HR	867,999	0	0	0	867,999	47.80
Boat Captain	18158	HR	1,029,048	0	0	0	1,029,048	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	18158	HR	0	2,851,854	0	0	2,851,854	157.06
DREDGE BARGE, 1000 TON	54474	HR	0	2,051,183	0	0	2,051,183	37.65
Per Diem	3631.60	DAY	0	0	0	321,438	321,438	88.51
Spare Tug Crew	2269.75	HR	237,141	186,258	0	0	423,399	186.54
Spare Tug Crew Per Diem days	454.00	MDY	0	0	0	40,184	40,184	88.51
TOTAL Reach 2	528238	BCY	2,134,187	5,089,295	0	361,623	7,585,105	14.36
TOTAL Reach 2	528238	BCY	2,134,187	5,089,295	0	361,623	7,585,105	14.36
Reach 3					** OVERTIME **			
Boat Captain	3986.84	HR	225,942	0	0	0	225,942	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3986.84	HR	0	626,164	0	0	626,164	157.06
DREDGE BARGE, 1000 TON	19934	HR	0	750,610	0	0	750,610	37.65
Per Diem	797.37	DAY	0	0	0	70,576	70,576	88.51
Spare Tug Crew	1167.42	HR	121,970	95,800	0	0	217,770	186.54
Spare Tug Crew Per Diem days	234.00	MDY	0	0	0	20,712	20,712	88.51
Deckhand for Tug	3986.84	HR	190,581	0	0	0	190,581	47.80
TOTAL Reach 3	231964	BCY	538,493	1,472,573	0	91,288	2,102,354	9.06
TOTAL Reach 3	231964	BCY	538,493	1,472,573	0	91,288	2,102,354	9.06
TOTAL Barging to South - 1000T Hopper	2503084	BCY	9,714,272	23,353,620	0	1,646,063	34,713,955	13.87
TOTAL Barging to South - 200T Deck	1.00	EA	0	0	0	0	0	0.00
TOTAL Canal/Lock Usage Fees	1.00	EA	0	0	0	100,000	100,000	100000.00
TOTAL Barging	3823060	BCY	21,720,132	36,946,597	0	3,780,361	62,447,089	16.33
Stabilization								
Transfer from Barge to Pugmil								
Unloading at Northern Facility					** OVERTIME **			
Outside Equip. Operators, Heavy	17082	HR	1,140,847	0	0	0	1,140,847	66.79
Master Mechanic	17082	HR	1,192,009	0	0	0	1,192,009	69.78
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	17082	HR	0	2,469,253	0	0	2,469,253	144.55

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	17082	HR	0	150,918	0	0	150,918	8.83
TOTAL Unloading at Northern Facility	1319976	BCY	2,332,856	2,620,171	0	0	4,953,027	3.75
TOTAL Unload Barge - North	1319967	BCY	2,332,856	2,620,171	0	0	4,953,027	3.75
Unloading at Southern Facility					** OVERTIME **			
Master Mechanic	16196	HR	1,130,210	0	0	0	1,130,210	69.78
Outside Equip. Operators, Heavy	16196	HR	1,081,700	0	0	0	1,081,700	66.79
HYD EXCAV, CRWLR, 4.75 CY BKT	16196	HR	0	3,823,241	0	0	3,823,241	236.06
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	16196	HR	0	207,009	0	0	207,009	12.78
TOTAL Unloading at Southern Facility	2503084	BCY	2,211,909	4,030,250	0	0	6,242,159	2.49
TOTAL Unload Barge - South	2647931	BCY	2,211,909	4,030,250	0	0	6,242,159	2.36
TOTAL Transfer from Barge to Pugmil	3823060	BCY	4,544,765	6,650,421	0	0	11,195,186	2.93
Stabilization Processing								
Soil Stabilization (30) To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.					** OVERTIME **			
LDR,FE, WH, 3.25 CY, ARTIC, 950F	38231	HR	0	2,351,661	0	0	2,351,661	61.51
Mixing Equipment	38231	HR	0	7,725,783	0	0	7,725,783	202.08
Outside Equip. Oper Light	38231	HR	2,306,344	0	0	0	2,306,344	60.33
Outside Equip. Oper Med	38231	HR	2,517,655	0	0	0	2,517,655	65.85
Outside Laborer (Semi-Skilled)	76461	HR	3,820,196	0	0	0	3,820,196	49.96
TOTAL Soil Stabilization	3823060	CY	8,644,195	10,077,444	0	0	18,721,640	4.90
TOTAL Soil Stabilization			8,644,195	10,077,444	0	0	18,721,640	
TOTAL Stabilization Processing	3823060	BCY	8,644,195	10,077,444	0	0	18,721,640	4.90

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Stabilization Agents/Chemical								
Stabilization Agents/Chemical								
Portland Cement - Material Cost BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sales tax = $90.93	428183	TNS	0	0	0	38,934,655	38,934,655	90.93
TOTAL Stabilization Agents/Chemical	3823060	BCY	0	0	0	38,934,655	38,934,655	10.18
TOTAL Stabilization Agents/Chemical	1.00	EA	0	0	0	38,934,655	38,934,655	38934654.73
TOTAL Stabilization Agents/Chemical	3823060	BCY	0	0	0	38,934,655	38,934,655	10.18
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	17083	HR	853,492	0	0	0	853,492	49.96
Outside Truck Drivers, Heavy	55348	HR	2,578,841	0	0	0	2,578,841	46.59
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	55348	HR	0	222,699	0	0	222,699	4.02
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	55348	HR	0	1,832,643	0	0	1,832,643	33.11
TOTAL Truck Cycle Times-North Facility	1425574	BCY	3,432,333	2,055,342	0	0	5,487,675	3.85
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	16196	HR	809,191	0	0	0	809,191	49.96
Outside Truck Drivers, Heavy	48588	HR	2,263,873	0	0	0	2,263,873	46.59
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	48588	HR	0	576,561	0	0	576,561	11.87
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	48588	HR	0	1,608,813	0	0	1,608,813	33.11
TOTAL Truck Cycle Times-South Facility	2703331	BCY	3,073,064	2,185,374	0	0	5,258,437	1.95
TOTAL Truck Cycle Times	1.00	EA	6,505,397	4,240,716	0	0	10,746,113	10746112.64
TOTAL Transfer to RR Holding Area	4128901	BCY	6,505,397	4,240,716	0	0	10,746,113	2.60
TOTAL Stabilization	3823060	BCY	19,694,358	20,968,581	0	38,934,655	79,597,593	20.82

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	10901	HR	0	670,531	0	0	670,531	61.51
Outside Equip. Operators, Heavy	10901	HR	728,026	0	0	0	728,026	66.79
Laborer	21801	HR	1,089,255	0	0	0	1,089,255	49.96
SMALL TOOLS	21801	HR	0	43,960	0	0	43,960	2.02
TOTAL Loader Cycle Time - North Site	1425574	BCY	1,817,281	714,491	0	0	2,531,772	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	20671	HR	0	1,271,535	0	0	1,271,535	61.51
Outside Equip. Operators, Heavy	20671	HR	1,380,563	0	0	0	1,380,563	66.79
Laborer	41342	HR	2,065,566	0	0	0	2,065,566	49.96
SMALL TOOLS	41342	HR	0	83,362	0	0	83,362	2.02
TOTAL Loader Cycle Time - South Site	2703331	BCY	3,446,130	1,354,897	0	0	4,801,027	1.78
TOTAL Load RR Car	4128905	BCY	5,263,411	2,069,388	0	0	7,332,799	1.78
Transp/Disposal >33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	23783	TRP	0	0	0	118,912,945	118,912,945	5000.00
TOTAL Rail Transport Fee (>33ppm)	2140433	TNS	0	0	0	118,912,945	118,912,945	55.56
TOTAL Rail Transport Fee (>33ppm)	2140433	TNS	0	0	0	118,912,945	118,912,945	55.56
Sediment Disposal (>-50 ppm)								
Disposal Fee/Taxes - Texas	2140433	TNS	0	0	0	112,372,733	112,372,733	52.50
TOTAL Sediment Disposal (>-50 ppm)	2140433	EA	0	0	0	112,372,733	112,372,733	52.50
TOTAL Sediment Disposal (>33 ppm)	2140433	TNS	0	0	0	112,372,733	112,372,733	52.50
TOTAL Transp/Disposal >33 ppm - Texas	2140433	TNS	0	0	0	231,285,677	231,285,677	108.06
Transp/Disposal(0-33) Northeast								
Transp/Disposal(0-33) Northeast								
Transp/disposal at Northeast This includes both the total transportation and disposal costs for northeastern disposal facility.	1134000	TON	0	0	0	56,700,000	56,700,000	50.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	56,700,000	56,700,000	56700000.00

MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	56,700,000	56,700,000	56700000.00
TOTAL Transp/Disposal(0-33) Northeast	1134000	TNS	0	0	0	56,700,000	56,700,000	50.00
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
Transp/disposal at Southeast This includes both the total transportation and disposal costs for southeastern dispoal facility.	2506034	TNS	0	0	0	125,301,700	125,301,700	50.00
TOTAL Transp/Disposal(0-33) Southeast	2506034	TNS	0	0	0	125,301,700	125,301,700	50.00
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	125,301,700	125,301,700	125301700
TOTAL Transp/Disposal(0-33) Southeast	2506034	TNS	0	0	0	125,301,700	125,301,700	50.00
Sediment Sample & Analysis								
Analytical costs for Disposal								
Total PCB's - Sediment Assume 1 test/1000 tns	5783.75	EA	0	0	0	867,563	867,563	150.00
Total TCLP Assume 1 test/10000 tns	578.03	EA	0	0	0	693,630	693,630	1200.00
Paint Filter Test Assume 1 test/1000 tns	5783.75	EA	0	0	0	115,675	115,675	20.00
Duplicates Assume 5% of Total PCB's	289.19	EA	0	0	0	43,378	43,378	150.00
Quality Assurance Assume 5% of Total PCB's	289.19	EA	0	0	0	43,378	43,378	150.00
TOTAL Analytical costs for Disposal	3823060	BCY	0	0	0	1,763,625	1,763,625	0.46
TOTAL Analytical costs for Disposal			0	0	0	1,763,625	1,763,625	
TOTAL Sediment Sample & Analysis	5780467	TNS	0	0	0	1,763,625	1,763,625	0.31
TOTAL Transport/Landfill Fee	3823084	BCY	5,263,411	2,069,388	0	415,051,002	422,383,801	110.48

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant					** OVERTIME **			
Wastewater Treatment Operator	2099.99	HR	78,116	0	0	0	78,116	37.20
Laborer	2099.99	HR	104,921	0	0	0	104,921	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	49.00	MON	0	0	108,197	0	108,197	2208.10
O&M Phone usage	49.00	MO	0	0	3,607	0	3,607	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	3998.37	LB	0	0	530	0	530	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	9819.64	LB	0	0	1,636	0	1,636	0.17
TOTAL O&M at North Plant	58800000	GAL	183,037	674	113,969	0	297,680	0.01
O&M at South Plant					** OVERTIME **			
Wastewater Treatment Operator	4199.99	HR	156,233	0	0	0	156,233	37.20
Laborer	4199.99	HR	209,842	0	0	0	209,842	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	49.00	MON	0	0	108,197	0	108,197	2208.10
O&M Phone usage	49.00	MO	0	0	3,607	0	3,607	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	7615.94	LB	0	0	1,009	0	1,009	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	18704	LB	0	0	3,117	0	3,117	0.17
TOTAL O&M at South Plant	********	GAL	366,075	674	115,929	0	482,678	0.00
TOTAL Water Plant Operation			549,112	1,347	229,898	0	780,358	
TOTAL Water Treatment Process	1.00	EA	549,112	1,347	229,898	0	780,358	780358.01
Effluent Monitoring								
Total Suspended Solids assume 1 test per 25000 gallons	140.00	EA	0	0	0	4,428	4,428	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	140.00	EA	0	0	0	11,512	11,512	82.22
COD assume 1 test per 25000 gallons	140.00	EA	0	0	0	3,011	3,011	21.51
PCB assume 1 test/25000 gallons	140.00	EA	0	0	0	26,565	26,565	189.75

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	140.00	EA	0	0	0	35,420	35,420	253.00
Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	32,764	32,764	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	60,214	60,214	430.10
TOTAL Discharge at Southern Facility	140.00	EA	0	0	0	173,912	173,912	1242.23
Total Suspended Solids assume 1 test per 25000 gallons	140.00	EA	0	0	0	4,428	4,428	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	140.00	EA	0	0	0	11,512	11,512	82.22
COD assume 1 test per 25000 gallons	140.00	EA	0	0	0	3,011	3,011	21.51
PCB assume 1 test/25000 gallons	140.00	EA	0	0	0	26,565	26,565	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	140.00	EA	0	0	0	35,420	35,420	253.00
Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	32,764	32,764	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	60,214	60,214	430.10
TOTAL Discharge at Northern Facility	140.00	EA	0	0	0	173,912	173,912	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	347,824	347,824	347824.40
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	549,112	1,347	229,898	347,824	1,128,182	1128182.41
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	343216	TNS	0	0	0	4,983,496	4,983,496	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,983,496	4,983,496	4983496.32
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,983,496	4,983,496	4983496.32

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Material 1 (topsoil type)	343216	TNS	0	0	0	4,983,496	4,983,496	14.52
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	863579	TNS	0	0	0	7,314,514	7,314,514	8.47
Graded Gravel (at Plant)	863579	TNS	0	0	0	7,314,514	7,314,514	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	14,629,028	14,629,028	14629028.26
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	14,629,028	14,629,028	14629028.26
TOTAL Material 2 (sand, gravel)	1727158	TNS	0	0	0	14,629,028	14,629,028	8.47
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	7702.28	HR	368,094	0	0	0	368,094	47.79
Outside Truck Drivers, Heavy	53916	HR	2,402,905	0	0	0	2,402,905	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	53916	HR	0	611,969	0	0	611,969	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	53916	HR	0	1,707,616	0	0	1,707,616	31.67
TOTAL Truck Cycle Times-North Facility	1478838	BCY	2,770,999	2,319,585	0	0	5,090,584	3.44
TOTAL Truck Cycle Times			2,770,999	2,319,585	0	0	5,090,584	
TOTAL Transportation to River	1478838	BCY	2,770,999	2,319,585	0	0	5,090,584	3.44

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	6576.50	HR	0	517,571	0	0	517,571	78.70
Outside Equip. Operators, Heavy	6576.50	HR	420,128	0	0	0	420,128	63.88
Laborer	13153	HR	628,585	0	0	0	628,585	47.79
SMALL TOOLS	13153	HR	0	25,368	0	0	25,368	1.93
TOTAL Loader Cycle Time - North Site	1478838	BCY	1,048,713	542,939	0	0	1,591,652	1.08
TOTAL Barge Loading	1.00	EA	1,048,713	542,939	0	0	1,591,652	1591652.07
TOTAL Barge Loading	1478838	BCY	1,048,713	542,939	0	0	1,591,652	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	3729.24	HR	178,267	0	0	0	178,267	47.80
Boat Captain	3729.24	HR	211,343	0	0	0	211,343	56.67
500 TO 800 Hp TUG BOAT	3729.24	HR	0	293,883	0	0	293,883	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	5966.78	HR	0	109,595	0	0	109,595	18.37
Per Diem for tug crew	745.85	MDY	0	0	0	66,016	66,016	88.51
Spare Tug Crew	745.85	HR	77,925	61,205	0	0	139,130	186.54
Spare Tug Crew Per Diem days	150.00	MDY	0	0	0	13,277	13,277	88.51
TOTAL Reach 1	92995	BCY	467,535	464,683	0	79,293	1,011,511	10.88
Reach 2					** OVERTIME **			
Deckhand for Tug	25227	HR	1,205,925	0	0	0	1,205,925	47.80
Boat Captain	25227	HR	1,429,674	0	0	0	1,429,674	56.67
500 TO 800 Hp TUG BOAT	25227	HR	0	1,988,036	0	0	1,988,036	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	36039	HR	0	661,945	0	0	661,945	18.37
Per Diem for tug crew	5045.44	MDY	0	0	0	446,580	446,580	88.51
Spare Tug Crew	3603.89	HR	376,530	295,739	0	0	672,269	186.54
Spare Tug Crew Per Diem days	720.00	MDY	0	0	0	63,728	63,728	88.51
TOTAL Reach 2	449346	BCY	3,012,128	2,945,720	0	510,308	6,468,156	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	41019	HR	1,960,831	0	0	0	1,960,831	47.80
Boat Captain	41019	HR	2,324,646	0	0	0	2,324,646	56.67
500 TO 800 Hp TUG BOAT	41019	HR	0	3,232,541	0	0	3,232,541	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	48711	HR	0	894,691	0	0	894,691	18.37
Per Diem for tug crew	8203.88	MDY	0	0	0	726,137	726,137	88.51
Spare Tug Crew	2563.71	HR	267,853	210,381	0	0	478,235	186.54

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Per Diem days	512.00	MDY	0	0	0	45,318	45,318	88.51
TOTAL Reach 3	319653	BCY	4,553,330	4,337,614	0	771,455	9,662,399	30.23
TOTAL Barging for Shallow Backfill	861994	BCY	8,032,993	7,748,017	0	1,361,056	17,142,066	19.89
Reach 1					** OVERTIME **			
Deckhand for Tug	762.48	HR	36,448	0	0	0	36,448	47.80
Boat Captain	762.48	HR	43,211	0	0	0	43,211	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	762.48	HR	0	119,753	0	0	119,753	157.06
DREDGE BARGE, 1000 TON	1524.96	HR	0	57,421	0	0	57,421	37.65
Per Diem for tug crew	152.50	MDY	0	0	0	13,498	13,498	88.51
Spare Tug Crew	381.24	HR	39,831	31,285	0	0	71,116	186.54
Spare Tug Crew Per Diem days	76.00	MDY	0	0	0	6,727	6,727	88.51
TOTAL Reach 1	66547	BCY	119,491	208,460	0	20,225	348,175	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	3684.25	HR	176,117	0	0	0	176,117	47.80
Boat Captain	3684.25	HR	208,794	0	0	0	208,794	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3684.25	HR	0	578,641	0	0	578,641	157.06
DREDGE BARGE, 1000 TON	9210.64	HR	0	346,821	0	0	346,821	37.65
Per Diem for tug crew	736.85	MDY	0	0	0	65,220	65,220	88.51
Spare Tug Crew	1842.13	HR	192,463	151,167	0	0	343,630	186.54
Spare Tug Crew Per Diem days	368.00	MDY	0	0	0	32,572	32,572	88.51
TOTAL Reach 2	321551	BCY	577,373	1,076,628	0	97,792	1,751,794	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	6552.21	HR	313,212	0	0	0	313,212	47.80
Boat Captain	6552.21	HR	371,326	0	0	0	371,326	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	6552.21	HR	0	1,029,074	0	0	1,029,074	157.06
DREDGE BARGE, 1000 TON	10484	HR	0	394,751	0	0	394,751	37.65
Per Diem for tug crew	1310.44	MDY	0	0	0	115,989	115,989	88.51
Spare Tug Crew	1310.44	HR	136,913	107,536	0	0	244,450	186.54
Spare Tug Crew Per Diem days	262.00	MDY	0	0	0	23,190	23,190	88.51
TOTAL Reach 3	228743	BCY	821,451	1,531,361	0	139,179	2,491,992	10.89
TOTAL Barging for Deep Backfill	616842	BCY	1,518,316	2,816,449	0	257,196	4,591,961	7.44
TOTAL Barging to Backfill Site	1478838	BCY	9,551,309	10,564,466	0	1,618,252	21,734,027	14.70

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	6741.67	HR	332,096	0	0	0	332,096	49.26
Dredge Engineer	3370.83	HR	217,858	0	0	0	217,858	64.63
Oiler	3370.83	HR	169,812	0	0	0	169,812	50.38
Excavator Dredge Operator	3370.83	HR	251,862	0	0	0	251,862	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2696.67	HR	0	372,866	0	0	372,866	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	674.17	HR	0	23,755	0	0	23,755	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	3370.83	HR	0	27,906	0	0	27,906	8.28
SMALL TOOLS	3370.83	HR	0	6,501	0	0	6,501	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	3370.83	HR	0	28,486	0	0	28,486	8.45
Command/Control System	3370.83	HR	0	65,157	0	0	65,157	19.33
Per Diem	2106.77	MDY	0	0	0	186,473	186,473	88.51
TOTAL Backfill - Fines	245154	BCY	971,629	524,672	0	186,473	1,682,774	6.86
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines			971,629	524,672	0	186,473	1,682,774	
TOTAL Material Placement (Fines)	245154	BCY	971,629	524,672	0	186,473	1,682,774	6.86
Material Placement (Material 2)								
Shallow Draft Backfilling					** OVERTIME **			
Deckhand for Dredge	9894.51	HR	487,406	0	0	0	487,406	49.26
Dredge Engineer	4947.26	HR	319,743	0	0	0	319,743	64.63
Oiler	4947.26	HR	249,228	0	0	0	249,228	50.38
Excavator Dredge Operator	4947.26	HR	369,649	0	0	0	369,649	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	3957.80	HR	0	547,242	0	0	547,242	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	989.45	HR	0	34,864	0	0	34,864	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	4947.26	HR	0	40,957	0	0	40,957	8.28
SMALL TOOLS	4947.26	HR	0	9,542	0	0	9,542	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	4947.26	HR	0	41,808	0	0	41,808	8.45
Command/Control System	4947.26	HR	0	95,629	0	0	95,629	19.33

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Per Diem	3092.03	MDY	0	0	0	273,681	273,681	88.51
TOTAL Shallow Draft Backfilling	616842	BCY	1,426,026	770,042	0	273,681	2,469,749	4.00
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Shallow Draft Backfilling			1,426,026	770,042	0	273,681	2,469,749	
Backfill Reach 1					** OVERTIME **			
Deckhand for Dredge	7067.63	HR	348,153	0	0	0	348,153	49.26
Dredge Engineer	3533.81	HR	228,392	0	0	0	228,392	64.63
Oiler	3533.81	HR	178,023	0	0	0	178,023	50.38
Excavator Dredge Operator	3533.81	HR	264,039	0	0	0	264,039	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	2827.05	HR	0	638,330	0	0	638,330	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	706.76	HR	0	41,245	0	0	41,245	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3533.81	HR	0	29,255	0	0	29,255	8.28
SMALL TOOLS	3533.81	HR	0	6,816	0	0	6,816	1.93
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3533.81	HR	0	43,203	0	0	43,203	12.23
Command/Control System	3533.81	HR	0	68,308	0	0	68,308	19.33
Per Diem	2208.63	MDY	0	0	0	195,489	195,489	88.51
TOTAL Backfill Reach 1	616842	BCY	1,018,607	827,157	0	195,489	2,041,254	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			1,018,607	827,157	0	195,489	2,041,254	
TOTAL Material Placement (Material 2)	1233684	BCY	2,444,633	1,597,199	0	469,170	4,511,002	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.17
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88
TOTAL Backfilling	1478838	BCY	17,539,496	15,876,385	67,728	21,898,520	55,382,129	37.45
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	37.00	AC	0	0	0	1,221,000	1,221,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	37.00	AC	0	0	0	296,000	296,000	8000.00
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	114.00	AC	0	0	0	3,762,000	3,762,000	33000.00
TOTAL Habitat & Vegetation Restoration			0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration			0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration			0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration	188.00	AC	0	0	0	5,279,000	5,279,000	28079.79

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
River Bank Restoration								
Shoreline Protect <2'-Hydroseed								
Shoreline Protection <2' ** OVERTIME ** Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr								
Boat Captain	330.67	HR	19,591	0	0	0	19,591	59.25
Deckhand	330.67	HR	17,029	0	0	0	17,029	51.50
Outside Equip. Operators, Heavy	330.67	HR	22,084	0	0	0	22,084	66.79
Laborer	330.67	HR	16,521	0	0	0	16,521	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	330.67	HR	0	6,085	0	0	6,085	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	330.67	HR	0	536	0	0	536	1.62
Hydroseeder	330.67	HR	0	3,564	0	0	3,564	10.78
SMALL TOOLS	330.67	HR	0	667	0	0	667	2.02
Seed, Mulch, Fertlizer	206667	SY	0	0	76,057	0	76,057	0.37
TOTAL Shoreline Protection <2'	206667	SY	75,226	10,851	76,057	0	162,133	0.78
TOTAL Shoreline Protect <2'-Hydroseed			75,226	10,851	76,057	0	162,133	
TOTAL Shoreline Protect <2'-Hydroseed	93000	LF	75,226	10,851	76,057	0	162,133	1.74
Shoreline Protect 2'-3' Mat								
Shoreline Protection 2'-3' ** OVERTIME ** Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr								
Boat Captain	925.93	HR	43,367	0	0	0	43,367	46.84
Deckhand	925.93	HR	37,695	0	0	0	37,695	40.71
Labor Foreman	925.93	HR	37,119	0	0	0	37,119	40.09
Laborer	2777.78	HR	109,711	0	0	0	109,711	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	925.93	HR	0	13,470	0	0	13,470	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	925.93	HR	0	1,186	0	0	1,186	1.28
SMALL TOOLS	925.93	HR	0	1,476	0	0	1,476	1.59
Staples	74074	EA	0	0	6,896	0	6,896	0.09
Erosion Control Mat w/seeds	111111	SY	0	0	168,088	0	168,088	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	111111	SY	227,892	16,131	175,682	0	419,706	3.78
TOTAL Shoreline Protect 2'-3' Mat			227,892	16,131	175,682	0	419,706	

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protect 2'-3' Mat	50000	LF	227,892	16,131	175,682	0	419,706	8.39
Shoreline Protect >3' Logs								
Shoreline Protection >3' ** OVERTIME ** Assume 50% reduction in productivity due to site accessibility, underwater work, and travel between sites. Therefore, 2500lf/day * .50 = 1250lf/day/10hr/day = 125lf/hr								
Boat Captain	256.00	HR	11,990	0	0	0	11,990	46.84
Deckhand	256.00	HR	10,422	0	0	0	10,422	40.71
Labor Foreman	256.00	HR	10,262	0	0	0	10,262	40.09
Laborer	768.00	HR	30,332	0	0	0	30,332	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	256.00	HR	0	3,724	0	0	3,724	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	256.00	HR	0	328	0	0	328	1.28
SMALL TOOLS	256.00	HR	0	408	0	0	408	1.59
Stakes	21333	EA	0	0	12,413	0	12,413	0.58
Biologs - 12" dia	32000	LF	0	0	186,190	0	186,190	5.82
BioLogs - 16" dia	32000	LF	0	0	223,428	0	223,428	6.98
TOTAL Shoreline Protection >3'	32000	LF	63,006	4,460	422,031	0	489,497	15.30
TOTAL Shoreline Protect >3' Logs			63,006	4,460	422,031	0	489,497	
TOTAL Shoreline Protect >3' Logs	32000	LF	63,006	4,460	422,031	0	489,497	15.30
TOTAL River Bank Restoration	175000	LF	366,124	31,442	673,770	0	1,071,336	6.12
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	14400	HR	1,314,924	0	0	0	1,314,924	91.31
Engineers, Project	14400	HR	918,642	0	0	0	918,642	63.79
Inspectors	14400	HR	424,886	0	0	0	424,886	29.51
Engineers, Quality Control	14400	HR	698,979	0	0	0	698,979	48.54
Clerks, Typists, Bookkeepers & Receptionist	11520	HR	299,919	0	0	0	299,919	26.03
Per Diem 5men/10hr/day = .5 multiplier	7199.98	MDY	0	0	0	526,678	526,678	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	400.80	EA	0	0	0	200,399	200,399	500.00
TOTAL Field Office Labor Requirements			3,657,349	0	0	727,078	4,384,427	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	64.00	MO	0	15,443	0	0	15,443	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	64.00	MO	0	95,341	0	0	95,341	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	32914	HR	0	82,695	0	0	82,695	2.51
TOTAL Field Equipment Requirements	64.00	MO	0	193,478	0	0	193,478	3023.10
TOTAL Construction Management			3,657,349	193,478	0	727,078	4,577,905	
TOTAL Construction Management			3,657,349	193,478	0	727,078	4,577,905	
TOTAL Construction Monitoring	48.00	MON	3,657,349	193,478	0	727,078	4,577,905	95373.03
TOTAL HTRW/Remediation/Construction	3823060	BCY	122,261,127	103,413,072	6,758,934	513,904,058	746,337,192	195.22
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89

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O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00	EA	0	0	0	0	0	0.00
Cost included in float surveys								
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp cost of one boat included with weekly monitoring	2.00	EA	0	2,694	0	0	2,694	1347.23
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9,14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.19
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67
TOTAL Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Shallow Sediment Inventory (5YR)								
Labor/Equipment								
Chemist	525.00	HR	36,399	0	0	0	36,399	69.33
Chemist, Jr.	1050.00	HR	64,221	0	0	0	64,221	61.16
Sampling Technician	1050.00	HR	44,705	0	0	0	44,705	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	525.00	HR	0	24,994	0	0	24,994	47.61
TOTAL Labor/Equipment	500.00	HR	145,326	24,994	0	0	170,320	340.64
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	263.00	EA	0	0	29,036	0	29,036	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	250.00	EA	0	0	172,048	0	172,048	688.19
TOTAL Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66

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) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Annual Reporting (1 YR)								
Lbr/Matls for Quarterly Report								
Project Manager	24.00	HR	2,772	0	0	0	2,772	115.51
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00	HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	527	0	0	0	527	32.93
Reproduction Operators	8.00	HR	169	0	0	0	169	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00	WK	12,146	0	383	0	12,529	12529.22
Lbr/Matls for Annual Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00	WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
TOTAL Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Survey Crew	117.00	DAY	480,720	0	0	0	480,720	4108.72
Post Processing	204.75	HR	23,660	0	0	0	23,660	115.56
Per Diem	117.00	DAY	0	0	46,503	0	46,503	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1170.00	HR	589,094	0	46,503	0	635,597	543.25
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL O & M	1.00	EA	1,596,019	91,249	1,008,753	650,000	3,346,021	3346021.14
TOTAL Alt Removal 0/0/3R	3823060	BCY	127,560,197	104,221,302	14,908,508	525,054,058	771,814,064	201.88

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APPENDIX I

COST ESTIMATES

I.10 Detailed Estimate - Alternative REM-0/0/3- Beneficial Use

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Removal 0/0/3R - Benficial								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 0/0/3(d)								
Labor/Equipment								
Chemist	15060	HR	1,044,141	0	0	0	1,044,141	69.33
Chemist, Jr.	15060	HR	921,112	0	0	0	921,112	61.16
Sampling Technician	15060	HR	641,204	0	0	0	641,204	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15060	HR	0	716,980	0	0	716,980	47.61
TOTAL Labor/Equipment	15060	HR	2,606,457	716,980	0	0	3,323,437	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22590	EA	0	0	5,985,709	0	5,985,709	264.97
Cesium - 137/Beryllium -7	7530.00	EA	0	0	831,349	0	831,349	110.40
Organic Carbon	2259.00	EA	0	0	166,270	0	166,270	73.60
Cation Exchange Capacity	2259.00	EA	0	0	166,270	0	166,270	73.60
TOTAL Analytical	7530.00	EA	0	0	7,149,597	0	7,149,597	949.48
TOTAL Sediment Inventory 0/0/3(d)	1506.00	DAY	2,606,457	716,980	7,164,318	0	10,487,755	6963.98
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Survey Crew	117.00	DAY	480,720	0	0	0	480,720	4108.72
Post Processing	204.75	HR	23,660	0	0	0	23,660	115.56
Per Diem	117.00	DAY	0	0	46,503	0	46,503	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1170.00	HR	589,094	0	46,503	0	635,597	543.25
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45

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Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,703,051	716,980	7,210,821	10,500,000	22,130,852	22130851.50
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	56.00	MON	0	0	32,692	0	32,692	583.79
TOTAL Health & Safety Equipment	56.00	MO	0	0	32,692	0	32,692	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25) Unit Measure Of	480.00	EA	0	0	91,047	0	91,047	189.68
Boot Covers, Tyvek (Bag Of 10Pr) Unit Measure Of	858.00	EA	0	0	11,482	0	11,482	13.38
Gloves, Latex (Box Of 100) (Single Hand) Unit Measure Of	60.00	EA	0	0	846	0	846	14.10
Pvc/Nitrile Blend (Package Of 12 Pr) Unit Measure	60.00	EA	0	0	3,613	0	3,613	60.21
TOTAL Health & Safety Stores	240.00	WKS	0	0	109,802	0	109,802	457.51

402444

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	28800	HR	1,721,759	0	0	0	1,721,759	59.78
Industrial Hygiene Technician	28800	HR	1,110,812	0	0	0	1,110,812	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1440.00	MDY	0	0	0	105,336	105,336	73.15
Air Fare (Round Trip)	80.00	EA	0	0	0	40,000	40,000	500.00
TOTAL Health & Safety Labor			2,832,571	0	0	145,336	2,977,907	
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn,trailer,8'x36',2 showers	112.00	MO	0	0	286,733	0	286,733	2560.11
TOTAL Health & Safety Decon Trailer	112.00	MO	0	0	286,733	0	286,733	2560.11
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

402445

HTRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements							
Project Manager	14400 HR	1,314,924	0	0	0	1,314,924	91.31
General Superintendents (South)	14400 HR	754,797	0	0	0	754,797	52.42
General Superintendents (North)	14400 HR	754,797	0	0	0	754,797	52.42
Engineers, Project	14400 HR	918,642	0	0	0	918,642	63.79
Chemist	14400 HR	789,232	0	0	0	789,232	54.81
Industrial Hygiene Technician	14400 HR	555,406	0	0	0	555,406	38.57
Engineers, Quality Control	14400 HR	698,979	0	0	0	698,979	48.54
Schedulers	14400 HR	698,979	0	0	0	698,979	48.54
Clerks, Typists, Bookkeepers & Receptionist	11520 HR	299,919	0	0	0	299,919	26.03
Janitors	11520 HR	96,852	0	0	0	96,852	8.41
Per Diem	11520 MDY	0	0	0	842,685	842,685	73.15
8men/10hr/day = .8 multiplier							
Air Fare (Round Trip)	640.80 EA	0	0	0	320,399	320,399	500.00
8 men/3wks = 2.67 multiplier							
TOTAL Field Office Labor Requirements		6,882,527	0	0	1,163,084	8,045,611	
Home Office Labor Requirements							
Program Managers	960.00 HR	90,717	0	0	0	90,717	94.50
Operations Managers	1920.00 HR	71,092	0	0	0	71,092	37.03
Certified Industrial Hygienist	480.00 HR	32,862	0	0	0	32,862	68.46
Contract Administrators	960.00 HR	35,194	0	0	0	35,194	36.66
Purchasing Agents, Chief	1920.00 HR	70,389	0	0	0	70,389	36.66
Engineers, Quality Control	960.00 HR	46,599	0	0	0	46,599	48.54
Chief Scheduler & Planning Eng.	480.00 HR	16,847	0	0	0	16,847	35.10
Accountants	960.00 HR	19,421	0	0	0	19,421	20.23
Operations Managers	480.00 HR	17,773	0	0	0	17,773	37.03
Clerks, Typists, Bookkeepers & Receptionist	480.00 HR	12,497	0	0	0	12,497	26.03
Air Fare (Round Trip)	240.00 EA	0	0	0	120,000	120,000	500.00
Per Diem & Lodging	480.00 DAY	0	0	0	63,840	63,840	133.00
Car Rental (Air Port to Site)	480.00 DAY	0	0	0	26,400	26,400	55.00
TOTAL Home Office Labor Requirements	240.00 WKS	413,390	0	0	210,240	623,630	2598.47
Field Equipment Requirements							
Trailer: Contractor	112.00 MO	0	0	37,145	0	37,145	331.65
Trailer: Contracting Officer	112.00 MO	0	0	37,145	0	37,145	331.65
Trailer: Storage	112.00 MO	0	0	20,202	0	20,202	180.37
Furniture Rental	224.00 MO	0	0	45,617	0	45,617	203.65
Telephone System Rental	224.00 MO	0	0	41,707	0	41,707	186.19
Sanitary Facility: Temporary	224.00 MO	0	0	23,460	0	23,460	104.73
Portable Radios (4 Ea)	224.00 WKS	0	0	13,033	0	13,033	58.18
Personal Computer	224.00 MO	0	0	28,673	0	28,673	128.01
Printer for PC	224.00 MO	0	0	16,943	0	16,943	75.64
Copy Machine	224.00 MO	0	0	43,010	0	43,010	192.01
Fax Machine	224.00 MO	0	0	5,213	0	5,213	23.27

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	56.00	MO	0	13,512	0	0	13,512	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	56.00	MO	0	83,423	0	0	83,423	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	56.00	MO	0	17,939	0	0	17,939	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	56.00	MO	0	104,394	0	0	104,394	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	28800	HR	0	72,358	0	0	72,358	2.51
TOTAL Field Equipment Requirements	56.00	MO	0	291,626	314,009	0	605,636	10814.93
Field Support Utilities								
Electricity	112.00	MO	0	0	0	21,280	21,280	190.00
Telephone (2 Lines)	112.00	MO	0	0	0	28,000	28,000	250.00
Bottled Water Service	480.00	WKS	0	0	0	21,600	21,600	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	112.00	MO	0	0	0	46,480	46,480	415.00
TOTAL Field Support Utilities	240.00	WKS	0	0	0	117,360	117,360	489.00
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	112.00	WK	0	0	4,562	0	4,562	40.73
Water Kegs (5 Gallon)	60.00	EA	0	0	1,393	0	1,393	23.22
Water Cups (Conical)	4800.00	BOX	0	0	22,064	0	22,064	4.60
Co2 Extinguisher (10Lb)	40.00	EA	0	0	6,565	0	6,565	164.11
Video Tape	240.00	EA	0	0	1,257	0	1,257	5.24
Camera Film and Development	55.00	MO	0	0	1,920	0	1,920	34.91
TOTAL Field Support Stores/Supplies	240.00	WKS	0	0	37,760	0	37,760	157.33
TOTAL Construction Management			7,341,922	291,626	351,769	1,490,684	9,476,001	
TOTAL Construction Management			7,341,922	291,626	351,769	1,490,684	9,476,001	
TOTAL Construction Management	40.00	MON	7,341,922	291,626	351,769	1,490,684	9,476,001	236900.03
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	6.00	EA	0	0	0	510,000	510,000	85000.00
Long Arm Purchase	4.00	EA	0	0	0	312,000	312,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	4,659	0	0	4,659	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Shallow Dredge Crew	4.00	HR	33,573	9,794	0	0	43,367	10841.80
Deep Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator -	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	160.00	HR	0	7,717	0	0	7,717	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Deep Dredge Crew	4.00	CRW	33,573	13,373	0	0	46,946	11736.57
North Barge Crew Rate								
Deckhand for Tug	200.00	HR	6,972	0	0	0	6,972	34.86
Boat Captain	200.00	HR	8,232	0	0	0	8,232	41.16
500 TO 800 Hp TUG BOAT	200.00	HR	0	13,564	0	0	13,564	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	200.00	HR	0	3,161	0	0	3,161	15.80
TOTAL North Barge Crew Rate	5.00	CRW	15,203	16,725	0	0	31,928	6385.58
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	4.00	CRW	12,163	26,372	0	0	38,534	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

402449

MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.48
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			156,902	122,610	0	0	279,512	
TOTAL Equipment Mobilization	1.00	EA	156,902	122,610	0	0	279,512	279512.38

402450

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	1920.00	HR	68,910	0	0	0	68,910	35.89
Dredge Engineer	960.00	HR	45,194	0	0	0	45,194	47.08
Oiler	960.00	HR	35,223	0	0	0	35,223	36.69
Excavator Dredge Operator	960.00	HR	52,115	0	0	0	52,115	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	960.00	HR	0	27,956	0	0	27,956	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	960.00	HR	0	6,859	0	0	6,859	7.14
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	960.00	HR	0	7,007	0	0	7,007	7.30
Command/Control System	960.00	HR	0	15,336	0	0	15,336	15.98
TOTAL Shallow Dredge Crew	4.00	CRW	201,441	58,763	0	0	260,203	65050.82
Deep Dredge Crew								
Deckhand for Dredge	1920.00	HR	68,910	0	0	0	68,910	35.89
Dredge Engineer	960.00	HR	45,194	0	0	0	45,194	47.08
Oiler	960.00	HR	35,223	0	0	0	35,223	36.69
Excavator Dredge Operator	960.00	HR	52,115	0	0	0	52,115	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	960.00	HR	0	46,300	0	0	46,300	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	960.00	HR	0	6,859	0	0	6,859	7.14
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	960.00	HR	0	10,137	0	0	10,137	10.56
Command/Control System	960.00	HR	0	15,336	0	0	15,336	15.98
TOTAL Deep Dredge Crew	4.00	HR	201,441	80,237	0	0	281,678	70419.42
North Barge Crew Rate								
Deckhand for Tug	1200.00	HR	41,829	0	0	0	41,829	34.86
Boat Captain	1200.00	HR	49,390	0	0	0	49,390	41.16
500 TO 800 Hp TUG BOAT	1200.00	HR	0	81,383	0	0	81,383	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	1200.00	HR	0	18,966	0	0	18,966	15.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	5.00	CRW	91,219	100,349	0	0	191,568	38313.50
South Barge Crew Rate								
Deckhand for Tug	960.00	HR	33,464	0	0	0	33,464	34.86
Boat Captain	960.00	HR	39,512	0	0	0	39,512	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	960.00	HR	0	128,357	0	0	128,357	133.70
DREDGE BARGE, 1000 TON	960.00	HR	0	29,875	0	0	29,875	31.12
TOTAL South Barge Crew Rate	4.00	CRW	72,975	158,231	0	0	231,206	57801.57
Spare Tug Crew Rate								
Spare Tug Crew	480.00	HR	41,446	32,553	0	0	73,999	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	41,446	32,553	0	0	73,999	36999.66
North Unloading Crew								
Outside Equip. Operators, Heavy	240.00	HR	11,331	0	0	0	11,331	47.21
Master Mechanic	240.00	HR	11,818	0	0	0	11,818	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	240.00	HR	0	28,383	0	0	28,383	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	240.00	HR	0	1,752	0	0	1,752	7.30
TOTAL North Unloading Crew	40.00	HR	23,149	30,135	0	0	53,284	1332.10
South Unloading Crew								
Master Mechanic	240.00	HR	11,818	0	0	0	11,818	49.24
Outside Equip. Operators, Heavy	240.00	HR	11,331	0	0	0	11,331	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	240.00	HR	0	46,372	0	0	46,372	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	240.00	HR	0	2,534	0	0	2,534	10.56
TOTAL South Unloading Crew	40.00	HR	23,149	48,907	0	0	72,055	1801.38

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	720.00	HR	23,613	0	0	0	23,613	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	720.00	HR	0	2,377	0	0	2,377	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	720.00	HR	0	19,268	0	0	19,268	26.76
TOTAL North Truck Crew	40.00	HR	25,009	21,645	0	0	46,654	1166.35
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	720.00	HR	23,613	0	0	0	23,613	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	720.00	HR	0	7,039	0	0	7,039	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	720.00	HR	0	19,268	0	0	19,268	26.76
TOTAL South Truck Crew	40.00	HR	25,009	26,307	0	0	51,316	1282.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	480.00	HR	0	24,164	0	0	24,164	50.34
Outside Equip. Operators, Heavy	480.00	HR	22,662	0	0	0	22,662	47.21
Laborer	960.00	HR	33,508	0	0	0	33,508	34.90
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
TOTAL Boxcar Loading Crew	40.00	HR	56,170	25,770	0	0	81,939	2048.48
TOTAL Equipment Mobilization			761,006	582,896	0	0	1,343,902	
Process Equipment								
Master Mechanic	1920.00	HR	94,543	0	0	0	94,543	49.24
Outside Equip. Operators, Heavy	1920.00	HR	90,646	0	0	0	90,646	47.21
TOTAL Process Equipment	160.00	HR	185,189	0	0	0	185,189	1157.43
TOTAL Process Equipment Start Up			185,189	0	0	0	185,189	
TOTAL Annual Remobilization & Startup	1.00	EA	946,196	582,896	0	0	1,529,092	1529091.87
Annual Demobilization								
Shallow Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	480.00	HR	0	13,978	0	0	13,978	29.12

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket	480.00	HR	0	3,503	0	0	3,503	7.30
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Shallow Dredge Crew	4.00	CRW	100,720	29,381	0	0	130,102	32525.41
Deep Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	480.00	HR	0	23,150	0	0	23,150	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket	480.00	HR	0	5,068	0	0	5,068	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Deep Dredge Crew	4.00	CRW	100,720	40,118	0	0	140,839	35209.71
North Barge Crew Rate								
Deckhand for Tug	600.00	HR	20,915	0	0	0	20,915	34.86
Boat Captain	600.00	HR	24,695	0	0	0	24,695	41.16
500 TO 800 Hp TUG BOAT	600.00	HR	0	40,692	0	0	40,692	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	600.00	HR	0	9,483	0	0	9,483	15.80
TOTAL North Barge Crew Rate	5.00	CRW	45,609	50,174	0	0	95,784	19156.75
South Barge Crew Rate								
Deckhand for Tug	480.00	HR	16,732	0	0	0	16,732	34.86
Boat Captain	480.00	HR	19,756	0	0	0	19,756	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	480.00	HR	0	64,178	0	0	64,178	133.70
DREDGE BARGE, 1000 TON	480.00	HR	0	14,937	0	0	14,937	31.12
TOTAL South Barge Crew Rate	4.00	CRW	36,488	79,116	0	0	115,603	28900.78

ITRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate							
Spare Tug Crew	240.00 HR	20,723	16,277	0	0	37,000	154.17
TOTAL Spare Tug Crew Rate	2.00 CRW	20,723	16,277	0	0	37,000	18499.83
North Unloading Crew							
Outside Equip. Operators, Heavy	160.00 HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00 HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00 HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00 HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00 HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew							
Master Mechanic	160.00 HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00 HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00 HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00 HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00 HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew							
Laborer (pugmill tender)	40.00 HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00 HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00 HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00 HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00 HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew							
Laborer (pugmill tender)	40.00 HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00 HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00 HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00 HR	0	12,845	0	0	12,845	26.76

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00	HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00	HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization			406,848	316,909	0	0	723,757	
TOTAL Annual Demobilization	1.00	EA	406,848	316,909	0	0	723,757	723756.76
Final Demob Site Restoration								
Shallow Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	2,330	0	0	2,330	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
Command/Control System	80.00	HR	0	1,278	0	0	1,278	15.98
TOTAL Shallow Dredge Crew	4.00	HR	16,787	4,897	0	0	21,684	5420.90
Deep Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	80.00	HR	0	3,858	0	0	3,858	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of	80.00	HR	0	845	0	0	845	10.56

ITRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.							
Command/Control System	80.00 HR	0	1,278	0	0	1,278	15.98
TOTAL Deep Dredge Crew	4.00 HR	16,787	6,686	0	0	23,473	5868.28
North Barge Crew Rate							
Deckhand for Tug	100.00 HR	3,486	0	0	0	3,486	34.86
Boat Captain	100.00 HR	4,116	0	0	0	4,116	41.16
500 TO 800 Hp TUG BOAT	100.00 HR	0	6,782	0	0	6,782	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	100.00 HR	0	1,580	0	0	1,580	15.80
TOTAL North Barge Crew Rate	5.00 HR	7,602	8,362	0	0	15,964	3192.79
South Barge Crew Rate							
Deckhand for Tug	80.00 HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00 HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00 HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00 HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	4.00 HR	6,081	13,186	0	0	19,267	4816.80
Spare Tug Crew Rate							
Spare Tug Crew	40.00 HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00 HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew							
Outside Equip. Operators, Heavy	40.00 HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00 HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00 HR	0	4,731	0	0	4,731	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	40.00 HR	0	292	0	0	292	7.30
TOTAL North Unloading Crew	80.00 HR	3,858	5,023	0	0	8,881	111.01

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			78,451	61,305	0	0	139,756	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	78,451	61,305	0	500,000	639,756	639756.19
TOTAL Mobilization/Demobilization	1.00	EA	1,588,398	1,083,719	0	1,338,560	4,010,677	4010677.20

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket	107.25	HR	0	877	0	0	877	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40 HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Cover Building #2 This building is a rain cover for railroad cars.	5000.00	SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00	SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000	SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL North Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - North	1.00	EA	768,442	764,259	1,186,870	8,258,025	10,977,596	10977595.69

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	40.00	HR	2,602	0	0	0	2,602	65.04
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	204.80	HR	13,321	0	0	0	13,321	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Repair Road/Work Area	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	600.00	LF	31,977	0	0	103,488	135,465	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	100.00	LF	5,330	0	0	12,320	17,650	176.50
Hopper - Mechanized-200 CY	4.00	EA	0	0	0	197,120	197,120	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82

ITRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Set Up Sediment Stabilization Eq							
Soil Stabilization Unit The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.	2.00 EA	0	0	0	1,232,000	1,232,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00 EA	0	0	0	1,232,000	1,232,000	1232000.00
TOTAL Set Up Sediment Stabilization Eq	1.00 EA	0	0	0	1,232,000	1,232,000	1232000.00
Construct Sediment Storage Facl							
Construct Sediment Storage Facl				** OVERTIME **			
Storage Building #1 This building is a rain cover for material.	30000 SF	0	0	0	2,217,600	2,217,600	73.92
Cover Building #2 This building is a rain cover for railroad cars.	4000.00 SF	0	0	0	295,680	295,680	73.92
Concrete Slab and Hardstand	10000 SY	0	0	0	616,000	616,000	61.60
TOTAL Construct Sediment Storage Facl	1.00 EA	0	0	0	3,129,280	3,129,280	3129280.00
TOTAL Construct Sediment Storage Facl	1.00 EA	0	0	0	3,129,280	3,129,280	3129280.00
TOTAL Construct Sediment Storage Facl	1.00 EA	0	0	0	3,129,280	3,129,280	3129280.00
Set Up Rail Car Load Fac-w/scale							
Set Up Rail Car Load Fac-w/scale				** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00 EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00 LF	2,665	0	0	8,624	11,289	225.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	152,250	0	0	0	152,250	152250.00
Skid Mounted WWTP	1.00	EA	0	0	0	350,000	350,000	350000.00
Influent Tanks, no pipe/pumps, 100000 gal, steel, gnd lvl, incl tdn	2.00	EA	0	0	0	200,000	200,000	100000.00
Effluent Tanks, no pipe/pumps, 100000 gal, steel, gnd lvl, incl fdn	3.00	EA	0	0	0	300,000	300,000	100000.00
TOTAL South Plant - 100 gpm			152,250	0	0	850,000	1,002,250	
TOTAL Water Treatment Facility	1.00	EA	152,250	0	0	850,000	1,002,250	1002250.00

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Testing Laboratory								
Capital Costs					** OVERTIME **			
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	315,899	630,628	419,748	6,976,195	8,342,470	8342470.06
Dredging								
Deep Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	60382	HR	2,872,190	0	0	0	2,872,190	47.57
Dredge Engineer	30191	HR	1,884,057	0	0	0	1,884,057	62.40
Oiler	30191	HR	1,468,506	0	0	0	1,468,506	48.64
Excavator Dredge Operator	30191	HR	2,176,653	0	0	0	2,176,653	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	25878	HR	0	5,696,184	0	0	5,696,184	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	4313.02	HR	0	251,699	0	0	251,699	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	30191	HR	0	242,095	0	0	242,095	8.02
SMALL TOOLS	30191	HR	0	56,203	0	0	56,203	1.86
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	30191	HR	0	357,300	0	0	357,300	11.83
Command/Control System	30191	HR	0	583,588	0	0	583,588	19.33
Per Diem	15096	MDY	0	0	0	1,336,132	1,336,132	88.51
TOTAL Dredging Reach 1	1882065	BCY	8,401,406	7,187,069	0	1,336,132	16,924,607	8.99
TOTAL Reach #1	1882065	BCY	8,401,406	7,187,069	0	1,336,132	16,924,607	8.99

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	16947	HR	806,136	0	0	0	806,136	47.57
Dredge Engineer	8473.73	HR	528,797	0	0	0	528,797	62.40
Oiler	8473.73	HR	412,165	0	0	0	412,165	48.64
Excavator Dredge Operator	8473.73	HR	610,920	0	0	0	610,920	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	7263.20	HR	0	1,598,745	0	0	1,598,745	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	1210.53	HR	0	70,644	0	0	70,644	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	8473.73	HR	0	67,949	0	0	67,949	8.02
SMALL TOOLS	8473.73	HR	0	15,775	0	0	15,775	1.86
Command/Control System	8473.73	HR	0	163,795	0	0	163,795	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	8473.73	HR	0	100,283	0	0	100,283	11.83
Per Diem	4236.87	MDY	0	0	0	375,011	375,011	88.51
TOTAL Dredging Reach 2	528238	BCY	2,358,017	2,017,190	0	375,011	4,750,219	8.99
TOTAL Rea.h #2	528238	BCY	2,358,017	2,017,190	0	375,011	4,750,219	8.99
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	7442.10	HR	353,997	0	0	0	353,997	47.57
Dredge Engineer	3721.05	HR	232,210	0	0	0	232,210	62.40
Oiler	3721.05	HR	180,993	0	0	0	180,993	48.64
Excavator Dredge Operator	3721.05	HR	268,272	0	0	0	268,272	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	3189.47	HR	0	702,053	0	0	702,053	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	531.58	HR	0	31,022	0	0	31,022	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3721.05	HR	0	29,838	0	0	29,838	8.02
SMALL TOOLS	3721.05	HR	0	6,927	0	0	6,927	1.86
Command/Control System	3721.05	HR	0	71,927	0	0	71,927	19.33
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3721.05	HR	0	44,037	0	0	44,037	11.83
Per Diem	1860.53	MDY	0	0	0	164,678	164,678	88.51
TOTAL Dredging Reach 3	231964	BCY	1,035,471	885,804	0	164,678	2,085,953	8.99
TOTAL Reach #3	231964	BCY	1,035,471	885,804	0	164,678	2,085,953	8.99
TOTAL Deep Draft Dredging	2642267	BCY	11,794,895	10,090,063	0	1,875,822	23,760,780	8.99

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Shallow Draft Dredging								
Dredging Reach 1					** OVERTIME **			
Deckhand for Dredge	14189	HR	674,943	0	0	0	674,943	47.57
Dredge Engineer	7094.70	HR	442,739	0	0	0	442,739	62.40
Oiler	7094.70	HR	345,088	0	0	0	345,088	48.64
Excavator Dredge Operator	7094.70	HR	511,497	0	0	0	511,497	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	6081.17	HR	0	819,989	0	0	819,989	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1013.53	HR	0	35,712	0	0	35,712	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	7094.70	HR	0	56,891	0	0	56,891	8.02
SMALL TOOLS	7094.70	HR	0	13,207	0	0	13,207	1.86
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	7094.70	HR	0	58,039	0	0	58,039	8.18
Command/Control System	7094.70	HR	0	137,139	0	0	137,139	19.33
Per Diem	3547.35	MDY	0	0	0	313,981	313,981	88.51
TOTAL Dredging Reach 1	147424	BCY	1,974,268	1,120,978	0	313,981	3,409,227	23.13
TOTAL Reach 1	147424	BCY	1,974,268	1,120,978	0	313,981	3,409,227	23.13
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	22583	HR	1,074,194	0	0	0	1,074,194	47.57
Dredge Engineer	11291	HR	704,634	0	0	0	704,634	62.40
Oiler	11291	HR	549,219	0	0	0	549,219	48.64
Excavator Dredge Operator	11291	HR	814,065	0	0	0	814,065	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	9678.38	HR	0	1,305,039	0	0	1,305,039	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1613.06	HR	0	56,838	0	0	56,838	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	11291	HR	0	90,543	0	0	90,543	8.02
SMALL TOOLS	11291	HR	0	21,020	0	0	21,020	1.86
Command/Control System	11291	HR	0	218,261	0	0	218,261	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	11291	HR	0	92,371	0	0	92,371	8.18
Per Diem	5645.72	MDY	0	0	0	499,711	499,711	88.51
TOTAL Dredging Reach 2	234630	BCY	3,142,111	1,784,072	0	499,711	5,425,894	23.13
TOTAL Reach 2	234630	BCY	3,142,111	1,784,072	0	499,711	5,425,894	23.13

NTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	43927	HR	2,089,466	0	0	0	2,089,466	47.57
Dredge Engineer	21964	HR	1,370,617	0	0	0	1,370,617	62.40
Oiler	21964	HR	1,068,311	0	0	0	1,068,311	48.64
Excavator Dredge Operator	21964	HR	1,583,476	0	0	0	1,583,476	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	18826	HR	0	2,538,494	0	0	2,538,494	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	3137.65	HR	0	110,557	0	0	110,557	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	21964	HR	0	176,120	0	0	176,120	8.02
SMALL TOOLS	21964	HR	0	40,887	0	0	40,887	1.86
Command/Control System	21964	HR	0	424,549	0	0	424,549	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	21964	HR	0	179,675	0	0	179,675	8.18
Per Diem	10982	MDY	0	0	0	972,012	972,012	88.51
TOTAL Dredging Reach 3	456390	BCY	6,111,870	3,470,283	0	972,012	10,554,166	23.13
TOTAL Reach 3	456390	BCY	6,111,870	3,470,283	0	972,012	10,554,166	23.13
TOTAL Shallow Draft Dredging	838444	BCY	11,228,250	6,375,333	0	1,785,704	19,389,287	23.13
Land Locked Area								
Dredging Reach 2					** OVERTIME **			
Deckhand for Dredge	27459	HR	1,306,134	0	0	0	1,306,134	47.57
Dredge Engineer	13729	HR	856,778	0	0	0	856,778	62.40
Oiler	13729	HR	667,806	0	0	0	667,806	48.64
Excavator Dredge Operator	13729	HR	989,837	0	0	0	989,837	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	11768	HR	0	1,586,823	0	0	1,586,823	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1961.35	HR	0	69,110	0	0	69,110	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	13729	HR	0	33,957	0	0	33,957	2.47
SMALL TOOLS	13729	HR	0	25,559	0	0	25,559	1.86
Command/Control System	13729	HR	0	265,387	0	0	265,387	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	13729	MDY	0	112,316	0	0	112,316	8.18
Per Diem	6864.74	MDY	0	0	0	607,609	607,609	88.51
TOTAL Dredging Reach 2	342349	BCY	3,820,555	2,093,152	0	607,609	6,521,315	19.05

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shallow Draft Dredging	342349	BCY	3,820,555	2,093,152	0	607,609	6,521,315	19.05
Reach 2					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	44130	HR	0	810,567	0	0	810,567	18.37
Spare Tug Crew	7355.08	HR	768,449	319,034	0	0	1,087,483	147.85
Spare Tug Crew Per Diem days	1472.00	MDY	0	0	0	130,289	130,289	88.51
TOTAL Reach 2	342349	BCY	768,449	1,129,601	0	130,289	2,028,339	5.92
TOTAL Small Barging to Transfer Site			768,449	1,129,601	0	130,289	2,028,339	
Transfer of Mat'l to Large barge					** OVERTIME **			
Oiler	6922.43	HR	348,731	0	0	0	348,731	50.38
Excavator Dredge Operator	6922.43	HR	517,230	0	0	0	517,230	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	5537.94	HR	0	765,726	0	0	765,726	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	1384.49	HR	0	48,783	0	0	48,783	35.24
WORK FLOAT, MED DUTY, 30'X10'X3'	6922.43	HR	0	17,513	0	0	17,513	2.53
PUMP SUBM, 4"D, SKID W/P-UNIT INCLUDES POWER UNIT	6922.43	HR	0	36,594	0	0	36,594	5.29
SMALL TOOLS	6922.43	HR	0	13,351	0	0	13,351	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	6922.43	HR	0	58,500	0	0	58,500	8.45
Per Diem	1384.49	MDY	0	0	0	122,543	122,543	88.51
TOTAL Transfer of Mat'l to Large barge	342349	BCY	865,961	940,468	0	122,543	1,928,972	5.63
TOTAL Transfer of Mat'l to 200T Barge			865,961	940,468	0	122,543	1,928,972	
Mobilization								
Mob Dozer with Barge/Tug	8.00	HR	0	0	0	1,936	1,936	242.00
Clearing and Grubbing	2.00	AC	0	0	0	12,100	12,100	6050.00
Mob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00	HR	0	0	0	3,872	3,872	242.00
Mob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40	2.00	EA	0	0	0	60,984	60,984	30492.00

HTRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
hours = $7200 . Total mob = $25,200 x 2 barges = $50,400							
Mob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00 EA	0	0	0	91,476	91,476	30492.00
Mob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00 EA	0	0	0	5,808	5,808	5808.00
TOTAL Mobilization		0	0	0	176,176	176,176	
Demobilization							
Demob Dozer with Barge/Tug	8.00 HR	0	0	0	1,936	1,936	242.00
Demob Excavator with Barge/Tug Assume 2 each; one dredging, one unloading barge	16.00 HR	0	0	0	3,872	3,872	242.00
Demob Work Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200 x 2 barges = $50,400	2.00 EA	0	0	0	60,984	60,984	30492.00
Demob Matl Barge with Barge/Tug Assume 2 equipment operator, 4 steel workers, 2 laborers , and 1 foreman will mobilize, erect, and place barge in 40 hours. Assume 9 workers at $50/hr for 40 hours = $18000 plus equipment @ $180/hr x 40 hours = $7200 . Total mob = $25,200	3.00 EA	0	0	0	91,476	91,476	30492.00
Demob Conveyor with Barge/Tug Assume $1600 for barge crew plus 4 men @$50/hr x 16 hours = $3200 = $4800	1.00 EA	0	0	0	5,808	5,808	5808.00

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RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Demobilization			0	0	0	164,076	164,076	
TOTAL Mobilization/Demobilization			0	0	0	340,252	340,252	
TOTAL Land Locked Area	342349	BCY	5,454,965	4,163,221	0	1,200,692	10,818,879	31.60
Turbidity Curtain/Resuspension								
Shallow Turbidity Control								
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	37800	HR	0	1,727,962	0	0	1,727,962	45.71
SMALL TOOLS	3779.99	HR	0	7,648	0	0	7,648	2.02
Deckhand for Tug	37800	HR	1,594,323	0	0	0	1,594,323	42.18
Boat Captain	37800	HR	1,882,476	0	0	0	1,882,476	49.80
TOTAL Shallow Turbidity Control	3.00	CRW	3,476,798	1,735,610	14,081	0	5,226,489	1742162.99
Deep Turbidity Control								
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	4600.00	LF	0	0	84,202	0	84,202	18.30
Anchoring System	92.00	EA	0	0	31,090	0	31,090	337.93
Mooring Buoy Light w/Photocell	46.00	EA	0	0	8,096	0	8,096	176.01
Freight to Site	2.30	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	28980	HR	0	1,324,771	0	0	1,324,771	45.71
SMALL TOOLS	2897.99	HR	0	5,863	0	0	5,863	2.02
Deckhand for Tug	28980	HR	1,222,314	0	0	0	1,222,314	42.18
Boat Captain	28980	HR	1,443,231	0	0	0	1,443,231	49.80
TOTAL Deep Turbidity Control	2.30	CRW	2,665,545	1,330,634	123,388	0	4,119,568	1791116.61
TOTAL Turbidity Control			6,142,344	3,066,244	137,469	0	9,346,057	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	6,142,344	3,066,244	137,469	0	9,346,057	9346057.16
TOTAL Dredging	3823060	BCY	34,620,454	23,694,861	137,469	4,862,219	63,315,003	16.56
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	15652	HR	1,085,186	0	0	0	1,085,186	69.33
Sampling Technician	15652	HR	666,409	0	0	0	666,409	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	15652	HR	0	212,945	0	0	212,945	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,751,595	214,292	0	0	1,965,887	1080.16

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sampling Equipment/Materials	8.00	LS	0	0	11,777	0	11,777	1472.06
TOTAL Materials			0	0	11,777	0	11,777	
Congener Specific PCB's	3328.00	EA	0	0	881,826	0	881,826	264.97
Total Suspended Solids	3328.00	EA	0	0	122,476	0	122,476	36.80
Fraction Organic Carbon On TSS	3328.00	EA	0	0	244,952	0	244,952	73.60
TOTAL Analytical	416.00	EA	0	0	1,249,253	0	1,249,253	3003.01
TOTAL Weekly Field Sampling	52.00	WKS	1,751,595	214,292	1,261,029	0	3,226,916	62056.08
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores- 0/0/3 (dg)								
Chemist	7430.00	HR	515,137	0	0	0	515,137	69.33
Chemist, Jr.	7430.00	HR	454,440	0	0	0	454,440	61.16
Sampling Technician	7430.00	HR	316,344	0	0	0	316,344	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	7430.00	HR	0	353,729	0	0	353,729	47.61
TOTAL Labor/Equipment	7430.00	HR	1,285,921	353,729	0	0	1,639,650	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	9362.00	EA	0	0	275,629	0	275,629	29.44
Total PCB's	2341.00	EA	0	0	620,299	0	620,299	264.97
Cesium - 137	2341.00	EA	0	0	258,458	0	258,458	110.40
Organic Carbon	2341.00	EA	0	0	172,305	0	172,305	73.60

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical	7430.00	EA	0	0	1,326,691	0	1,326,691	178.56
TOTAL Confirmation Cores- 0/0/3 (dg)	743.00	DAY	1,285,921	353,729	1,341,412	0	2,981,062	4012.20
Confirmation Cores- 0/0/3 (bf)								
Chemist	2820.00	HR	195,516	0	0	0	195,516	69.33
Chemist, Jr.	2820.00	HR	172,479	0	0	0	172,479	61.16
Sampling Technician	2820.00	HR	120,066	0	0	0	120,066	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	2820.00	HR	0	134,255	0	0	134,255	47.61
TOTAL Labor/Equipment	2820.00	HR	488,062	134,255	0	0	622,317	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	3553.00	EA	0	0	104,605	0	104,605	29.44
Total PCB's	888.00	EA	0	0	235,295	0	235,295	264.97
Organic Carbon	888.00	EA	0	0	65,360	0	65,360	73.60
TOTAL Analytical	2820.00	EA	0	0	405,259	0	405,259	143.71
TOTAL Confirmation Cores- 0/0/3 (bf)	282.00	DAY	488,062	134,255	419,980	0	1,042,297	3696.09
Geophysical Surveys- 0/0/3 (dg)								
Chemist	2020.00	HR	140,051	0	0	0	140,051	69.33
Survey Crew	202.00	DAY	829,961	0	0	0	829,961	4108.72
Post Processing	353.50	HR	40,850	0	0	0	40,850	115.56
Per Diem	202.00	DAY	0	0	80,286	0	80,286	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	2020.00	HR	1,014,457	0	80,286	0	1,094,743	541.95
TOTAL Geophysical Surveys- 0/0/3 (dg)	202.00	DAY	1,014,457	0	80,286	0	1,094,743	5419.52
TOTAL Fish Sample Analysis	7.00	EA	0	0	0	4,550,000	4,550,000	650000.00
Annual Reporting								
Project Manager	168.00	HR	19,406	0	0	0	19,406	115.51
Chemist .	280.00	HR	19,413	0	0	0	19,413	69.33
Engineers, Quality Control	168.00	HR	10,316	0	0	0	10,316	61.40
Clerks, Typists, Bookkeepers & Receptionist	112.00	HR	3,689	0	0	0	3,689	32.93
Reproduction Operators	56.00	HR	1,182	0	0	0	1,182	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Lbr/Matls for Quarterly Report	7.00	WK	58,437	0	383	0	58,819	8402.78
Project Manager	336.00	HR	38,812	0	0	0	38,812	115.51
Chemist	560.00	HR	38,826	0	0	0	38,826	69.33
Engineers, Quality Control	336.00	HR	20,632	0	0	0	20,632	61.40
Clerks, Typists, Bookkeepers & Receptionist	224.00	HR	7,377	0	0	0	7,377	32.93
Reproduction Operators	112.00	HR	2,363	0	0	0	2,363	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	14.00	WK	112,442	0	383	0	112,825	8058.91
TOTAL Annual Reporting	7.00	YR	170,879	0	765	0	171,644	24520.59
TOTAL Testing and Monitoring (remed)	1.00	EA	6,003,459	860,761	3,262,456	4,550,000	14,676,675	14676675.45
Barging								
Barging to North - 1000T Hopper								
Reach 1					** OVERTIME **			
Spare Tug Crew	2392.18	HR	249,932	196,306	0	0	446,238	186.54
Spare Tug Crew Per Diem days	478.00	MDY	0	0	0	42,308	42,308	88.51
DREDGE BARGE, 1000 TON	7176.55	HR	0	270,228	0	0	270,228	37.65
TOTAL Reach 1	139183	BCY	249,932	466,534	0	42,308	758,775	5.45
TOTAL Reach 1	139183	BCY	249,932	466,534	0	42,308	758,775	5.45
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 1000T Hopper	139183	BCY	249,932	466,534	0	42,308	758,775	5.45
Barging to North - 200T Deck								
Reach 1					** OVERTIME **			
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	22804	HR	0	418,860	0	0	418,860	18.37
Spare Tug Crew	1520.29	HR	158,838	124,757	0	0	283,595	186.54
Spare Tug Crew Per Diem days	304.00	MDY	0	0	0	26,907	26,907	88.51
TOTAL Reach 1	147424	BCY	158,838	543,617	0	26,907	729,363	4.95

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	147424	BCY	158,838	543,617	0	26,907	729,363	4.95
Reach 2					** OVERTIME **			
Deckhand for Tug	29750	HR	1,422,132	0	0	0	1,422,132	47.80
Boat Captain	29750	HR	1,685,996	0	0	0	1,685,996	56.67
500 TO 800 Hp TUG BOAT	29750	HR	0	2,344,466	0	0	2,344,466	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	89250	HR	0	1,639,308	0	0	1,639,308	18.37
Per Diem	5950.03	DAY	0	0	0	526,646	526,646	88.51
Spare Tug Crew	5950.03	HR	621,651	488,267	0	0	1,109,918	186.54
Spare Tug Crew Per Diem days	1190.00	MDY	0	0	0	105,329	105,329	88.51
TOTAL Reach 2	576979	BCY	3,729,780	4,472,041	0	631,975	8,833,796	15.31
TOTAL Reach 2	576979	BCY	3,729,780	4,472,041	0	631,975	8,833,796	15.31
Reach 3					** OVERTIME **			
Deckhand for Tug	70597	HR	3,374,718	0	0	0	3,374,718	47.80
Boat Captain	70597	HR	4,000,866	0	0	0	4,000,866	56.67
500 TO 800 Hp TUG BOAT	70597	HR	0	5,563,413	0	0	5,563,413	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	117662	HR	0	2,161,153	0	0	2,161,153	18.37
Per Diem	14119	MDY	0	0	0	1,249,730	1,249,730	88.51
Spare Tug Crew	4706.47	HR	491,726	386,219	0	0	877,944	186.54
Spare Tug Crew Per Diem days	942.00	MDY	0	0	0	83,378	83,378	88.51
TOTAL Reach 3	456390	BCY	7,867,309	8,110,785	0	1,333,108	17,311,201	37.93
TOTAL Reach 3	456390	BCY	7,867,309	8,110,785	0	1,333,108	17,311,201	37.93
TOTAL Barging to North - 200T Deck	1180793	BCY	11,755,928	13,126,443	0	1,991,990	26,874,360	22.76
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	28738	HR	1,373,730	0	0	0	1,373,730	47.80
Boat Captain	28738	HR	1,528,613	0	0	0	1,528,613	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	28738	HR	0	4,513,460	0	0	4,513,460	157.06
DREDGE BARGE, 1000 TON	86213	HR	0	3,246,286	0	0	3,246,286	37.65
Per Diem	5747.52	DAY	0	0	0	508,721	508,721	88.51
Spare Tug Crew	4789.60	HR	500,411	393,040	0	0	893,451	186.54
Spare Tug Crew Per Diem days	958.00	MDY	0	0	0	84,794	84,794	88.51
TOTAL Reach 1	836011	BCY	3,502,754	8,152,786	0	593,515	12,249,056	14.65

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 1	836011	BCY	3,502,754	8,152,786	0	593,515	12,249,056	14.65
Reach 2					** OVERTIME **			
Deckhand for Tug	18158	HR	867,999	0	0	0	867,999	47.80
Boat Captain	18158	HR	1,029,048	0	0	0	1,029,048	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	18158	HR	0	2,851,854	0	0	2,851,854	157.06
DREDGE BARGE, 1000 TON	54474	HR	0	2,051,183	0	0	2,051,183	37.65
Per Diem	3631.60	DAY	0	0	0	321,438	321,438	88.51
Spare Tug Crew	2269.75	HR	237,141	186,258	0	0	423,399	186.54
Spare Tug Crew Per Diem days	454.00	MDY	0	0	0	40,184	40,184	88.51
TOTAL Reach 2	528238	BCY	2,134,187	5,089,295	0	361,623	7,585,105	14.36
TOTAL Reach 2	528238	BCY	2,134,187	5,089,295	0	361,623	7,585,105	14.36
Reach 3					** OVERTIME **			
Boat Captain	3986.84	HR	225,942	0	0	0	225,942	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3986.84	HR	0	626,164	0	0	626,164	157.06
DREDGE BARGE, 1000 TON	19934	HR	0	750,610	0	0	750,610	37.65
Per Diem	797.37	DAY	0	0	0	70,576	70,576	88.51
Spare Tug Crew	1167.42	HR	121,970	95,800	0	0	217,770	186.54
Spare Tug Crew Per Diem days	234.00	MDY	0	0	0	20,712	20,712	88.51
Deckhand for Tug	3986.84	HR	190,581	0	0	0	190,581	47.80
TOTAL Reach 3	231964	BCY	538,493	1,472,573	0	91,288	2,102,354	9.06
TOTAL Reach 3	231964	BCY	538,493	1,472,573	0	91,288	2,102,354	9.06
TOTAL Barging to South - 1000T Hopper	1596213	BCY	6,175,434	14,714,655	0	1,046,426	21,936,515	13.74
TOTAL Barging to South - 200T Deck	1.00	EA	0	0	0	0	0	0.00
TOTAL Canal/Lock Usage Fees	1.00	EA	0	0	0	100,000	100,000	100000.00
TOTAL Barging	2916189	BCY	18,181,294	28,307,632	0	3,180,724	49,669,650	17.03
Stabilization								
Transfer from Barge to Pugmil								
Unloading at Northern Facility					** OVERTIME **			
Outside Equip. Operators, Heavy	17082	HR	1,140,847	0	0	0	1,140,847	66.79
Master Mechanic	17082	HR	1,192,009	0	0	0	1,192,009	69.78
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	17082	HR	0	2,469,253	0	0	2,469,253	144.55

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	17082	HR	0	150,918	0	0	150,918	8.83
TOTAL Unloading at Northern Facility	1319976	BCY	2,332,856	2,620,171	0	0	4,953,027	3.75
TOTAL Unload Barge - North	1319967	BCY	2,332,856	2,620,171	0	0	4,953,027	3.75
Unloading at Southern Facility					** OVERTIME **			
Master Mechanic	10328	HR	720,733	0	0	0	720,733	69.78
Outside Equip. Operators, Heavy	10328	HR	689,798	0	0	0	689,798	66.79
HYD EXCAV, CRWLR, 4.75 CY BKT	10328	HR	0	2,438,075	0	0	2,438,075	236.06
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	10328	HR	0	132,009	0	0	132,009	12.78
TOTAL Unloading at Southern Facility	1596213	BCY	1,410,531	2,570,085	0	0	3,980,616	2.49
TOTAL Unload Barge - South	1596213	BCY	1,410,531	2,570,085	0	0	3,980,616	2.49
TOTAL Transfer from Barge to Pugmil	2916189	BCY	3,743,387	5,190,255	0	0	8,933,642	3.06
Stabilization Processing								
Soil Stabilization (30) To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.					** OVERTIME **			
LDR,FE, WH, 3.25 CY, ARTIC, 950F	29162	HR	0	1,793,822	0	0	1,793,822	61.51
Mixing Equipment	29162	HR	0	5,893,144	0	0	5,893,144	202.08
Outside Equip. Oper Light	29162	HR	1,759,225	0	0	0	1,759,225	60.33
Outside Equip. Oper Med	29162	HR	1,920,402	0	0	0	1,920,402	65.85
Outside Laborer (Semi-Skilled)	58324	HR	2,913,945	0	0	0	2,913,945	49.96
TOTAL Soil Stabilization	2916189	CY	6,593,572	7,686,966	0	0	14,280,538	4.90
TOTAL Soil Stabilization			6,593,572	7,686,966	0	0	14,280,538	
TOTAL Stabilization Processing	2916189	BCY	6,593,572	7,686,966	0	0	14,280,538	4.90

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Stabilization Agents/Chemical								
Stabilization Agents/Chemical								
Portland Cement - Material Cost BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sales tax = $90.93	326613	TNS	0	0	0	29,698,935	29,698,935	90.93
TOTAL Stabilization Agents/Chemical	2916189	BCY	0	0	0	29,698,935	29,698,935	10.18
TOTAL Stabilization Agents/Chemical	1.00	EA	0	0	0	29,698,935	29,698,935	29698935.37
TOTAL Stabilization Agents/Chemical	2916189	BCY	0	0	0	29,698,935	29,698,935	10.18
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	17083	HR	853,492	0	0	0	853,492	49.96
Outside Truck Drivers, Heavy	55348	HR	2,578,841	0	0	0	2,578,841	46.59
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	55348	HR	0	222,699	0	0	222,699	4.02
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	55348	HR	0	1,832,643	0	0	1,832,643	33.11
TOTAL Truck Cycle Times-North Facility	1425574	BCY	3,432,333	2,055,342	0	0	5,487,675	3.85
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	11154	HR	557,301	0	0	0	557,301	49.96
Outside Truck Drivers, Heavy	33463	HR	1,559,162	0	0	0	1,559,162	46.59
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	33463	HR	0	397,086	0	0	397,086	11.87
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	33463	HR	0	1,108,013	0	0	1,108,013	33.11
TOTAL Truck Cycle Times-South Facility	1861823	BCY	2,116,463	1,505,098	0	0	3,621,562	1.95
TOTAL Truck Cycle Times	1.00	EA	5,548,797	3,560,440	0	0	9,109,237	9109236.79
TOTAL Transfer to RR Holding Area	3149484	BCY	5,548,797	3,560,440	0	0	9,109,237	2.89
TOTAL Stabilization	2916189	BCY	15,885,756	16,437,662	0	29,698,935	62,022,352	21.27

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	10901	HR	0	670,531	0	0	670,531	61.51
Outside Equip. Operators, Heavy	10901	HR	728,026	0	0	0	728,026	66.79
Laborer	21801	HR	1,089,255	0	0	0	1,089,255	49.96
SMALL TOOLS	21801	HR	0	43,960	0	0	43,960	2.02
TOTAL Loader Cycle Time - North Site	1425574	BCY	1,817,281	714,491	0	0	2,531,772	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	13182	HR	0	810,856	0	0	810,856	61.51
Outside Equip. Operators, Heavy	13182	HR	880,383	0	0	0	880,383	66.79
Laborer	26364	HR	1,317,208	0	0	0	1,317,208	49.96
SMALL TOOLS	26364	HR	0	53,160	0	0	53,160	2.02
TOTAL Loader Cycle Time - South Site	1723910	BCY	2,197,592	864,016	0	0	3,061,607	1.78
TOTAL Load RR Car	3149484	BCY	4,014,873	1,578,507	0	0	5,593,380	1.78
Transp/Disposal >33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	23783	TRP	0	0	0	118,912,945	118,912,945	5000.00
TOTAL Rail Transport Fee (>33ppm)	2140433	TNS	0	0	0	118,912,945	118,912,945	55.56
TOTAL Rail Transport Fee (>33ppm)	2140433	TNS	0	0	0	118,912,945	118,912,945	55.56
Sediment Disposal (>-50 ppm)								
Disposal Fee/Taxes - Texas	2140433	TNS	0	0	0	112,372,733	112,372,733	52.50
TOTAL Sediment Disposal (>-50 ppm)	2140433	EA	0	0	0	112,372,733	112,372,733	52.50
TOTAL Sediment Disposal (>33 ppm)	2140433	TNS	0	0	0	112,372,733	112,372,733	52.50
TOTAL Transp/Disposal >33 ppm - Texas	2140433	TNS	0	0	0	231,285,677	231,285,677	108.06
Transp/Disposal(0-33) Northeast								
Transp/Disposal(0-33) Northeast								
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	TNS	0	0	0	0	0	0.00

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
TOTAL Transp/Disposal(0-33) Southeast	2506034	TNS	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	0	0	0.00
TOTAL Transp/Disposal(0-33) Southeast	1.00	TNS	0	0	0	0	0	0.00
Disposal(10-33) Benifical								
Disposal(10-33) Benifical								
Disposal - 200 miles This includes both the total transportation and disposal costs for southeastern dispoal facility.	1269619	TNS	0	0	0	38,088,570	38,088,570	30.00
TOTAL Disposal(10-33) Benifical	1269619	TNS	0	0	0	38,088,570	38,088,570	30.00
TOTAL Disposal(10-33) Benifical	1.00	EA	0	0	0	38,088,570	38,088,570	38088570.00
Barge to Benificial					** OVERTIME **			
Deckhand for Tug	46760	HR	1,847,276	0	0	0	1,847,276	39.51
Boat Captain	46760	HR	2,190,019	0	0	0	2,190,019	46.84
INLAND TUG, 44' X 14', INCL RADAR & 9 KW GEN SET	46760	HR	0	6,069,445	0	0	6,069,445	129.80
DREDGE BARGE, 1000 TON	140280	HR	0	4,365,422	0	0	4,365,422	31.12
Per Diem	9352.01	DAY	0	0	0	684,100	684,100	73.15
Spare Tug Crew	7793.34	HR	672,925	528,538	0	0	1,201,463	154.17
Spare Tug Crew Per Diem days	1558.00	MDY	0	0	0	113,968	113,968	73.15
TOTAL Barge to Benificial	906871	BCY	4,710,220	10,963,406	0	798,068	16,471,693	18.16
TOTAL Barge to Benificial	906871	BCY	4,710,220	10,963,406	0	798,068	16,471,693	18.16
TOTAL Disposal(10-33) Benifical	1269619	TNS	4,710,220	10,963,406	0	38,886,638	54,560,263	42.97
Tramsportation(<10ppm) Benifical								
Transportation(<10ppm) Benifical								
Transportation for <10 ppm This includes both the total transportation and disposal costs for southeastern dispoal facility.	2268845	TNS	0	0	0	53,181,727	53,181,727	23.44

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transportation(<10ppm) Benifical	2268845	TNS	0	0	0	53,181,727	53,181,727	23.44
TOTAL Transportation(<10ppm) Benifical	1.00	EA	0	0	0	53,181,727	53,181,727	53181726.80
TOTAL Tramsportation(<10ppm) Benifical	2268845	TNS	0	0	0	53,181,727	53,181,727	23.44
Sediment Sample & Analysis								
Analytical costs for Disposal								
Total PCB's - Sediment Assume 1 test/1000 tns	5783.75	EA	0	0	0	867,563	867,563	150.00
Total TCLP Assume 1 test/10000 tns	578.03	EA	0	0	0	693,630	693,630	1200.00
Paint Filter Test Assume 1 test/1000 tns	5783.75	EA	0	0	0	115,675	115,675	20.00
Duplicates Assume 5% of Total PCB's	289.19	EA	0	0	0	43,378	43,378	150.00
Quality Assurance Assume 5% of Total PCB's	289.19	EA	0	0	0	43,378	43,378	150.00
TOTAL Analytical costs for Disposal	3823060	BCY	0	0	0	1,763,625	1,763,625	0.46
TOTAL Analytical costs for Disposal			0	0	0	1,763,625	1,763,625	
TOTAL Sediment Sample & Analysis	5678897	TNS	0	0	0	1,763,625	1,763,625	0.31
TOTAL Transport/Landfill Fee	3823084	BCY	8,725,093	12,541,912	0	325,117,666	346,384,671	90.60
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant					** OVERTIME **			
Wastewater Treatment Operator	2099.99	HR	78,116	0	0	0	78,116	37.20
Laborer	2099.99	HR	104,921	0	0	0	104,921	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	49.00	MON	0	0	108,197	0	108,197	2208.10
O&M Phone usage	49.00	MO	0	0	3,607	0	3,607	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	3998.37	LB	0	0	530	0	530	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	9819.64	LB	0	0	1,636	0	1,636	0.17
TOTAL O&M at North Plant	58800000	GAL	183,037	674	113,969	0	297,680	0.01

Tue 28 Nov 2000 TAMS Consultants, Inc. TIME 18:35:08
Eff. Date 04/01/00 PROJECT HUDOOS: HUDSON RIVER PCB 2000 R-11/21/00 - Dredging of Hudson River to
DETAILED ESTIMATE Hudson River PCB DETAIL PAGE 366
58. Alt Removal 0/0/3R - Benficial

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
O&M at South Plant					** OVERTIME **			
Wastewater Treatment Operator	4199.99	HR	156,233	0	0	0	156,233	37.20
Laborer	4199.99	HR	209,842	0	0	0	209,842	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	49.00	MON	0	0	108,197	0	108,197	2208.10
O&M Phone usage	49.00	MO	0	0	3,607	0	3,607	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	4834.76	LB	0	0	641	0	641	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	11874	LB	0	0	1,979	0	1,979	0.17
TOTAL O&M at South Plant	71100000	GAL	366,075	674	114,422	0	481,171	0.01
TOTAL Water Plant Operation			549,112	1,347	228,392	0	778,851	
TOTAL Water Treatment Process	1.00	EA	549,112	1,347	228,392	0	778,851	778851.36
Effluent Monitoring								
Total Suspended Solids assume 1 test per 25000 gallons	140.00	EA	0	0	0	4,428	4,428	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	140.00	EA	0	0	0	11,512	11,512	82.22
COD assume 1 test per 25000 gallons	140.00	EA	0	0	0	3,011	3,011	21.51
PCB assume 1 test/25000 gallons	140.00	EA	0	0	0	26,565	26,565	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	140.00	EA	0	0	0	35,420	35,420	253.00
Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	32,764	32,764	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	60,214	60,214	430.10
TOTAL Discharge at Southern Facility	140.00	EA	0	0	0	173,912	173,912	1242.23
Total Suspended Solids assume 1 test per 25000 gallons	140.00	EA	0	0	0	4,428	4,428	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	140.00	EA	0	0	0	11,512	11,512	82.22
COD assume 1 test per 25000 gallons	140.00	EA	0	0	0	3,011	3,011	21.51
PCB assume 1 test/25000 gallons	140.00	EA	0	0	0	26,565	26,565	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	140.00	EA	0	0	0	35,420	35,420	253.00
Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	32,764	32,764	234.03

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Semi Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	60,214	60,214	430.10
TOTAL Discharge at Northern Facility	140.00	EA	0	0	0	173,912	173,912	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	347,824	347,824	347824.40
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	549,112	1,347	228,392	347,824	1,126,676	1126675.76
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	343216	TNS	0	0	0	4,983,496	4,983,496	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,983,496	4,983,496	4983496.32
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,983,496	4,983,496	4983496.32
TOTAL Material 1 (topsoil type)	343216	TNS	0	0	0	4,983,496	4,983,496	14.52
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	863579	TNS	0	0	0	7,314,514	7,314,514	8.47
Graded Gravel (at Plant)	863579	TNS	0	0	0	7,314,514	7,314,514	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	14,629,028	14,629,028	14629028.26
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	14,629,028	14,629,028	14629028.26
TOTAL Material 2 (sand, gravel)	1727158	TNS	0	0	-0	14,629,028	14,629,028	8.47

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	7702.28	HR	368,094	0	0	0	368,094	47.79
Outside Truck Drivers, Heavy	53916	HR	2,402,905	0	0	0	2,402,905	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	53916	HR	0	611,969	0	0	611,969	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	53916	HR	0	1,707,616	0	0	1,707,616	31.67
TOTAL Truck Cycle Times-North Facility	1478838	BCY	2,770,999	2,319,585	0	0	5,090,584	3.44
TOTAL Truck Cycle Times			2,770,999	2,319,585	0	0	5,090,584	
TOTAL Transportation to River	1478838	BCY	2,770,999	2,319,585	0	0	5,090,584	3.44
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	6576.50	HR	0	517,571	0	0	517,571	78.70
Outside Equip. Operators, Heavy	6576.50	HR	420,128	0	0	0	420,128	63.88
Laborer	13153	HR	628,585	0	0	0	628,585	47.79
SMALL TOOLS	13153	HR	0	25,368	0	0	25,368	1.93
TOTAL Loader Cycle Time - North Site	1478838	BCY	1,048,713	542,939	0	0	1,591,652	1.08
TOTAL Barge Loading	1.00	EA	1,048,713	542,939	0	0	1,591,652	1591652.07
TOTAL Barge Loading	1478838	BCY	1,048,713	542,939	0	0	1,591,652	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	3729.24	HR	178,267	0	0	0	178,267	47.80
Boat Captain	3729.24	HR	211,343	0	0	0	211,343	56.67
500 TO 800 Hp TUG BOAT	3729.24	HR	0	293,883	0	0	293,883	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	5966.78	HR	0	109,595	0	0	109,595	18.37

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Per Diem for tug crew	745.85	MDY	0	0	0	66,016	66,016	88.51
Spare Tug Crew	745.85	HR	77,925	61,205	0	0	139,130	186.54
Spare Tug Crew Per Diem days	150.00	MDY	0	0	0	13,277	13,277	88.51
TOTAL Reach 1	92995	BCY	467,535	464,683	0	79,293	1,011,511	10.88
Reach 2					** OVERTIME **			
Deckhand for Tug	25227	HR	1,205,925	0	0	0	1,205,925	47.80
Boat Captain	25227	HR	1,429,674	0	0	0	1,429,674	56.67
500 TO 800 Hp TUG BOAT	25227	HR	0	1,988,036	0	0	1,988,036	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	36039	HR	0	661,945	0	0	661,945	18.37
Per Diem for tug crew	5045.44	MDY	0	0	0	446,580	446,580	88.51
Spare Tug Crew	3603.89	HR	376,530	295,739	0	0	672,269	186.54
Spare Tug Crew Per Diem days	720.00	MDY	0	0	0	63,728	63,728	88.51
TOTAL Reach 2	449346	BCY	3,012,128	2,945,720	0	510,308	6,468,156	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	41019	HR	1,960,831	0	0	0	1,960,831	47.80
Boat Captain	41019	HR	2,324,646	0	0	0	2,324,646	56.67
500 TO 800 Hp TUG BOAT	41019	HR	0	3,232,541	0	0	3,232,541	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	48711	HR	0	894,691	0	0	894,691	18.37
Per Diem for tug crew	8203.88	MDY	0	0	0	726,137	726,137	88.51
Spare Tug Crew	2563.71	HR	267,853	210,381	0	0	478,235	186.54
Spare Tug Crew Per Diem days	512.00	MDY	0	0	0	45,318	45,318	88.51
TOTAL Reach 3	319653	BCY	4,553,330	4,337,614	0	771,455	9,662,399	30.23
TOTAL Barging for Shallow Backfill	861994	BCY	8,032,993	7,748,017	0	1,361,056	17,142,066	19.89
Reach 1					** OVERTIME **			
Deckhand for Tug	762.48	HR	36,448	0	0	0	36,448	47.80
Boat Captain	762.48	HR	43,211	0	0	0	43,211	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	762.48	HR	0	119,753	0	0	119,753	157.06
DREDGE BARGE, 1000 TON	1524.96	HR	0	57,421	0	0	57,421	37.65
Per Diem for tug crew	152.50	MDY	0	0	0	13,498	13,498	88.51
Spare Tug Crew	381.24	HR	39,831	31,285	0	0	71,116	186.54
Spare Tug Crew Per Diem days	76.00	MDY	0	0	0	6,727	6,727	88.51
TOTAL Reach 1	66547	BCY	119,491	208,460	0	20,225	348,175	5.23

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 2					** OVERTIME **			
Deckhand for Tug	3684.25	HR	176,117	0	0	0	176,117	47.80
Boat Captain	3684.25	HR	208,794	0	0	0	208,794	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3684.25	HR	0	578,641	0	0	578,641	157.06
DREDGE BARGE, 1000 TON	9210.64	HR	0	346,821	0	0	346,821	37.65
Per Diem for tug crew	736.85	MDY	0	0	0	65,220	65,220	88.51
Spare Tug Crew	1842.13	HR	192,463	151,167	0	0	343,630	186.54
Spare Tug Crew Per Diem days	368.00	MDY	0	0	0	32,572	32,572	88.51
TOTAL Reach 2	321551	BCY	577,373	1,076,628	0	97,792	1,751,794	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	6552.21	HR	313,212	0	0	0	313,212	47.80
Boat Captain	6552.21	HR	371,326	0	0	0	371,326	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	6552.21	HR	0	1,029,074	0	0	1,029,074	157.06
DREDGE BARGE, 1000 TON	10484	HR	0	394,751	0	0	394,751	37.65
Per Diem for tug crew	1310.44	MDY	0	0	0	115,989	115,989	88.51
Spare Tug Crew	1310.44	HR	136,913	107,536	0	0	244,450	186.54
Spare Tug Crew Per Diem days	262.00	MDY	0	0	0	23,190	23,190	88.51
TOTAL Reach 3	228743	BCY	821,451	1,531,361	0	139,179	2,491,992	10.89
TOTAL Barging for Deep Backfill	616842	BCY	1,518,316	2,816,449	0	257,196	4,591,961	7.44
TOTAL Barging to Backfill Site	1478838	BCY	9,551,309	10,564,466	0	1,618,252	21,734,027	14.70
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	6741.67	HR	332,096	0	0	0	332,096	49.26
Dredge Engineer	3370.83	HR	217,858	0	0	0	217,858	64.63
Oiler	3370.83	HR	169,812	0	0	0	169,812	50.38
Excavator Dredge Operator	3370.83	HR	251,862	0	0	0	251,862	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2696.67	HR	0	372,866	0	0	372,866	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	674.17	HR	0	23,755	0	0	23,755	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	3370.83	HR	0	27,906	0	0	27,906	8.28
SMALL TOOLS	3370.83	HR	0	6,501	0	0	6,501	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	3370.83	HR	0	28,486	0	0	28,486	8.45
Command/Control System	3370.83	HR	0	65,157	0	0	65,157	19.33
Per Diem	2106.77	MDY	0	0	0	186,473	186,473	88.51

TRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Backfill - Fines	245154 BCY	971,629	524,672	0	186,473	1,682,774	6.86
TOTAL Backfill Reach 2	1000.00 BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00 BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines		971,629	524,672	0	186,473	1,682,774	
TOTAL Material Placement (Fines)	245154 BCY	971,629	524,672	0	186,473	1,682,774	6.86
Material Placement (Material 2)							
Shallow Draft Backfilling				** OVERTIME **			
Deckhand for Dredge	9894.51 HR	487,406	0	0	0	487,406	49.26
Dredge Engineer	4947.26 HR	319,743	0	0	0	319,743	64.63
Oiler	4947.26 HR	249,228	0	0	0	249,228	50.38
Excavator Dredge Operator	4947.26 HR	369,649	0	0	0	369,649	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	3957.80 HR	0	547,242	0	0	547,242	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	989.45 HR	0	34,864	0	0	34,864	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	4947.26 HR	0	40,957	0	0	40,957	8.28
SMALL TOOLS	4947.26 HR	0	9,542	0	0	9,542	1.93
Environmental Bucket	4947.26 HR	0	41,808	0	0	41,808	8.45
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.							
Command/Control System	4947.26 HR	0	95,629	0	0	95,629	19.33
Per Diem	3092.03 MDY	0	0	0	273,681	273,681	88.51
TOTAL Shallow Draft Backfilling	616842 BCY	1,426,026	770,042	0	273,681	2,469,749	4.00
TOTAL Backfill Reach 2	1000.00 BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00 BCY	0	0	0	0	0	0.00
TOTAL Shallow Draft Backfilling		1,426,026	770,042	0	273,681	2,469,749	
Backfill Reach 1				** OVERTIME **			
Deckhand for Dredge	7067.63 HR	348,153	0	0	0	348,153	49.26
Dredge Engineer	3533.81 HR	228,392	0	0	0	228,392	64.63
Oiler	3533.81 HR	178,023	0	0	0	178,023	50.38
Excavator Dredge Operator	3533.81 HR	264,039	0	0	0	264,039	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	2827.05 HR	0	638,330	0	0	638,330	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	706.76 HR	0	41,245	0	0	41,245	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3533.81 HR	0	29,255	0	0	29,255	8.28

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
SMALL TOOLS	3533.81	HR	0	6,816	0	0	6,816	1.93
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3533.81	HR	0	43,203	0	0	43,203	12.23
Command/Control System	3533.81	HR	0	68,308	0	0	68,308	19.33
Per Diem	2208.63	MDY	0	0	0	195,489	195,489	88.51
TOTAL Backfill Reach 1	616842	BCY	1,018,607	827,157	0	195,489	2,041,254	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			1,018,607	827,157	0	195,489	2,041,254	
TOTAL Material Placement (Material 2)	1233684	BCY	2,444,633	1,597,199	0	469,170	4,511,002	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.17
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88

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HTRW/Remediation/Construction	QUANTY UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Backfilling	1478838 BCY	17,539,496	15,876,385	67,728	21,898,520	55,382,129	37.45
Habitat & Vegetation Restoration							
Habitat & Vegetation Restoration							
Habitat & Vegetation Restoration							
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	37.00 AC	0	0	0	1,221,000	1,221,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	37.00 AC	0	0	0	296,000	296,000	8000.00
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	114.00 AC	0	0	0	3,762,000	3,762,000	33000.00
TOTAL Habitat & Vegetation Restoration		0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration		0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration		0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration	188.00 AC	0	0	0	5,279,000	5,279,000	28079.79
River Bank Restoration							
Shoreline Protect <2'-Hydroseed							
Shoreline Protection <2'					** OVERTIME **		
Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr							
Boat Captain	330.67 HR	19,591	0	0	0	19,591	59.25
Deckhand	330.67 HR	17,029	0	0	0	17,029	51.50
Outside Equip. Operators, Heavy	330.67 HR	22,084	0	0	0	22,084	66.79
Laborer	330.67 HR	16,521	0	0	0	16,521	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	330.67 HR	0	6,085	0	0	6,085	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	330.67 HR	0	536	0	0	536	1.62
Hydroseeder	330.67 HR	0	3,564	0	0	3,564	10.78
SMALL TOOLS	330.67 HR	0	667	0	0	667	2.02
Seed, Mulch, Fertlizer	206667 SY	0	0	76,057	0	76,057	0.37

402495

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protection <2'	206667	SY	75,226	10,851	76,057	0	162,133	0.78
TOTAL Shoreline Protect <2'-Hydroseed			75,226	10,851	76,057	0	162,133	
TOTAL Shoreline Protect <2'-Hydroseed	93000	LF	75,226	10,851	76,057	0	162,133	1.74
Shoreline Protect 2'-3' Mat								
Shoreline Protection 2'-3' ** OVERTIME ** Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr								
Boat Captain	925.93	HR	43,367	0	0	0	43,367	46.84
Deckhand	925.93	HR	37,695	0	0	0	37,695	40.71
Labor Foreman	925.93	HR	37,119	0	0	0	37,119	40.09
Laborer	2777.78	HR	109,711	0	0	0	109,711	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	925.93	HR	0	13,470	0	0	13,470	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	925.93	HR	0	1,186	0	0	1,186	1.28
SMALL TOOLS	925.93	HR	0	1,476	0	0	1,476	1.59
Staples	74074	EA	0	0	6,896	0	6,896	0.09
Erosion Control Mat w/seeds	111111	SY	0	0	168,088	0	168,088	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	111111	SY	227,892	16,131	175,682	0	419,706	3.78
TOTAL Shoreline Protect 2'-3' Mat			227,892	16,131	175,682	0	419,706	
TOTAL Shoreline Protect 2'-3' Mat	50000	LF	227,892	16,131	175,682	0	419,706	8.39
Shoreline Protect >3' Logs								
Shoreline Protection >3' ** OVERTIME ** Assume 50% reduction in productivity due to site accessibility, underwater work, and travel between sites. Therefore, 2500lf/day * .50 = 1250lf/day/10hr/day = 125lf/hr								
Boat Captain	256.00	HR	11,990	0	0	0	11,990	46.84
Deckhand	256.00	HR	10,422	0	0	0	10,422	40.71
Labor Foreman	256.00	HR	10,262	0	0	0	10,262	40.09
Laborer	768.00	HR	30,332	0	0	0	30,332	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	256.00	HR	0	3,724	0	0	3,724	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	256.00	HR	0	328	0	0	328	1.28
SMALL TOOLS	256.00	HR	0	408	0	0	408	1.59
Stakes	21333	EA	0	0	12,413	0	12,413	0.58
Biologs - 12" dia	32000	LF	0	0	186,190	0	186,190	5.82
BioLogs - 16" dia	32000	LF	0	0	223,428	0	223,428	6.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protection >3'	32000	LF	63,006	4,460	422,031	0	489,497	15.30
TOTAL Shoreline Protect >3' Logs			63,006	4,460	422,031	0	489,497	
TOTAL Shoreline Protect >3' Logs	32000	LF	63,006	4,460	422,031	0	489,497	15.30
TOTAL River Bank Restoration	175000	LF	366,124	31,442	673,770	0	1,071,336	6.12
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	14400	HR	1,314,924	0	0	0	1,314,924	91.31
Engineers, Project	14400	HR	918,642	0	0	0	918,642	63.79
Inspectors	14400	HR	424,886	0	0	0	424,886	29.51
Engineers, Quality Control	14400	HR	698,979	0	0	0	698,979	48.54
Clerks, Typists, Bookkeepers & Receptionist	11520	HR	299,919	0	0	0	299,919	26.03
Per Diem 5men/10hr/day = .5 multiplier	7199.98	MDY	0	0	0	526,678	526,678	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	400.80	EA	0	0	0	200,399	200,399	500.00
TOTAL Field Office Labor Requirements			3,657,349	0	0	727,078	4,384,427	
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	64.00	MO	0	15,443	0	0	15,443	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	64.00	MO	0	95,341	0	0	95,341	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	32914	HR	0	82,695	0	0	82,695	2.51
TOTAL Field Equipment Requirements	64.00	MO	0	193,478	0	0	193,478	3023.10
TOTAL Construction Management			3,657,349	193,478	0	727,078	4,577,905	
TOTAL Construction Management			3,657,349	193,478	0	727,078	4,577,905	
TOTAL Construction Monitoring	48.00	MON	3,657,349	193,478	0	727,078	4,577,905	95373.03
TOTAL HTRW/Remediation/Construction	3823060	BCY	118,375,370	100,715,712	6,757,427	414,135,366	639,983,876	167.40

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O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00	EA	0	0	0	0	0	0.00
Cost included in float surveys								
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp	2.00	EA	0	2,694	0	0	2,694	1347.23
cost of one boat included with weekly monitoring								
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70

402499

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9.14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.18
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67

402500

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Shallow Sediment Inventory (5YR)								
Labor/Equipment								
Chemist	525.00	HR	36,399	0	0	0	36,399	69.33
Chemist, Jr.	1050.00	HR	64,221	0	0	0	64,221	61.16
Sampling Technician	1050.00	HR	44,705	0	0	0	44,705	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	525.00	HR	0	24,994	0	0	24,994	47.61
TOTAL Labor/Equipment	500.00	HR	145,326	24,994	0	0	170,320	340.64
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	263.00	EA	0	0	29,036	0	29,036	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	250.00	EA	0	0	172,048	0	172,048	688.19
TOTAL Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
Annual Reporting (1 YR)								
Lbr/Matls for Quarterly Report								
Project Manager	24.00	HR	2,772	0	0	0	2,772	115.51
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00	HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	527	0	0	0	527	32.93
Reproduction Operators	8.00	HR	169	0	0	0	169	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00	WK	12,146	0	383	0	12,529	12529.22

402501

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Lbr/Matls for Annual Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00	WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
TOTAL Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00

402502

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Survey Crew	117.00	DAY	480,720	0	0	0	480,720	4108.72
Post Processing	204.75	HR	23,660	0	0	0	23,660	115.56
Per Diem	117.00	DAY	0	0	46,503	0	46,503	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1170.00	HR	589,094	0	46,503	0	635,597	543.25
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL O & M	1.00	EA	1,596,019	91,249	1,008,753	650,000	3,346,021	3346021.14
TOTAL Alt Removal 0/0/3R - Benficial	3823060	BCY	123,674,440	101,523,942	14,977,001	425,285,366	665,460,749	174.06

402503

HUDSON RIVER PCBs REASSESSMENT FS

APPENDIX I

COST ESTIMATES

I.11 Detailed Estimate - Alternative REM-3/10/Select - Hydraulic Dredging

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Hydraulic Dredging 3/10/Sel								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 3/10/10 (d)								
Labor/Equipment								
Chemist	15130	HR	1,048,994	0	0	0	1,048,994	69.33
Chemist, Jr.	15130	HR	925,393	0	0	0	925,393	61.16
Sampling Technician	15130	HR	644,184	0	0	0	644,184	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15130	HR	0	720,313	0	0	720,313	47.61
TOTAL Labor/Equipment	15130	HR	2,618,572	720,313	0	0	3,338,884	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22695	EA	0	0	6,013,531	0	6,013,531	264.97
Cesium - 137/Beryllium -7	7565.00	EA	0	0	835,213	0	835,213	110.40
Organic Carbon	2270.00	EA	0	0	167,079	0	167,079	73.60
Cation Exchange Capacity	2270.00	EA	0	0	167,079	0	167,079	73.60
TOTAL Analytical	7565.00	EA	0	0	7,182,903	0	7,182,903	949.49
TOTAL Sediment Inventory 3/10/10 (d)	1513.00	DAY	2,618,572	720,313	7,197,623	0	10,536,508	6963.98
Geophysical Surveys 3/10/10 (d)								
Labor/Equipment								
Chemist	500.00	HR	34,666	0	0	0	34,666	69.33
Survey Crew	50.00	DAY	205,436	0	0	0	205,436	4108.72
Post Processing	87.50	HR	10,111	0	0	0	10,111	115.56
Per Diem	50.00	DAY	0	0	19,873	0	19,873	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	500.00	HR	253,808	0	19,873	0	273,681	547.36
TOTAL Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63

402505

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,379,880	720,313	7,217,496	10,500,000	21,817,689	21817689.02
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	40.00	MON	0	0	23,351	0	23,351	583.79
TOTAL Health & Safety Equipment	40.00	MO	0	0	23,351	0	23,351	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25) Unit Measure Of	343.00	EA	0	0	65,061	0	65,061	189.68
Boot Covers, Tyvek (Bag Of 10Pr) Unit Measure Of	858.00	EA	0	0	11,482	0	11,482	13.38
Gloves, Latex (Box Of 100) (Single Hand) Unit Measure Of	42.86	EA	0	0	604	0	604	14.10
Pvc/Nitrile Blend (Package Of 12 Pr) Unit Measure	42.86	EA	0	0	2,580	0	2,580	60.21
TOTAL Health & Safety Stores	171.43	WKS	0	0	82,542	0	82,542	481.50

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	20571	HR	1,229,828	0	0	0	1,229,828	59.78
Industrial Hygiene Technician	20571	HR	793,437	0	0	0	793,437	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1028.57	MDY	0	0	0	75,240	75,240	73.15
Air Fare (Round Trip)	57.00	EA	0	0	0	28,500	28,500	500.00
TOTAL Health & Safety Labor			2,023,265	0	0	103,740	2,127,005	
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn,trailer,8'x36',2 showers	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety Decon Trailer	80.00	MO	0	0	204,809	0	204,809	2560.11
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
TOTAL Health & Safety	1.00	EA	2,023,265	0	310,702	103,740	2,437,707	2437707.25
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements								
Project Manager	10286	HR	939,231	0	0	0	939,231	91.31
General Superintendents (South)	10286	HR	539,141	0	0	0	539,141	52.42
General Superintendents (North)	10286	HR	539,141	0	0	0	539,141	52.42
Engineers, Project	10286	HR	656,173	0	0	0	656,173	63.79
Chemist	10286	HR	563,737	0	0	0	563,737	54.81
Industrial Hygiene Technician	10286	HR	396,719	0	0	0	396,719	38.57
Engineers, Quality Control	10286	HR	499,270	0	0	0	499,270	48.54
Schedulers	10286	HR	499,270	0	0	0	499,270	48.54
Clerks, Typists, Bookkeepers & Receptionist	8228.54	HR	214,228	0	0	0	214,228	26.03
Janitors	8228.54	HR	69,180	0	0	0	69,180	8.41
Per Diem	8228.54	MDY	0	0	0	601,918	601,918	73.15
8men/10hr/day = .8 multiplier								
Air Fare (Round Trip)	457.71	EA	0	0	0	228,856	228,856	500.00
8 men/3wks = 2.67 multiplier								
TOTAL Field Office Labor Requirements			4,916,091	0	0	830,774	5,746,865	
Home Office Labor Requirements								
Program Managers	686.00	HR	64,825	0	0	0	64,825	94.5
Operations Managers	1371.00	HR	50,764	0	0	0	50,764	37.03
Certified Industrial Hygienist	343.00	HR	23,482	0	0	0	23,482	68.46
Contract Administrators	686.00	HR	25,149	0	0	0	25,149	36.66
Purchasing Agents, Chief	1371.00	HR	50,262	0	0	0	50,262	36.66
Engineers, Quality Control	686.00	HR	33,299	0	0	0	33,299	48.54
Chief Scheduler & Planning Eng.	343.00	HR	12,039	0	0	0	12,039	35.10
Accountants	686.00	HR	13,878	0	0	0	13,878	20.23
Operations Managers	343.00	HR	12,700	0	0	0	12,700	37.03
Clerks, Typists, Bookkeepers & Receptionist	343.00	HR	8,930	0	0	0	8,930	26.03
Air Fare (Round Trip)	171.00	EA	0	0	0	85,500	85,500	500.00
Per Diem & Lodging	343.00	DAY	0	0	0	45,619	45,619	133.00
Car Rental (Air Port to Site)	343.00	DAY	0	0	0	18,865	18,865	55.00
TOTAL Home Office Labor Requirements	171.43	WKS	295,328	0	0	149,984	445,312	2597.66
Field Equipment Requirements								
Trailer: Contractor	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Contracting Officer	80.00	MO	0	0	26,532	0	26,532	331.65
Trailer: Storage	80.00	MO	0	0	14,430	0	14,430	180.37
Furniture Rental	160.00	MO	0	0	32,583	0	32,583	203.65
Telephone System Rental	160.00	MO	0	0	29,790	0	29,790	186.19
Sanitary Facility: Temporary	160.00	MO	0	0	16,757	0	16,757	104.73
Portable Radios (4 Ea)	160.00	WKS	0	0	9,310	0	9,310	58.18
Personal Computer	160.00	MO	0	0	20,481	0	20,481	128.01
Printer for PC	160.00	MO	0	0	12,102	0	12,102	75.64
Copy Machine	160.00	MO	0	0	30,721	0	30,721	192.01
Fax Machine	160.00	MO	0	0	3,724	0	3,724	23.27

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	9,652	0	0	9,652	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	40.00	MO	0	59,588	0	0	59,588	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	12,813	0	0	12,813	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	40.00	MO	0	74,567	0	0	74,567	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	20571	HR	0	51,684	0	0	51,684	2.51
TOTAL Field Equipment Requirements	40.00	MO	0	208,305	224,824	0	433,129	10828.23
Field Support Utilities								
Electricity	80.00	MO	0	0	0	15,200	15,200	190.00
Telephone (2 Lines)	80.00	MO	0	0	0	20,000	20,000	250.00
Bottled Water Service	343.00	WKS	0	0	0	15,435	15,435	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	80.00	MO	0	0	0	33,200	33,200	415.00
TOTAL Field Support Utilities	171.43	WKS	0	0	0	83,835	83,835	489.04
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	80.00	WK	0	0	3,258	0	3,258	40.73
Water Kegs (5 Gallon)	43.00	EA	0	0	998	0	998	23.22
Water Cups (Conical)	3429.00	BOX	0	0	15,762	0	15,762	4.60
Co2 Extinguisher (10Lb)	29.00	EA	0	0	4,759	0	4,759	164.11
Video Tape	171.00	EA	0	0	895	0	895	5.24
Camera Film and Development	40.00	MO	0	0	1,396	0	1,396	34.91
TOTAL Field Support Stores/Supplies	171.43	WKS	0	0	27,069	0	27,069	157.91
TOTAL Construction Management			5,257,423	208,305	251,894	1,064,593	6,782,215	
TOTAL Construction Management			5,257,423	208,305	251,894	1,064,593	6,782,215	
TOTAL Construction Management	40.00	MON	5,257,423	208,305	251,894	1,064,593	6,782,215	169555.37
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

RTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	5.00	EA	0	0	0	425,000	425,000	85000.00
Long Arm Purchase	3.00	EA	0	0	0	234,000	234,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	659,000	659,000	659000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	240.00	HR	8,614	0	0	0	8,614	35.89
Dredge Engineer	120.00	HR	5,649	0	0	0	5,649	47.08
Oiler	120.00	HR	4,403	0	0	0	4,403	36.69
Excavator Dredge Operator	120.00	HR	6,514	0	0	0	6,514	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	120.00	HR	0	3,494	0	0	3,494	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	120.00	HR	0	857	0	0	857	7.14
SMALL TOOLS	120.00	HR	0	201	0	0	201	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	120.00	HR	0	876	0	0	876	7.30
Command/Control System	120.00	HR	0	1,917	0	0	1,917	15.98
TOTAL Shallow Dredge Crew	3.00	HR	25,180	7,345	0	0	32,525	10841.80
Deep Dredge Crew								
Deckhand for Dredge	240.00	HR	8,614	0	0	0	8,614	35.89
Dredge Engineer	120.00	HR	5,649	0	0	0	5,649	47.08
Oiler	120.00	HR	4,403	0	0	0	4,403	36.69
Excavator Dredge Operator	120.00	HR	6,514	0	0	0	6,514	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	120.00	HR	0	5,788	0	0	5,788	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	120.00	HR	0	857	0	0	857	7.14
SMALL TOOLS	120.00	HR	0	201	0	0	201	1.67

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	120.00	HR	0	1,267	0	0	1,267	10.56
Command/Control System	120.00	HR	0	1,917	0	0	1,917	15.98
TOTAL Deep Dredge Crew	3.00	CRW	25,180	10,030	0	0	35,210	11736.57
North Barge Crew Rate								
Deckhand for Tug	120.00	HR	4,183	0	0	0	4,183	34.86
Boat Captain	120.00	HR	4,939	0	0	0	4,939	41.16
500 TO 800 Hp TUG BOAT	120.00	HR	0	8,138	0	0	8,138	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	120.00	HR	0	1,897	0	0	1,897	15.80
TOTAL North Barge Crew Rate	3.00	CRW	9,122	10,035	0	0	19,157	6385.58
South Barge Crew Rate								
Deckhand for Tug	80.00	HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00	HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00	HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00	HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	2.00	CRW	6,081	13,186	0	0	19,267	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.4
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			127,953	96,942	0	0	224,896	
TOTAL Equipment Mobilization	1.00	EA	127,953	96,942	0	0	224,896	224895.65

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	480.00	HR	0	13,978	0	0	13,978	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	480.00	HR	0	3,503	0	0	3,503	7.30
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Shallow Dredge Crew	3.00	CRW	100,720	29,381	0	0	130,102	43367.21
Deep Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	480.00	HR	0	23,150	0	0	23,150	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	480.00	HR	0	5,068	0	0	5,068	10.56
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Deep Dredge Crew	3.00	HR	100,720	40,118	0	0	140,839	46946.28
North Barge Crew Rate								
Deckhand for Tug	480.00	HR	16,732	0	0	0	16,732	34.86
Boat Captain	480.00	HR	19,756	0	0	0	19,756	41.16
500 TO 800 Hp TUG BOAT	480.00	HR	0	32,553	0	0	32,553	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	480.00	HR	0	7,586	0	0	7,586	15.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	3.00	CRW	36,488	40,139	0	0	76,627	25542.33
South Barge Crew Rate								
Deckhand for Tug	320.00	HR	11,155	0	0	0	11,155	34.86
Boat Captain	320.00	HR	13,171	0	0	0	13,171	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	320.00	HR	0	42,786	0	0	42,786	133.70
DREDGE BARGE, 1000 TON	320.00	HR	0	9,958	0	0	9,958	31.12
TOTAL South Barge Crew Rate	2.00	CRW	24,325	52,744	0	0	77,069	38534.38
Spare Tug Crew Rate								
Spare Tug Crew	320.00	HR	27,631	21,702	0	0	49,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	27,631	21,702	0	0	49,333	24666.44
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	40.00	HR	15,432	20,090	0	0	35,523	888.06
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	40.00	HR	15,432	32,604	0	0	48,037	1200.92

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	40.00	HR	17,138	14,430	0	0	31,568	789.20
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL South Truck Crew	40.00	HR	17,138	17,538	0	0	34,676	866.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	40.00	HR	37,446	17,180	0	0	54,626	1365.66
TOTAL Equipment Mobilization			392,471	285,927	0	0	678,399	
Process Equipment								
Master Mechanic	1280.00	HR	63,029	0	0	0	63,029	49.24
Outside Equip. Operators, Heavy	1280.00	HR	60,431	0	0	0	60,431	47.21
TOTAL Process Equipment	160.00	HR	123,460	0	0	0	123,460	771.62
TOTAL Process Equipment Start Up			123,460	0	0	0	123,460	
TOTAL Annual Remobilization & Startup	1.00	EA	515,931	285,927	0	0	801,858	801858.45
Annual Demobilization								
Shallow Dredge Crew								
Deckhand for Dredge	480.00	HR	17,227	0	0	0	17,227	35.89
Dredge Engineer	240.00	HR	11,298	0	0	0	11,298	47.08
Oiler	240.00	HR	8,806	0	0	0	8,806	36.69
Excavator Dredge Operator	240.00	HR	13,029	0	0	0	13,029	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	240.00	HR	0	6,989	0	0	6,989	29.12

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	240.00	HR	0	1,715	0	0	1,715	7.14
SMALL TOOLS	240.00	HR	0	401	0	0	401	1.67
Environmental Bucket	240.00	HR	0	1,752	0	0	1,752	7.30
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	240.00	HR	0	3,834	0	0	3,834	15.98
TOTAL Shallow Dredge Crew	3.00	CRW	50,360	14,691	0	0	65,051	21683.61
Deep Dredge Crew								
Deckhand for Dredge	480.00	HR	17,227	0	0	0	17,227	35.89
Dredge Engineer	240.00	HR	11,298	0	0	0	11,298	47.08
Oiler	240.00	HR	8,806	0	0	0	8,806	36.69
Excavator Dredge Operator	240.00	HR	13,029	0	0	0	13,029	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	240.00	HR	0	11,575	0	0	11,575	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	240.00	HR	0	1,715	0	0	1,715	7.14
SMALL TOOLS	240.00	HR	0	401	0	0	401	1.67
Environmental Bucket	240.00	HR	0	2,534	0	0	2,534	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Command/Control System	240.00	HR	0	3,834	0	0	3,834	15.98
TOTAL Deep Dredge Crew	3.00	CRW	50,360	20,059	0	0	70,419	23473.14
North Barge Crew Rate								
Deckhand for Tug	240.00	HR	8,366	0	0	0	8,366	34.86
Boat Captain	240.00	HR	9,878	0	0	0	9,878	41.16
500 TO 800 Hp TUG BOAT	240.00	HR	0	16,277	0	0	16,277	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	240.00	HR	0	3,793	0	0	3,793	15.80
TOTAL North Barge Crew Rate	3.00	CRW	18,244	20,070	0	0	38,314	12771.17
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	2.00	CRW	12,163	26,372	0	0	38,534	19267.19

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate								
Spare Tug Crew	160.00	HR	13,815	10,851	0	0	24,666	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	13,815	10,851	0	0	24,666	12333.22
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00	HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00	HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00	HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00	HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00	HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization			247,529	193,885	0	0	441,414	
TOTAL Annual Demobilization	1.00	EA	247,529	193,885	0	0	441,414	441414.29
Final Demob Site Restoration								
Shallow Dredge Crew								
Deckhand for Dredge	120.00	HR	4,307	0	0	0	4,307	35.89
Dredge Engineer	60.00	HR	2,825	0	0	0	2,825	47.08
Oiler	60.00	HR	2,201	0	0	0	2,201	36.69
Excavator Dredge Operator	60.00	HR	3,257	0	0	0	3,257	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	60.00	HR	0	1,747	0	0	1,747	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	60.00	HR	0	429	0	0	429	7.14
SMALL TOOLS	60.00	HR	0	100	0	0	100	1.67
Environmental Bucket	60.00	HR	0	438	0	0	438	7.30
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	60.00	HR	0	959	0	0	959	15.98
TOTAL Shallow Dredge Crew	3.00	HR	12,590	3,673	0	0	16,263	5420.90
Deep Dredge Crew								
Deckhand for Dredge	120.00	HR	4,307	0	0	0	4,307	35.89
Dredge Engineer	60.00	HR	2,825	0	0	0	2,825	47.08
Oiler	60.00	HR	2,201	0	0	0	2,201	36.69
Excavator Dredge Operator	60.00	HR	3,257	0	0	0	3,257	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	60.00	HR	0	2,894	0	0	2,894	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	60.00	HR	0	429	0	0	429	7.14
SMALL TOOLS	60.00	HR	0	100	0	0	100	1.67
Environmental Bucket	60.00	HR	0	634	0	0	634	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of								

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.								
Command/Control System	60.00	HR	0	959	0	0	959	15.98
TOTAL Deep Dredge Crew	3.00	HR	12,590	5,015	0	0	17,605	5868.28
North Barge Crew Rate								
Deckhand for Tug	60.00	HR	2,091	0	0	0	2,091	34.86
Boat Captain	60.00	HR	2,469	0	0	0	2,469	41.16
500 TO 800 Hp TUG BOAT	60.00	HR	0	4,069	0	0	4,069	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	60.00	HR	0	948	0	0	948	15.80
TOTAL North Barge Crew Rate	3.00	HR	4,561	5,017	0	0	9,578	3192.79
South Barge Crew Rate								
Deckhand for Tug	40.00	HR	1,394	0	0	0	1,394	34.86
Boat Captain	40.00	HR	1,646	0	0	0	1,646	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	40.00	HR	0	5,348	0	0	5,348	133.70
DREDGE BARGE, 1000 TON	40.00	HR	0	1,245	0	0	1,245	31.12
TOTAL South Barge Crew Rate	2.00	HR	3,041	6,593	0	0	9,634	4816.80
Spare Tug Crew Rate								
Spare Tug Crew	40.00	HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00	HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew								
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00	HR	0	4,731	0	0	4,731	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	40.00	HR	0	292	0	0	292	7.30
TOTAL North Unloading Crew	80.00	HR	3,858	5,023	0	0	8,881	111.01

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			63,977	48,471	0	0	112,448	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	63,977	48,471	0	500,000	612,448	612447.83
TOTAL Mobilization/Demobilization	1.00	EA	955,390	625,226	0	1,175,560	2,756,176	2756176.22

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket	107.25	HR	0	877	0	0	877	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel - Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl					** OVERTIME **			
Cover Building #2 This building is a rain cover for railroad cars.	5000.00	SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00	SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000	SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

RW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Water Treatment Facility	1.00	EA	0	0	0	15,000,000	15,000,000	15000000.00
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Water Separation Cyclone	1.00	EA	0	0	0	1,000,000	1,000,000	1000000.00
TOTAL Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	23,742,745	26,274,743	26274743.08
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	40.00	HR	2,602	0	0	0	2,602	65.04
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	204.80	HR	13,321	0	0	0	13,321	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54
TOTAL Repair Road/Work Area	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	600.00	LF	31,977	0	0	103,488	135,465	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	100.00	LF	5,330	0	0	12,320	17,650	176.50
Hopper - Mechanized-200 CY	4.00	EA	0	0	0	197,120	197,120	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added. The purchase and set up cost								

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl					** OVERTIME **			
Storage Building #1 This building is a rain cover for material.	22500	SF	0	0	0	1,663,200	1,663,200	73.92
Cover Building #2 This building is a rain cover for railroad cars.	4000.00	SF	0	0	0	295,680	295,680	73.92
Concrete Slab and Hardstand	7500.00	SY	0	0	0	462,000	462,000	61.60
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	2,420,880	2,420,880	2420880.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,665	0	0	8,624	11,289	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	187,572	0	0	0	187,572	187572.00
Skid Mounted WWTP	1.00	EA	0	0	0	308,000	308,000	308000.00
Influent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	2.00	EA	0	0	0	82,764	82,764	41382.20
Effluent Tanks, gnd stor, 40000 gal, 6" NP conn, plastic, horiz cyl	3.00	EA	0	0	0	124,516	124,516	41505.40
TOTAL North Plant - 50 gpm			187,572	0	0	515,281	702,853	
TOTAL Water Treatment Facility	1.00	EA	187,572	0	0	515,281	702,853	702852.61
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	

MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	351,221	630,628	419,748	5,317,076	6,718,673	6718672.67
Dredging								
Deep Draft Dredging								
Dredging Reach 1					** OVERTIME **			
TOTAL Dredging Reach 1		MDY	0	0	0	0	0	
TOTAL Reach #1			0	0	0	0	0	
Dredging Reach 2					** OVERTIME **			
TOTAL Dredging Reach 2		MDY	0	0	0	0	0	
TOTAL Reach #2			0	0	0	0	0	
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	6313.49	HR	300,312	0	0	0	300,312	47.57
Dredge Engineer	3156.74	HR	196,994	0	0	0	196,994	62.40
Oiler	3156.74	HR	153,545	0	0	0	153,545	48.64
Excavator Dredge Operator	3156.74	HR	227,588	0	0	0	227,588	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	2705.78	HR	0	595,585	0	0	595,585	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	450.96	HR	0	26,317	0	0	26,317	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3156.74	HR	0	25,313	0	0	25,313	8.02
SMALL TOOLS	3156.74	HR	0	5,877	0	0	5,877	1.86
Command/Control System	3156.74	HR	0	61,019	0	0	61,019	19.33
Environmental Bucket	3156.74	HR	0	37,359	0	0	37,359	11.83
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Per Diem	1578.37	MDY	0	0	0	139,704	139,704	88.51
TOTAL Dredging Reach 3	196786	BCY	878,439	751,470	0	139,704	1,769,612	8.99
TOTAL Reach #3	196786	BCY	878,439	751,470	0	139,704	1,769,612	8.99
TOTAL Deep Draft Dredging	196786	BCY	878,439	751,470	0	139,704	1,769,612	8.99

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Hydraulic Dredging								
Hydraulic Dredge					** OVERTIME **			
Dredge Engineer	6245.56	HR	379,695	0	0	0	379,695	60.79
Chief Engineer	20.02	MO	245,849	0	0	0	245,849	12281.50
Leverman	6245.56	HR	431,267	0	0	0	431,267	69.05
Deckhand	6245.56	HR	289,432	0	0	0	289,432	46.34
Maintenance Engineer	6245.56	HR	363,121	0	0	0	363,121	58.14
Mate	6245.56	HR	340,571	0	0	0	340,571	54.53
Welder	6245.56	HR	358,161	0	0	0	358,161	57.35
Welder	6245.56	HR	297,483	0	0	0	297,483	47.63
12" Cutter head Dredge (ADD 8"DIA DISCHARGE LINE)	20.02	MO	0	1,392,981	0	0	1,392,981	69587.10
SMALL TOOLS	6245.56	HR	0	12,341	0	0	12,341	1.98
Per Diem	4996.45	MDY	0	0	514,633	0	514,633	103.00
Pontoon Line	20.02	MO	0	208,173	0	0	208,173	10399.41
Submerged Line	20.02	MO	0	1,188,032	0	0	1,188,032	59348.78
Shore Line	20.02	MO	0	42,073	0	0	42,073	2101.79
TOTAL Hydraulic Dredge	1561390	BCY	2,705,579	2,843,599	514,633	0	6,063,811	3.88
Tender Tug					** OVERTIME **			
Boat Captain	6245.56	HR	341,488	0	0	0	341,488	54.68
Boat Master	6245.56	HR	354,232	0	0	0	354,232	56.72
Deckhand for Tug	6245.56	HR	288,354	0	0	0	288,354	46.17
TUG BOAT, 150 - 400 HP (112 - 298 KW)	20.02	MO	0	157,355	0	0	157,355	7860.77
Per Diem	1873.67	MDY	0	0	192,987	0	192,987	103.00
TOTAL Tender Tug	1561390	BCY	984,075	157,355	192,987	0	1,334,417	0.85
Skimmer/Debris Collector					** OVERTIME **			
Boat Captain	6245.56	HR	341,488	0	0	0	341,488	54.68
Boat Master	6245.56	HR	354,232	0	0	0	354,232	56.72
Deckhand for Tug	6245.56	HR	288,354	0	0	0	288,354	46.17
WORKBOAT,TRKABLE,25.25'X10'X3.5' WITH PILOT HOUSE & PUSH KNEES	20.02	MO	0	86,399	0	0	86,399	4316.12
Per Diem	1873.67	MDY	0	0	192,987	0	192,987	103.00
TOTAL Skimmer/Debris Collector	1561390	BCY	984,075	86,399	192,987	0	1,263,461	0.81
Survey Boat					** OVERTIME **			
Boat Operator	6245.56	HR	341,488	0	0	0	341,488	54.68
Per Diem	624.56	MDY	0	0	64,329	0	64,329	103.00
LAUNCH,22.83', SURVEYOR, 4000#	20.02	MO	0	197,106	0	0	197,106	9846.52
TOTAL Survey Boat	1561390	BCY	341,488	197,106	64,329	0	602,923	0.39

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Booster Pump					** OVERTIME **			
Maintenance Engineer	6245.56	HR	373,074	0	0	0	373,074	59.73
Oiler	6245.56	HR	303,786	0	0	0	303,786	48.64
Booster Pump	30.03	MO	0	1,241,920	0	0	1,241,920	41360.51
Per Diem	1249.11	MDY	0	0	128,658	0	128,658	103.00
TOTAL Booster Pump	1561390	BCY	676,860	1,241,920	128,658	0	2,047,437	1.31
Derrick Barge					** OVERTIME **			
Deckhand	12491	HR	594,162	0	0	0	594,162	47.57
Operator	6245.56	HR	450,278	0	0	0	450,278	72.10
Derrick Barge	20.02	MO	0	74,808	0	0	74,808	3737.09
Per Diem	1249.11	MDY	0	0	128,658	0	128,658	103.00
TOTAL Derrick Barge	1561390	BCY	1,044,440	74,808	128,658	0	1,247,906	0.80
Fuel Barge					** OVERTIME **			
Fuel barge	20.02	MO	0	45,143	0	0	45,143	2255.14
TOTAL Fuel Barge	2553450	BCY	0	45,143	0	0	45,143	0.02
Work Barge					** OVERTIME **			
Work Barge	20.02	MO	0	28,376	0	0	28,376	1417.52
TOTAL Work Barge	2553450	BCY	0	28,376	0	0	28,376	0.01
TOTAL Hydraulic Dredging- Thompson Isl	1561390	BCY	6,736,517	4,674,706	1,222,253	0	12,633,475	8.09
Hydraulic Dredge					** OVERTIME **			
Dredge Engineer	2320.55	HR	144,812	0	0	0	144,812	62.40
Chief Engineer	7.44	MO	91,346	0	0	0	91,346	12281.50
Leverman	2320.55	HR	164,559	0	0	0	164,559	70.91
Deckhand	4641.10	HR	220,762	0	0	0	220,762	47.57
Maintenance Engineer	2320.55	HR	138,616	0	0	0	138,616	59.73
Mate	2320.55	HR	129,986	0	0	0	129,986	56.02
Welder	2320.55	HR	136,718	0	0	0	136,718	58.92
Welder	2320.55	HR	113,444	0	0	0	113,444	48.89
12" Cutter head Dredge	7.44	MO	0	517,568	0	0	517,568	69587.10
(ADD 8"DIA DISCHARGE LINE)								
SMALL TOOLS	2320.55	HR	0	4,320	0	0	4,320	1.86
Pontoon Line	7.44	MO	0	89,520	0	0	89,520	12035.99
Submerged Line	7.44	MO	0	1,060,602	0	0	1,060,602	142598.14
Shore Line	7.44	MO	0	33,345	0	0	33,345	4483.21
Per Diem	2088.49	MDY	0	0	215,114	0	215,114	103.00
TOTAL Hydraulic Dredge	580137	BCY	1,140,243	1,705,355	215,114	0	3,060,712	5.28

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Tender Tug					** OVERTIME **			
Boat Captain	2320.55	HR	126,881	0	0	0	126,881	54.68
Boat Master	2320.55	HR	131,616	0	0	0	131,616	56.72
Deckhand for Tug	2320.55	HR	107,138	0	0	0	107,138	46.17
TUG BOAT, 150 - 400 HP (112 - 298 KW)	7.44	MO	0	58,466	0	0	58,466	7860.77
Per Diem	696.16	MDY	0	0	71,705	0	71,705	103.00
TOTAL Tender Tug	580137	BCY	365,635	58,466	71,705	0	495,805	0.85
Skimmer/Debris Collector					** OVERTIME **			
Boat Captain	2320.55	HR	126,881	0	0	0	126,881	54.68
Boat Master	2320.55	HR	131,616	0	0	0	131,616	56.72
Deckhand for Tug	2320.55	HR	107,138	0	0	0	107,138	46.17
WORKBOAT,TRKABLE,25.25'X10'X3.5' WITH PILOT HOUSE & PUSH KNEES	7.44	MO	0	32,102	0	0	32,102	4316.12
Per Diem	696.16	MDY	0	0	71,705	0	71,705	103.00
TOTAL Skimmer/Debris Collector	580137	BCY	365,635	32,102	71,705	0	469,441	0.81
Survey Boat					** OVERTIME **			
Boat Operator	2320.55	HR	126,881	0	0	0	126,881	54.[illegible]
Per Diem	232.05	MDY	0	0	23,902	0	23,902	103.
LAUNCH,22.83', SURVEYOR, 4000#	7.44	MO	0	73,235	0	0	73,235	9846.52
TOTAL Survey Boat	580137	BCY	126,881	73,235	23,902	0	224,018	0.39
Booster Pump					** OVERTIME **			
Maintenance Engineer	9282.19	HR	554,465	0	0	0	554,465	59.73
Oiler	9282.19	HR	451,488	0	0	0	451,488	48.64
Booster Pump	29.75	MO	0	1,230,500	0	0	1,230,500	41360.51
Per Diem	1856.44	MDY	0	0	191,213	0	191,213	103.00
TOTAL Booster Pump	580137	BCY	1,005,953	1,230,500	191,213	0	2,427,666	4.18
Derrick Barge					** OVERTIME **			
Deckhand	4641.10	HR	220,762	0	0	0	220,762	47.57
Operator	2320.55	HR	167,302	0	0	0	167,302	72.10
Derrick Barge	7.44	MO	0	27,795	0	0	27,795	3737.09
Per Diem	464.11	MDY	0	0	47,803	0	47,803	103.00
TOTAL Derrick Barge	580137	BCY	388,063	27,795	47,803	0	463,662	0.80

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Fuel Barge					** OVERTIME **			
Fuel barge	7.44	MO	0	16,773	0	0	16,773	2255.14
TOTAL Fuel Barge	2553450	BCY	0	16,773	0	0	16,773	0.01
Work Barge					** OVERTIME **			
Work Barge	7.44	MO	0	10,543	0	0	10,543	1417.52
TOTAL Work Barge	2553450	BCY	0	10,543	0	0	10,543	0.00
TOTAL Hydraulic Dredging- Lock 6	580137	BCY	3,392,409	3,154,770	621,441	0	7,168,620	12.36
Hydraulic Dredge					** OVERTIME **			
TOTAL Hydraulic Dredge		MDY	0	0	0	0	0	
Tender Tug					** OVERTIME **			
TOTAL Tender Tug		MDY	0	0	0	0	0	
Skimmer/Debris Collector					** OVERTIME **			
TOTAL Skimmer/Debris Collector		MDY	0	0	0	0	0	
Survey Boat					** OVERTIME **			
TOTAL Survey Boat		MO	0	0	0	0	0	
Booster Pump					** OVERTIME **			
TOTAL Booster Pump		MDY	0	0	0	0	0	
Derrick Barge					** OVERTIME **			
TOTAL Derrick Barge		MDY	0	0	0	0	0	
Fuel Barge					** OVERTIME **			
TOTAL Fuel Barge	2553450	BCY	0	0	0	0	0	0.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Work Barge					** OVERTIME **			
TOTAL Work Barge	2553450	BCY	0	0	0	0	0	0.00
TOTAL Hydraulic Dredging- Lock 5			0	0	0	0	0	
TOTAL Hydraulic Dredging	2141527	BCY	10,128,926	7,829,476	1,843,694	0	19,802,096	9.25
Shallow Draft Dredging								
Dredging Reach 1					** OVERTIME **			
TOTAL Dredging Reach 1		MDY	0	0	0	0	0	
TOTAL Reach 1			0	0	0	0	0	
Dredging Reach 2					** OVERTIME **			
TOTAL Dredging Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	30166	HR	1,434,900	0	0	0	1,434,900	47.57
Dredge Engineer	15083	HR	941,245	0	0	0	941,245	62.40
Oiler	15083	HR	733,642	0	0	0	733,642	48.64
Excavator Dredge Operator	15083	HR	1,087,421	0	0	0	1,087,421	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	12928	HR	0	1,743,262	0	0	1,743,262	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2154.72	HR	0	75,923	0	0	75,923	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	15083	HR	0	120,947	0	0	120,947	8.02
SMALL TOOLS	15083	HR	0	28,078	0	0	28,078	1.86
Command/Control System	15083	HR	0	291,551	0	0	291,551	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	15083	HR	0	123,388	0	0	123,388	8.18
Per Diem	7541.51	MDY	0	0	0	667,510	667,510	88.51
TOTAL Dredging Reach 3	313417	BCY	4,197,209	2,383,150	0	667,510	7,247,869	23.13
TOTAL Reach 3	313417	BCY	4,197,209	2,383,150	0	667,510	7,247,869	23.13
TOTAL Shallow Draft Dredging	313417	BCY	4,197,209	2,383,150	0	667,510	7,247,869	23.13

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land Locked Area								
Dredging Reach 2				** OVERTIME **				
TOTAL Dredging Reach 2		MDY	0	0	0	0	0	
TOTAL Shallow Draft Dredging			0	0	0	0	0	
Reach 2				** OVERTIME **				
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Small Barging to Transfer Site			0	0	0	0	0	
Transfer of Mat'l to Large barge				** OVERTIME **				
TOTAL Transfer of Mat'l to Large barge		MDY	0	0	0	0	0	
TOTAL Transfer of Mat'l to 200T Barge			0	0	0	0	0	
TOTAL Mobilization/Demobilization			0	0	0	0	0	
TOTAL Land Locked Area			0	0	0	0	0	
Turbidity Curtain/Resuspension								
Shallow Turbidity Control								
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	14400	HR	0	658,271	0	0	658,271	45.71
SMALL TOOLS	1440.00	HR	0	2,913	0	0	2,913	2.02
Deckhand for Tug	14400	HR	607,361	0	0	0	607,361	42.18
Boat Captain	14400	HR	717,134	0	0	0	717,134	49.80
TOTAL Shallow Turbidity Control	2.00	CRW	1,324,495	661,185	14,081	0	1,999,760	999879.99
Deep Turbidity Control								
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	6000.00	LF	0	0	109,829	0	109,829	18.30
Anchoring System	120.00	EA	0	0	40,552	0	40,552	337.93
Mooring Buoy Light w/Photocell	60.00	EA	0	0	10,560	0	10,560	176.01
Freight to Site	3.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	8999.97	HR	0	411,420	0	0	411,420	45.71
SMALL TOOLS	900.00	HR	0	1,821	0	0	1,821	2.02
Deckhand for Tug	8999.97	HR	379,601	0	0	0	379,601	42.18
Boat Captain	8999.97	HR	448,209	0	0	0	448,209	49.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Deep Turbidity Control	3.00	CRW	827,809	413,240	160,941	0	1,401,991	467330.36
TOTAL Turbidity Control			2,152,304	1,074,425	175,022	0	3,401,751	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	2,152,304	1,074,425	175,022	0	3,401,751	3401751.07
TOTAL Dredging	2651730	CY	17,356,877	12,038,520	2,018,716	807,214	32,221,328	12.15
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	12012	HR	832,817	0	0	0	832,817	69.33
Sampling Technician	12012	HR	511,430	0	0	0	511,430	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	12012	HR	0	163,423	0	0	163,423	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,344,247	164,770	0	0	1,509,017	829.13
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	2496.00	EA	0	0	661,369	0	661,369	264.97
Total Suspended Solids	2496.00	EA	0	0	91,857	0	91,857	36.80
Fraction Organic Carbon On TSS	2496.00	EA	0	0	183,714	0	183,714	73.60
TOTAL Analytical	416.00	EA	0	0	936,940	0	936,940	2252.26
TOTAL Weekly Field Sampling	52.00	WKS	1,344,247	164,770	945,772	0	2,454,789	47207.49
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores- 3/10/10 (dg)								
Chemist	3090.00	HR	214,236	0	0	0	214,236	69.33
Chemist, Jr.	3090.00	HR	188,993	0	0	0	188,993	61.16
Sampling Technician	3090.00	HR	131,562	0	0	0	131,562	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	3090.00	HR	0	147,109	0	0	147,109	47.61
TOTAL Labor/Equipment	3090.00	HR	534,791	147,109	0	0	681,900	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	3893.00	EA	0	0	114,615	0	114,615	29.44
Total PCB's	973.00	EA	0	0	257,817	0	257,817	264.97
Cesium - 137	973.00	EA	0	0	107,424	0	107,424	110.40
Organic Carbon	973.00	EA	0	0	71,616	0	71,616	73.60
TOTAL Analytical	3090.00	EA	0	0	551,472	0	551,472	178.47
TOTAL Confirmation Cores- 3/10/10 (dg)	309.00	DAY	534,791	147,109	566,193	0	1,248,093	4039.14
Confirmation Cores- 3/10/10 (bk)								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Chemist, Jr.	1170.00	HR	71,560	0	0	0	71,560	61.16
Sampling Technician	1170.00	HR	49,815	0	0	0	49,815	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	1170.00	HR	0	55,702	0	0	55,702	47.61
TOTAL Labor/Equipment	1170.00	HR	202,494	55,702	0	0	258,195	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	1474.00	EA	0	0	43,396	0	43,396	29.44
Total PCB's	369.00	EA	0	0	97,775	0	97,775	264.97
Organic Carbon	369.00	EA	0	0	27,160	0	27,160	73.60
TOTAL Analytical	1170.00	EA	0	0	168,331	0	168,331	143.87
TOTAL Confirmation Cores- 3/10/10 (bk)	117.00	DAY	202,494	55,702	183,051	0	441,247	3771.34

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Geophysical Surveys 3/10/10 (dg)								
Chemist	860.00	HR	59,626	0	0	0	59,626	69.33
Survey Crew	86.00	DAY	353,350	0	0	0	353,350	4108.72
Post Processing	150.50	HR	17,391	0	0	0	17,391	115.56
Per Diem	86.00	DAY	0	0	34,181	0	34,181	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	860.00	HR	433,962	0	34,181	0	468,143	544.35
TOTAL Geophysical Surveys 3/10/10 (dg)	86.00	DAY	433,962	0	34,181	0	468,143	5443.53
TOTAL Fish Sample Analysis	5.00	EA	0	0	0	3,250,000	3,250,000	650000.00
Annual Reporting								
Project Manager	120.00	HR	13,862	0	0	0	13,862	115.51
Chemist	200.00	HR	13,866	0	0	0	13,866	69.33
Engineers, Quality Control	120.00	HR	7,368	0	0	0	7,368	61.40
Clerks, Typists, Bookkeepers & Receptionist	80.00	HR	2,635	0	0	0	2,635	32.93
Reproduction Operators	40.00	HR	844	0	0	0	844	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	5.00	WK	43,007	0	383	0	43,389	8677.87
Project Manager	240.00	HR	27,723	0	0	0	27,723	115.51
Chemist	400.00	HR	27,733	0	0	0	27,733	69.33
Engineers, Quality Control	240.00	HR	14,737	0	0	0	14,737	61.40
Clerks, Typists, Bookkeepers & Receptionist	160.00	HR	5,269	0	0	0	5,269	32.93
Reproduction Operators	80.00	HR	1,688	0	0	0	1,688	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	10.00	WK	81,582	0	383	0	81,965	8196.45
TOTAL Annual Reporting	5.00	YR	124,588	0	765	0	125,354	25070.78
TOTAL Testing and Monitoring (remed)	1.00	EA	3,932,628	526,065	1,888,946	3,250,000	9,597,639	9597639.12

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Barging								
Barging to North - 1000T Hopper								
TOTAL Reach 1			0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3	100.00	BCY	0	0	0	0	0	0.00
TOTAL Barging to North - 1000T Hopper	1.00	EA	0	0	0	0	0	0.00
Barging to North - 200T Deck								
TOTAL Reach 1			0	0	0	0	0	
Reach 2					** OVERTIME **			
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 200T Deck	1.00	BCY	0	0	0	0	0	0.00
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	38253	HR	1,828,593	0	0	0	1,828,593	47.80
Boat Captain	38253	HR	2,167,872	0	0	0	2,167,872	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	38253	HR	0	6,007,935	0	0	6,007,935	157.06
DREDGE BARGE, 1000 TON	114759	HR	0	4,321,181	0	0	4,321,181	37.65
Per Diem	7650.61	DAY	0	0	0	677,167	677,167	88.51
Spare Tug Crew	6375.51	HR	666,105	523,182	0	0	1,189,287	186.54
Spare Tug Crew Per Diem days	1276.00	MDY	0	0	0	112,941	112,941	88.51
TOTAL Reach 1	1112827	BCY	4,662,570	10,852,298	0	790,108	16,304,976	14.65
TOTAL Reach 1	1112827	BCY	4,662,570	10,852,298	0	790,108	16,304,976	14.65
TOTAL Reach 2			0	0	0	0	0	

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 3					** OVERTIME **			
Deckhand for Tug	3382.23	HR	161,679	0	0	0	161,679	47.80
Boat Captain	3382.23	HR	191,677	0	0	0	191,677	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3382.23	HR	0	531,205	0	0	531,205	157.06
DREDGE BARGE, 1000 TON	16911	HR	0	636,778	0	0	636,778	37.65
Per Diem	676.45	DAY	0	0	0	59,873	59,873	88.51
Spare Tug Crew	3382.23	HR	353,371	277,550	0	0	630,920	186.54
Spare Tug Crew Per Diem days	676.00	MDY	0	0	0	59,834	59,834	88.51
TOTAL Reach 3	196786	BCY	706,727	1,445,532	0	119,707	2,271,965	11.55
TOTAL Reach 3	196786	BCY	706,727	1,445,532	0	119,707	2,271,965	11.55
TOTAL Barging to South - 1000T Hopper	1309613	BCY	5,369,296	12,297,830	0	909,815	18,576,941	14.19
Barging to South - 200T Deck								
Reach 1								
TOTAL Reach 1		MDY	0	0	0	0	0	
TOTAL Reach 1			0	0	0	0	0	
Reach 2								
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
Reach 3								
Deckhand for Tug	37708	HR	1,590,431	0	0	0	1,590,431	42.18
Boat Captain	37708	HR	1,877,881	0	0	0	1,877,881	49.80
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	37708	HR	0	6,100,442	0	0	6,100,442	161.78
DREDGE BARGE, 1000 TON	59255	HR	0	2,231,202	0	0	2,231,202	37.65
Per Diem	7541.52	DAY	0	0	0	667,511	667,511	88.51
Spare Tug Crew	5386.80	HR	562,806	442,048	0	0	1,004,854	186.54
Spare Tug Crew Per Diem days	1078.00	MDY	0	0	0	95,415	95,415	88.51
TOTAL Reach 3	313417	BCY	4,031,118	8,773,691	0	762,927	13,567,735	43.29
TOTAL Reach 3	313417	BCY	4,031,118	8,773,691	0	762,927	13,567,735	43.29
TOTAL Barging to South - 200T Deck	313417	BCY	4,031,118	8,773,691	0	762,927	13,567,735	43.29

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Canal/Lock Usage Fees			0	0	0	50,000	50,000	
TOTAL Barging	1623030	BCY	9,400,414	21,071,521	0	1,722,741	32,194,676	19.84
Water Separation Cyclone-Operate								
Water Separation Cyclone-Operate								
Water Separation Cyclone Operate (30) ** OVERTIME ** To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	8566.11	HR	0	416,540	0	0	416,540	48.63
Equipment Costs	8566.11	HR	0	237,747	0	0	237,747	27.75
Outside Equip. Oper Light	8566.11	HR	408,506	0	0	0	408,506	47.69
Outside Equip. Oper Med	8566.11	HR	445,933	0	0	0	445,933	52.06
Outside Laborer (Semi-Skilled)	17132	HR	676,642	0	0	0	676,642	39.50
TOTAL Water Separation Cyclone Operate	2141527	CY	1,531,081	654,287	0	0	2,185,367	1.02
TOTAL Water Separation Cyclone-Operate	1.00	EA	1,531,081	654,287	0	0	2,185,367	2185367.27
TOTAL Water Separation Cyclone-Operate	1.00	EA	1,531,081	654,287	0	0	2,185,367	2185367.27
TOTAL Water Separation Cyclone-Operate	2141527	BCY	1,531,081	654,287	0	0	2,185,367	1.02
Dewater Hydraulic Dredge Mat								
Dewater Hydraulic Dredge Mat								
Dewater Hydraulic Dredge Materil	2141527	CY	0	0	0	21,415,270	21,415,270	10.00
TOTAL Dewater Hydraulic Dredge Mat	2141527	BCY	0	0	0	21,415,270	21,415,270	10.00
TOTAL Dewater Hydraulic Dredge Mat	2141527	BCY	0	0	0	21,415,270	21,415,270	10.00
TOTAL Dewater Hydraulic Dredge Mat	2141527	BCY	0	0	0	21,415,270	21,415,270	10.00
Stabilization								
Transfer Cyclone to Hold								
Transfer Cyclone to Pugmil ** OVERTIME **								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	16375	HR	0	1,007,285	0	0	1,007,285	61.51
Outside Equip. Operators, Heavy	16375	HR	1,093,656	0	0	0	1,093,656	66.79
Laborer	32751	HR	1,636,302	0	0	0	1,636,302	49.96
SMALL TOOLS	32751	HR	0	66,038	0	0	66,038	2.02

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transfer Cyclone to Pugmil	2141527	BCY	2,729,958	1,073,323	0	0	3,803,281	1.78
TOTAL Transfer Cyclone to Pugmil	1.00	EA	2,729,958	1,073,323	0	0	3,803,281	3803281.24
TOTAL Transfer Cyclone to Hold	2141527	BCY	2,729,958	1,073,323	0	0	3,803,281	1.78
Unload from Barge								
Unloading at Northern Facility					** OVERTIME **			
TOTAL Unloading at Northern Facility		HR	0	0	0	0	0	
TOTAL Unload Barge - North	53800	BCY	0	0	0	0	0	0.00
Unloading at Southern Facility								
Master Mechanic	10502	HR	654,160	0	0	0	654,160	62.29
Outside Equip. Operators, Heavy	10502	HR	627,200	0	0	0	627,200	59.72
HYD EXCAV, CRWLR, 4.75 CY BKT	10502	HR	0	2,566,878	0	0	2,566,878	244.42
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	10502	HR	0	140,274	0	0	140,274	13.36
TOTAL Unloading at Southern Facility	1623030	BCY	1,281,361	2,707,151	0	0	3,988,512	2.46
TOTAL Unload Barge - South	162030	BCY	1,281,361	2,707,151	0	0	3,988,512	24.62
TOTAL Unload from Barge	1623030	BCY	1,281,361	2,707,151	0	0	3,988,512	2.46
Load Barge								
Unloading at Northern Facility					** OVERTIME **			
Outside Equip. Operators, Heavy	14401	HR	961,809	0	0	0	961,809	66.79
Master Mechanic	14401	HR	1,004,942	0	0	0	1,004,942	69.78
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	14401	HR	0	2,081,743	0	0	2,081,743	144.55
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	14401	HR	0	127,234	0	0	127,234	8.83
TOTAL Unloading at Northern Facility	1112827	BCY	1,966,752	2,208,977	0	0	4,175,729	3.75

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Load Barge - North	1.00	EA	1,966,752	2,208,977	0	0	4,175,729	4175728.79
TOTAL Load Barge	1112827	BCY	1,966,752	2,208,977	0	0	4,175,729	3.75
Stabilization Processing								
Soil Stabilization (30)				** OVERTIME **				
To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	5102.03	HR	0	313,839	0	0	313,839	61.51
Mixing Equipment	5102.03	HR	0	1,031,037	0	0	1,031,037	202.08
Outside Equip. Oper Light	5102.03	HR	307,786	0	0	0	307,786	60.33
Outside Equip. Oper Med	5102.03	HR	335,985	0	0	0	335,985	65.85
Outside Laborer (Semi-Skilled)	10204	HR	509,810	0	0	0	509,810	49.96
TOTAL Soil Stabilization	510203	BCY	1,153,581	1,344,876	0	0	2,498,457	4.90
TOTAL Soil Stabilization			1,153,581	1,344,876	0	0	2,498,457	
TOTAL Stabilization Processing	510203	BCY	1,153,581	1,344,876	0	0	2,498,457	4.90
Stabilization Agents/Chemical								
Stabilization Agents/Chemical					** OVERTIME **			
Portland Cement - Material Cost BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sales tax = $90.93	57143	TNS	0	0	0	5,195,989	5,195,989	90.93
TOTAL Stabilization Agents/Chemical	510203	BCY	0	0	0	5,195,989	5,195,989	10.18
TOTAL Stabilization Agents/Chemical	1.00	EA	0	0	0	5,195,989	5,195,989	5195988.98
TOTAL Stabilization Agents/Chemical	510203	BCY	0	0	0	5,195,989	5,195,989	10.18
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	13313	HR	665,154	0	0	0	665,154	49.96
Outside Truck Drivers, Heavy	39939	HR	1,860,902	0	0	0	1,860,902	46.59
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	39939	HR	0	160,700	0	0	160,700	4.02
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	39939	HR	0	1,322,443	0	0	1,322,443	33.11
TOTAL Truck Cycle Times-North Facility	1028700	BCY	2,526,056	1,483,143	0	0	4,009,199	3.90

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	10766	HR	537,884	0	0	0	537,884	49.96
Outside Truck Drivers, Heavy	32297	HR	1,504,838	0	0	0	1,504,838	46.59
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	32297	HR	0	383,251	0	0	383,251	11.87
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	32297	HR	0	1,069,407	0	0	1,069,407	33.11
TOTAL Truck Cycle Times-South Facility	1663846	BCY	2,042,722	1,452,658	0	0	3,495,380	2.10
TOTAL Truck Cycle Times	1.00	EA	4,568,778	2,935,801	0	0	7,504,579	7504579.36
TOTAL Transfer to RR Holding Area	2692546	BCY	4,568,778	2,935,801	0	0	7,504,579	2.79
TOTAL Stabilization	510203	BCY	11,700,429	10,270,129	0	5,195,989	27,166,548	53.25
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	7866.00	HR	0	483,858	0	0	483,858	61.51
Outside Equip. Operators, Heavy	7866.00	HR	525,347	0	0	0	525,347	66.79
Laborer	15732	HR	786,011	0	0	0	786,011	49.96
SMALL TOOLS	15732	HR	0	31,722	0	0	31,722	2.02
TOTAL Loader Cycle Time - North Site	1028700	BCY	1,311,358	515,580	0	0	1,826,937	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	12723	HR	0	782,604	0	0	782,604	61.51
Outside Equip. Operators, Heavy	12723	HR	849,709	0	0	0	849,709	66.79
Laborer	25445	HR	1,271,315	0	0	0	1,271,315	49.96
SMALL TOOLS	25445	HR	0	51,308	0	0	51,308	2.02
TOTAL Loader Cycle Time - South Site	1663846	BCY	2,121,024	833,912	0	0	2,954,936	1.78
TOTAL Load RR Car	2692546	BCY	3,432,381	1,349,492	0	0	4,781,873	1.78
Transp/Disposal -33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	17634	TRP	0	0	0	88,170,389	88,170,389	5000.00
TOTAL Rail Transport Fee (>33ppm)	1587067	TNS	0	0	0	88,170,389	88,170,389	55.56
TOTAL Rail Transport Fee (>33ppm)	1587067	TNS	0	0	0	88,170,389	88,170,389	55.56

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sediment Disposal (>-33 ppm)								
Disposal Fee/Taxes - Texas	1587067	TNS	0	0	0	83,321,018	83,321,018	52.50
TOTAL Sediment Disposal (>-33 ppm)	1587067	EA	0	0	0	83,321,018	83,321,018	52.50
TOTAL Sediment Disposal (>33 ppm)	1587067	TNS	0	0	0	83,321,018	83,321,018	52.50
TOTAL Transp/Disposal -33 ppm - Texas	1587067	TNS	0	0	0	171,491,407	171,491,407	108.06
Transp/Disposal(0-33) Norhteast								
Transp/Disposal(0-33) Northeast								
Transp/disposal at Northeast This includes both the total transportation and disposal costs for northeaster disposal facility.	813002	TON	0	0	0	40,650,100	40,650,100	50.00
TOTAL Transp/Disposal(0-33) Northeast	813001	TNS	0	0	0	40,650,100	40,650,100	50.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	40,650,100	40,650,100	40650100.00
TOTAL Transp/Disposal(0-33) Norhteast	813002	TNS	0	0	0	40,650,100	40,650,100	50.00
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
Transp/disposal at Southeast This includes both the total transportation and disposal costs for southeastern disposal facility.	1369493	TNS	0	0	0	68,474,650	68,474,650	50.00
TOTAL Transp/Disposal(0-33) Southeast	1369493	TNS	0	0	0	68,474,650	68,474,650	50.00
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	68,474,650	68,474,650	68474650.00
TOTAL Transp/Disposal(0-33) Southeast	1369493	TNS	0	0	0	68,474,650	68,474,650	50.00
Sediment Sample & Analysis								
Analytical costs for Disposal					** OVERTIME **			
Total PCB's - Sediment Assume 1 test/1000 tns	4011.69	EA	0	0	0	601,754	601,754	150.00
Total TCLP Assume 1 test/10000 tns	400.93	EA	0	0	0	481,112	481,112	1200.00
Paint Filter Test Assume 1 test/1000 tns	4011.69	EA	0	0	0	80,234	80,234	20.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Duplicates	200.58	EA	0	0	0	30,088	30,088	150.00
Assume 5% of Total PCB's								
Quality Assurance	200.58	EA	0	0	0	30,088	30,088	150.00
Assume 5% of Total PCB's								
TOTAL Analytical costs for Disposal	2651730	BCY	0	0	0	1,223,276	1,223,276	0.46
TOTAL Analytical costs for Disposal			0	0	0	1,223,276	1,223,276	
TOTAL Sediment Sample & Analysis	3769561	TNS	0	0	0	1,223,276	1,223,276	0.32
TOTAL Transport/Landfill Fee	2651730	BCY	3,432,381	1,349,492	0	281,839,432	286,621,305	108.09
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant					** OVERTIME **			
Wastewater Treatment Operator	12000	HR	446,380	0	0	0	446,380	37.20
Laborer	12000	HR	599,549	0	0	0	599,549	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	284238	LB	0	0	37,657	0	37,657	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	698063	LB	0	0	116,324	0	116,324	0.17
TOTAL O&M at North Plant	********	GAL	1,045,928	674	233,841	0	1,280,442	0.00
O&M at South Plant					** OVERTIME **			
Wastewater Treatment Operator	1200.00	HR	44,638	0	0	0	44,638	37.20
Laborer	1200.00	HR	59,955	0	0	0	59,955	49.96
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	35.00	MON	0	0	77,283	0	77,283	2208.10
O&M Phone usage	35.00	MO	0	0	2,576	0	2,576	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	4467.56	LB	0	0	592	0	592	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	10972	LB	0	0	1,828	0	1,828	0.17

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL O&M at South Plant	65700000	GAL	104,593	674	82,280	0	187,546	0.00
TOTAL Water Plant Operation			1,150,521	1,347	316,120	0	1,467,989	
TOTAL Water Treatment Process	1.00	EA	1,150,521	1,347	316,120	0	1,467,989	1467988.55
Effluent Monitoring								
Total Suspended Solids	100.00	EA	0	0	0	3,163	3,163	31.63
assume 1 test per 25000 gallons BOD (immunoassay)	100.00	EA	0	0	0	8,223	8,223	82.22
Assume 1 test per 25000 gallons COD	100.00	EA	0	0	0	2,151	2,151	21.51
assume 1 test per 25000 gallons PCB	100.00	EA	0	0	0	18,975	18,975	189.75
assume 1 test/25000 gallons Metals (Priority Pollutant -13)	100.00	EA	0	0	0	25,300	25,300	253.00
assume 1 test per 25000 gallons Volatile Organics	100.00	EA	0	0	0	23,403	23,403	234.03
assume 1 test per 25000 gallons Semi Volatile Organics	100.00	EA	0	0	0	43,010	43,010	430.10
assume 1 test per 25000 gallons								
TOTAL Discharge at Southern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
Total Suspended Solids	100.00	EA	0	0	0	3,163	3,163	31.63
assume 1 test per 25000 gallons BOD (immunoassay)	100.00	EA	0	0	0	8,223	8,223	82.22
Assume 1 test per 25000 gallons COD	100.00	EA	0	0	0	2,151	2,151	21.51
assume 1 test per 25000 gallons PCB	100.00	EA	0	0	0	18,975	18,975	189.75
assume 1 test/25000 gallons Metals (Priority Pollutant -13)	100.00	EA	0	0	0	25,300	25,300	253.00
assume 1 test per 25000 gallons Volatile Organics	100.00	EA	0	0	0	23,403	23,403	234.03
assume 1 test per 25000 gallons Semi Volatile Organics	100.00	EA	0	0	0	43,010	43,010	430.10
assume 1 test per 25000 gallons								
TOTAL Discharge at Northern Facility	100.00	EA	0	0	0	124,223	124,223	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	248,446	248,446	248446.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	1,150,521	1,347	316,120	248,446	1,716,435	1716434.55
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	276315	TNS	0	0	0	4,012,094	4,012,094	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,094	4,012,094	4012093.80
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,012,094	4,012,094	4012093.80
TOTAL Material 1 (topsoil type)	276315	TNS	0	0	0	4,012,094	4,012,094	14.52
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	457986	TNS	0	0	0	3,879,141	3,879,141	8.47
Graded Gravel (at Plant)	457986	TNS	0	0	0	3,879,141	3,879,141	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	7,758,283	7,758,283	7758282.84
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	7,758,283	7,758,283	7758282.84
TOTAL Material 2 (sand, gravel)	915972	TNS	0	0	0	7,758,283	7,758,283	8.47
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	4435.59	HR	211,978	0	0	0	211,978	47.79
Outside Truck Drivers, Heavy	31049	HR	1,383,786	0	0	0	1,383,786	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	31049	HR	0	352,421	0	0	352,421	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	31049	HR	0	983,383	0	0	983,383	31.67
TOTAL Truck Cycle Times-North Facility	851634	BCY	1,595,765	1,335,804	0	0	2,931,568	3.44
TOTAL Truck Cycle Times			1,595,765	1,335,804	0	0	2,931,568	
TOTAL Transportation to River	851634	CY	1,595,765	1,335,804	0	0	2,931,568	3.44
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	3787.28	HR	0	298,059	0	0	298,059	78.70
Outside Equip. Operators, Heavy	3787.28	HR	241,943	0	0	0	241,943	63.88
Laborer	7574.55	HR	361,990	0	0	0	361,990	47.79
SMALL TOOLS	7574.55	HR	0	14,609	0	0	14,609	1.93
TOTAL Loader Cycle Time - North Site	851634	BCY	603,933	312,668	0	0	916,601	1.08
TOTAL Barge Loading	1.00	EA	603,933	312,668	0	0	916,601	916601.42
TOTAL Barge Loading	851634	CY	603,933	312,668	0	0	916,601	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	6479.32	HR	309,728	0	0	0	309,728	47.80
Boat Captain	6479.32	HR	367,195	0	0	0	367,195	56.67
500 TO 800 Hp TUG BOAT	6479.32	HR	0	510,604	0	0	510,604	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	10367	HR	0	190,414	0	0	190,414	18.37
Per Diem for tug crew	1295.86	MDY	0	0	0	114,699	114,699	88.51
Spare Tug Crew	1295.86	HR	135,390	106,340	0	0	241,730	186.54
Spare Tug Crew Per Diem days	260.00	MDY	0	0	0	23,013	23,013	88.51
TOTAL Reach 1	161573	BCY	812,313	807,358	0	137,712	1,757,383	10.88

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 2					** OVERTIME **			
Deckhand for Tug	2268.25	HR	108,428	0	0	0	108,428	47.80
Boat Captain	2268.25	HR	128,546	0	0	0	128,546	56.67
500 TO 800 Hp TUG BOAT	2268.25	HR	0	178,750	0	0	178,750	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	3240.36	HR	0	59,517	0	0	59,517	18.37
Per Diem for tug crew	453.65	MDY	0	0	0	40,153	40,153	88.51
Spare Tug Crew	324.04	HR	33,855	26,591	0	0	60,446	186.54
Spare Tug Crew Per Diem days	64.00	MDY	0	0	0	5,665	5,665	88.51
TOTAL Reach 2	40402	BCY	270,829	264,858	0	45,818	581,505	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	41388	HR	1,978,461	0	0	0	1,978,461	47.80
Boat Captain	41388	HR	2,345,547	0	0	0	2,345,547	56.67
500 TO 800 Hp TUG BOAT	41388	HR	0	3,261,605	0	0	3,261,605	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	49148	HR	0	902,735	0	0	902,735	18.37
Per Diem for tug crew	8277.64	MDY	0	0	0	732,666	732,666	88.51
Spare Tug Crew	2586.76	HR	270,262	212,273	0	0	482,534	186.54
Spare Tug Crew Per Diem days	518.00	MDY	0	0	0	45,849	45,849	88.51
TOTAL Reach 3	322527	BCY	4,594,269	4,376,613	0	778,515	9,749,397	30.23
TOTAL Barging for Shallow Backfill	524501	BCY	5,677,411	5,448,829	0	962,045	12,088,286	23.05
Reach 1					** OVERTIME **			
Deckhand for Tug	1154.64	HR	55,195	0	0	0	55,195	47.80
Boat Captain	1154.64	HR	65,436	0	0	0	65,436	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	1154.64	HR	0	181,346	0	0	181,346	157.06
DREDGE BARGE, 1000 TON	2309.29	HR	0	86,955	0	0	86,955	37.65
Per Diem for tug crew	230.93	MDY	0	0	0	20,440	20,440	88.51
Spare Tug Crew	577.32	HR	60,318	47,376	0	0	107,694	186.54
Spare Tug Crew Per Diem days	116.00	MDY	0	0	0	10,267	10,267	88.51
TOTAL Reach 1	100774	BCY	180,949	315,676	0	30,707	527,332	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	288.72	HR	13,802	0	0	0	13,802	47.80
Boat Captain	288.72	HR	16,363	0	0	0	16,363	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	288.72	HR	0	45,346	0	0	45,346	157.06
DREDGE BARGE, 1000 TON	721.81	HR	0	27,179	0	0	27,179	37.65
Per Diem for tug crew	57.74	MDY	0	0	0	5,111	5,111	88.51
Spare Tug Crew	144.36	HR	15,083	11,847	0	0	26,929	186.54
Spare Tug Crew Per Diem days	28.00	MDY	0	0	0	2,478	2,478	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	25199	BCY	45,247	84,372	0	7,589	137,209	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	5762.14	HR	275,445	0	0	0	275,445	47.80
Boat Captain	5762.14	HR	326,551	0	0	0	326,551	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	5762.14	HR	0	904,988	0	0	904,988	157.06
DREDGE BARGE, 1000 TON	9219.42	HR	0	347,151	0	0	347,151	37.65
Per Diem for tug crew	1152.43	MDY	0	0	0	102,003	102,003	88.51
Spare Tug Crew	1152.43	HR	120,404	94,570	0	0	214,974	186.54
Spare Tug Crew Per Diem days	230.00	MDY	0	0	0	20,358	20,358	88.51
TOTAL Reach 3	201161	BCY	722,400	1,346,709	0	122,361	2,191,469	10.89
TOTAL Barging for Deep Backfill	327133	BCY	948,596	1,746,757	0	160,657	2,856,010	8.73
TOTAL Barging to Backfill Site	851634	BCY	6,626,007	7,195,587	0	1,122,702	14,944,296	17.55
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	5427.57	HR	267,363	0	0	0	267,363	49.26
Dredge Engineer	2713.78	HR	175,393	0	0	0	175,393	64.63
Oiler	2713.78	HR	136,712	0	0	0	136,712	50.38
Excavator Dredge Operator	2713.78	HR	202,768	0	0	0	202,768	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2171.03	HR	0	300,186	0	0	300,186	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	542.76	HR	0	19,124	0	0	19,124	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2713.78	HR	0	22,467	0	0	22,467	8.28
SMALL TOOLS	2713.78	HR	0	5,234	0	0	5,234	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2713.78	HR	0	22,934	0	0	22,934	8.45
Command/Control System	2713.78	HR	0	52,457	0	0	52,457	19.33
Per Diem	1696.11	MDY	0	0	0	150,126	150,126	88.51
TOTAL Backfill - Fines	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines			782,237	422,401	0	150,126	1,354,764	

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Material Placement (Fines)	197368	BCY	782,237	422,401	0	150,126	1,354,764	6.86
Material Placement (Material 2)								
Shallow Draft Backfilling					** OVERTIME **			
Deckhand for Dredge	5247.41	HR	258,489	0	0	0	258,489	49.26
Dredge Engineer	2623.70	HR	169,571	0	0	0	169,571	64.63
Oiler	2623.70	HR	132,174	0	0	0	132,174	50.38
Excavator Dredge Operator	2623.70	HR	196,038	0	0	0	196,038	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2098.96	HR	0	290,222	0	0	290,222	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	524.74	HR	0	18,490	0	0	18,490	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	2623.70	HR	0	21,721	0	0	21,721	8.28
SMALL TOOLS	2623.70	HR	0	5,060	0	0	5,060	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	2623.70	HR	0	22,172	0	0	22,172	8.45
Command/Control System	2623.70	HR	0	50,716	0	0	50,716	19.33
Per Diem	1639.81	MDY	0	0	0	145,142	145,142	88.51
TOTAL Shallow Draft Backfilling	327133	BCY	756,272	408,380	0	145,142	1,309,795	4.00
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Shallow Draft Backfilling			756,272	408,380	0	145,142	1,309,795	
Backfill Reach 1					** OVERTIME **			
Deckhand for Dredge	3748.21	HR	184,638	0	0	0	184,638	49.26
Dredge Engineer	1874.11	HR	121,124	0	0	0	121,124	64.63
Oiler	1874.11	HR	94,412	0	0	0	94,412	50.38
Excavator Dredge Operator	1874.11	HR	140,029	0	0	0	140,029	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	1499.28	HR	0	338,529	0	0	338,529	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	374.82	HR	0	21,874	0	0	21,874	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	1874.11	HR	0	15,515	0	0	15,515	8.28
SMALL TOOLS	1874.11	HR	0	3,615	0	0	3,615	1.93
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	1874.11	HR	0	22,912	0	0	22,912	12.23
Command/Control System	1874.11	HR	0	36,226	0	0	36,226	19.33
Per Diem	1171.32	MDY	0	0	0	103,675	103,675	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Backfill Reach 1	327133	BCY	540,203	438,670	0	103,675	1,082,549	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			540,203	438,670	0	103,675	1,082,549	
TOTAL Material Placement (Material 2)	654256	EA	1,296,475	847,051	0	248,817	2,392,343	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.17
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88
TOTAL Backfilling	851634	BCY	11,656,629	10,441,035	67,728	13,304,122	35,469,514	41.65

ETRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration					** OVERTIME **			
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	22.00	AC	0	0	0	726,000	726,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	22.00	AC	0	0	0	176,000	176,000	8000.00
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	55.00	AC	0	0	0	1,815,000	1,815,000	33000.00
TOTAL Habitat & Vegetation Restoration	97.50	AC	0	0	0	2,717,000	2,717,000	27866.67
TOTAL Habitat & Vegetation Restoration			0	0	0	2,717,000	2,717,000	
TOTAL Habitat & Vegetation Restoration			0	0	0	2,717,000	2,717,000	
TOTAL Habitat & Vegetation Restoration	97.50	AC	0	0	0	2,717,000	2,717,000	27866.67
River Bank Restoration								
Shoreline Protect <2'-Hydroseed								
Shoreline Protection <2'					** OVERTIME **			
Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr								
Boat Captain	60.44	HR	3,581	0	0	0	3,581	59.25
Deckhand	60.44	HR	3,113	0	0	0	3,113	51.50
Outside Equip. Operators, Heavy	60.44	HR	4,037	0	0	0	4,037	66.79
Laborer	60.44	HR	3,020	0	0	0	3,020	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	60.44	HR	0	1,112	0	0	1,112	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	60.44	HR	0	98	0	0	98	1.62
Hydroseeder	60.44	HR	0	651	0	0	651	10.78
SMALL TOOLS	60.44	HR	0	122	0	0	122	2.02
Seed, Mulch, Fertlizer	37778	SY	0	0	13,903	0	13,903	0.37
TOTAL Shoreline Protection <2'	37778	SY	13,751	1,984	13,903	0	29,637	0.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protect <2'-Hydroseed			13,751	1,984	13,903	0	29,637	
TOTAL Shoreline Protect <2'-Hydroseed	17000	LF	13,751	1,984	13,903	0	29,637	1.74
Shoreline Protect 2'-3' Mat								
Shoreline Protection 2'-3'					** OVERTIME **			
Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr								
Boat Captain	870.37	HR	40,765	0	0	0	40,765	46.84
Deckhand	870.37	HR	35,434	0	0	0	35,434	40.71
Labor Foreman	870.37	HR	34,892	0	0	0	34,892	40.09
Laborer	2611.11	HR	103,129	0	0	0	103,129	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	870.37	HR	0	12,662	0	0	12,662	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	870.37	HR	0	1,114	0	0	1,114	1.28
SMALL TOOLS	870.37	HR	0	1,387	0	0	1,387	1.59
Staples	69630	EA	0	0	6,482	0	6,482	0.09
Erosion Control Mat w/seeds	104444	SY	0	0	158,003	0	158,003	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	104444	SY	214,219	15,163	165,183	0	394,565	3.78
TOTAL Shoreline Protect 2'-3' Mat			214,219	15,163	165,183	0	394,565	
TOTAL Shoreline Protect 2'-3' Mat	47000	LF	214,219	15,163	165,183	0	394,565	8.40
Shoreline Protect >3' Logs								
Shoreline Protection >3'					** OVERTIME **			
Assume 50% reduction in productivity due to site accessibility, underwater work, and travel between sites. Therefore, 2500lf/day * .50 = 1250lf/day/10hr/day = 125lf/hr								
Boat Captain	216.00	HR	10,116	0	0	0	10,116	46.84
Deckhand	216.00	HR	8,793	0	0	0	8,793	40.71
Labor Foreman	216.00	HR	8,659	0	0	0	8,659	40.09
Laborer	648.00	HR	25,593	0	0	0	25,593	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	216.00	HR	0	3,142	0	0	3,142	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	216.00	HR	0	277	0	0	277	1.28
SMALL TOOLS	216.00	HR	0	344	0	0	344	1.59
Stakes	18000	EA	0	0	10,473	0	10,473	0.58
Biologs - 12" dia	27000	LF	0	0	157,098	0	157,098	5.82
BioLogs - 16" dia	27000	LF	0	0	188,517	0	188,517	6.98
TOTAL Shoreline Protection >3'	27000	LF	53,162	3,763	356,088	0	413,013	15.30

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protect >3' Logs			53,162	3,763	356,088	0	413,013	
TOTAL Shoreline Protect >3' Logs	27000	LF	53,162	3,763	356,088	0	413,013	15.30
TOTAL River Bank Restoration	91000	LF	281,131	20,910	535,174	0	837,216	9.20
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	12343	HR	1,127,078	0	0	0	1,127,078	91.31
Engineers, Project	12343	HR	787,407	0	0	0	787,407	63.79
Inspectors	12343	HR	364,188	0	0	0	364,188	29.51
Engineers, Quality Control	12343	HR	599,125	0	0	0	599,125	48.54
Clerks, Typists, Bookkeepers & Receptionist	9874.25	HR	257,074	0	0	0	257,074	26.03
Per Diem 5men/10hr/day = .5 multiplier	6171.41	MDY	0	0	0	451,438	451,438	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	343.54	EA	0	0	0	171,771	171,771	500.00
TOTAL Field Office Labor Requirements			3,134,871	0	0	623,209	3,758,080	
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	11,582	0	0	11,582	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	48.00	MO	0	71,506	0	0	71,506	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	24686	HR	0	62,021	0	0	62,021	2.51
TOTAL Field Equipment Requirements	48.00	MO	0	145,109	0	0	145,109	3023.10
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Management			3,134,871	145,109	0	623,209	3,903,189	
TOTAL Construction Monitoring	48.00	MON	3,134,871	145,109	0	623,209	3,903,189	81316.44
TOTAL HTRW/Remediation/Construction	2651730	BCY	72,745,133	58,746,832	6,995,898	362,791,738	501,279,601	189.04

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat	2.00	EA	0	0	0	0	0	0.00
Cost included in float surveys								
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp	2.00	EA	0	2,694	0	0	2,694	1347.23
cost of one boat included with weekly monitoring								
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9,14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.18
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67

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O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Core Sampling-1,4,9,14,19,24	1.00	YR	19,825	5,453	112,965	0	138,243	138242.82
TOTAL Fish Sample Analysis (1 YR)	1.00	EA	0	0	0	650,000	650,000	650000.00
Shallow Sediment Inventory (5YR)								
Labor/Equipment								
Chemist	525.00	HR	36,399	0	0	0	36,399	69.33
Chemist, Jr.	1050.00	HR	64,221	0	0	0	64,221	61.16
Sampling Technician	1050.00	HR	44,705	0	0	0	44,705	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	525.00	HR	0	24,994	0	0	24,994	47.61
TOTAL Labor/Equipment	500.00	HR	145,326	24,994	0	0	170,320	340.64
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	525.00	EA	0	0	139,110	0	139,110	264.97
Cesium - 137/Beryllium -7	263.00	EA	0	0	29,036	0	29,036	110.40
Organic Carbon	53.00	EA	0	0	3,901	0	3,901	73.60
TOTAL Analytical	250.00	EA	0	0	172,048	0	172,048	688.19
TOTAL Shallow Sediment Inventory (5YR)	1.00	EVT	145,326	24,994	173,520	0	343,840	343839.66
Annual Reporting (1 YR)								
Lbr/Matls for Quarterly Report								
Project Manager	24.00	HR	2,772	0	0	0	2,772	115.51
Chemist	40.00	HR	2,773	0	0	0	2,773	69.33
Engineers, Quality Control	24.00	HR	1,474	0	0	0	1,474	61.40
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	527	0	0	0	527	32.93
Reproduction Operators	8.00	HR	169	0	0	0	169	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	1.00	WK	12,146	0	383	0	12,529	12529.22

) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Lbr/Matls for Annual Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	2.00	WK	19,862	0	383	0	20,244	10122.13
TOTAL Annual Reporting (1 YR)	1.00	YR	32,008	0	765	0	32,773	32773.48
5 Year Review								
Lbr/Matls for Quarterly Report								
Project Manager	48.00	HR	5,545	0	0	0	5,545	115.51
Chemist	80.00	HR	5,547	0	0	0	5,547	69.33
Engineers, Quality Control	48.00	HR	2,947	0	0	0	2,947	61.40
Clerks, Typists, Bookkeepers & Receptionist	32.00	HR	1,054	0	0	0	1,054	32.93
Reproduction Operators	16.00	HR	338	0	0	0	338	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	2.00	WK	19,862	0	383	0	20,244	10122.13
Lbr/Matls for Annual Report								
Project Manager	96.00	HR	11,089	0	0	0	11,089	115.51
Chemist	160.00	HR	11,093	0	0	0	11,093	69.33
Engineers, Quality Control	96.00	HR	5,895	0	0	0	5,895	61.40
Clerks, Typists, Bookkeepers & Receptionist	64.00	HR	2,108	0	0	0	2,108	32.93
Reproduction Operators	32.00	HR	675	0	0	0	675	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	4.00	WK	35,292	0	383	0	35,674	8918.58
TOTAL 5 Year Review	2.00	YR	55,153	0	765	0	55,919	27959.29
Analysis of Model								
Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00
TOTAL Analysis of Model	1.00	YR	101,500	0	0	0	101,500	101500.00

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Geophysical Surveys 3/10/10 (d)								
Labor/Equipment								
Chemist	500.00	HR	34,666	0	0	0	34,666	69.33
Survey Crew	50.00	DAY	205,436	0	0	0	205,436	4108.72
Post Processing	87.50	HR	10,111	0	0	0	10,111	115.56
Per Diem	50.00	DAY	0	0	19,873	0	19,873	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	500.00	HR	253,808	0	19,873	0	273,681	547.36
TOTAL Geophysical Surveys 3/10/10 (d)	50.00	DAY	253,808	0	19,873	0	273,681	5473.63
TOTAL O & M	1.00	EA	1,260,733	91,249	982,123	650,000	2,984,106	2984105.60
TOTAL Alt Hydraulic Dredging 3/10/Sel	2651730	BCY	77,385,746	59,558,393	15,195,518	373,941,738	526,081,395	198.39

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APPENDIX I

COST ESTIMATES

I.12 Detailed Estimate - Alternative REM-0/0/3- Hydraulic Dredging

Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Alt Hydraulic Dredging 0/0/3Sel								
Studies & Design								
TOTAL Pre-design Investigation/Design	1.00	EA	0	0	0	10,000,000	10,000,000	10000000.00
TOTAL Treatability Study	1.00	EA	0	0	0	500,000	500,000	500000.00
Sediment Inventory 0/0/3(d)								
Labor/Equipment								
Chemist	15060	HR	1,044,141	0	0	0	1,044,141	69.33
Chemist, Jr.	15060	HR	921,112	0	0	0	921,112	61.16
Sampling Technician	15060	HR	641,204	0	0	0	641,204	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	15060	HR	0	716,980	0	0	716,980	47.61
TOTAL Labor/Equipment	15060	HR	2,606,457	716,980	0	0	3,323,437	220.68
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Analytical								
Congener Specific PCB's	22590	EA	0	0	5,985,709	0	5,985,709	264.97
Cesium - 137/Beryllium -7	7530.00	EA	0	0	831,349	0	831,349	110.40
Organic Carbon	2259.00	EA	0	0	166,270	0	166,270	73.60
Cation Exchange Capacity	2259.00	EA	0	0	166,270	0	166,270	73.60
TOTAL Analytical	7530.00	EA	0	0	7,149,597	0	7,149,597	949.48
TOTAL Sediment Inventory 0/0/3(d)	1506.00	DAY	2,606,457	716,980	7,164,318	0	10,487,755	6963.98
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Survey Crew	117.00	DAY	480,720	0	0	0	480,720	4108.72
Post Processing	204.75	HR	23,660	0	0	0	23,660	115.56
Per Diem	117.00	DAY	0	0	46,503	0	46,503	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1170.00	HR	589,094	0	46,503	0	635,597	543.25
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45

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Studies & Design	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Model Development								
Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Model Development	1.00	EA	507,500	0	0	0	507,500	507500.00
TOTAL Studies & Design	1.00	EA	3,703,051	716,980	7,210,821	10,500,000	22,130,852	22130851.50
HTRW/Remediation/Construction								
TOTAL Contractor Work Plans	1.00	EA	0	0	0	264,600	264,600	264600.00
Health & Safety								
Health & Safety								
Health & Safety Equipment								
Heat Stress Monitor (Monthly Rental)	56.00	MON	0	0	32,692	0	32,692	583.79
TOTAL Health & Safety Equipment	56.00	MO	0	0	32,692	0	32,692	583.79
Health & Safety Stores								
Hand Held Body Flush Station (2 - 32Oz Bottles) Assume 20 ea	20.00	EA	0	0	692	0	692	34.60
Portable Eye Wash Station (6Gal/10Lbs) Assume 4 each	4.00	EA	0	0	918	0	918	229.47
Hard Hats	50.00	EA	0	0	422	0	422	8.45
Safety Glasses	100.00	EA	0	0	611	0	611	6.11
Face Shield - Hard Hat Mountable	20.00	EA	0	0	171	0	171	8.55
Coveralls, Tyvek (Case Of 25) Unit Measure Of	480.00	EA	0	0	91,047	0	91,047	189.68
Boot Covers, Tyvek (Bag Of 10Pr) Unit Measure Of	858.00	EA	0	0	11,482	0	11,482	13.38
Gloves, Latex (Box Of 100) (Single Hand) Unit Measure Of	60.00	EA	0	0	846	0	846	14.10
Pvc/Nitrile Blend (Package Of 12 Pr) Unit Measure	60.00	EA	0	0	3,613	0	3,613	60.21
TOTAL Health & Safety Stores	240.00	WKS	0	0	109,802	0	109,802	457.51

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MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Health & Safety Labor								
Site Safety & Health Officer	28800	HR	1,721,759	0	0	0	1,721,759	59.78
Industrial Hygiene Technician	28800	HR	1,110,812	0	0	0	1,110,812	38.57
Per Diem & Lodging 1 man/10 hrs/day = .1 multiplier	1440.00	MDY	0	0	0	105,336	105,336	73.15
Air Fare (Round Trip)	80.00	EA	0	0	0	40,000	40,000	500.00
TOTAL Health & Safety Labor			2,832,571	0	0	145,336	2,977,907	
Health & Safety Decon Trailer								
Temp constr facil,2 wall fans, rent/mo,decontn.trailer,8'x36',2 showers	112.00	MO	0	0	286,733	0	286,733	2560.11
TOTAL Health & Safety Decon Trailer	112.00	MO	0	0	286,733	0	286,733	2560.11
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
TOTAL Health & Safety	1.00	EA	2,832,571	0	429,227	145,336	3,407,134	3407133.69
Construction Management								
Construction Management								
Work Order Startup								
Project Managers	32.00	HR	2,922	0	0	0	2,922	91.31
General Superintendents (P.M.)	64.00	HR	3,355	0	0	0	3,355	52.42
Certified Industrial Hygienist	16.00	HR	1,095	0	0	0	1,095	68.46
Contract Administrators	32.00	HR	1,173	0	0	0	1,173	36.66
Purchasing Expediters / Buyers	64.00	HR	1,665	0	0	0	1,665	26.02
Engineers, Quality Control	32.00	HR	1,553	0	0	0	1,553	48.54
Chief Scheduler & Planning Eng.	16.00	HR	562	0	0	0	562	35.10
Clerks, Typists, Bookkeepers & Receptionist	16.00	HR	417	0	0	0	417	26.03
Operations Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Office Managers	320.00	HR	11,849	0	0	0	11,849	37.03
Site Safety & Health Officer	160.00	HR	9,565	0	0	0	9,565	59.78
TOTAL Work Order Startup	8.00	WKS	46,004	0	0	0	46,004	5750.56

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Field Office Labor Requirements								
Project Manager	14400	HR	1,314,924	0	0	0	1,314,924	91.31
General Superintendents (South)	14400	HR	754,797	0	0	0	754,797	52.42
General Superintendents (North)	14400	HR	754,797	0	0	0	754,797	52.42
Engineers, Project	14400	HR	918,642	0	0	0	918,642	63.79
Chemist	14400	HR	789,232	0	0	0	789,232	54.81
Industrial Hygiene Technician	14400	HR	555,406	0	0	0	555,406	38.57
Engineers, Quality Control	14400	HR	698,979	0	0	0	698,979	48.54
Schedulers	14400	HR	698,979	0	0	0	698,979	48.54
Clerks, Typists, Bookkeepers & Receptionist	11520	HR	299,919	0	0	0	299,919	26.03
Janitors	11520	HR	96,852	0	0	0	96,852	8.41
Per Diem	11520	MDY	0	0	0	842,685	842,685	73.15
8men/10hr/day = .8 multiplier								
Air Fare (Round Trip)	640.80	EA	0	0	0	320,399	320,399	500.00
8 men/3wks = 2.67 multiplier								
TOTAL Field Office Labor Requirements			6,882,527	0	0	1,163,084	8,045,611	
Home Office Labor Requirements								
Program Managers	960.00	HR	90,717	0	0	0	90,717	94.50
Operations Managers	1920.00	HR	71,092	0	0	0	71,092	37.03
Certified Industrial Hygienist	480.00	HR	32,862	0	0	0	32,862	68.46
Contract Administrators	960.00	HR	35,194	0	0	0	35,194	36.66
Purchasing Agents, Chief	1920.00	HR	70,389	0	0	0	70,389	36.66
Engineers, Quality Control	960.00	HR	46,599	0	0	0	46,599	48.54
Chief Scheduler & Planning Eng.	480.00	HR	16,847	0	0	0	16,847	35.10
Accountants	960.00	HR	19,421	0	0	0	19,421	20.23
Operations Managers	480.00	HR	17,773	0	0	0	17,773	37.03
Clerks, Typists, Bookkeepers & Receptionist	480.00	HR	12,497	0	0	0	12,497	26.03
Air Fare (Round Trip)	240.00	EA	0	0	0	120,000	120,000	500.00
Per Diem & Lodging	480.00	DAY	0	0	0	63,840	63,840	133.00
Car Rental (Air Port to Site)	480.00	DAY	0	0	0	26,400	26,400	55.00
TOTAL Home Office Labor Requirements	240.00	WKS	413,390	0	0	210,240	623,630	2598.47
Field Equipment Requirements								
Trailer: Contractor	112.00	MO	0	0	37,145	0	37,145	331.65
Trailer: Contracting Officer	112.00	MO	0	0	37,145	0	37,145	331.65
Trailer: Storage	112.00	MO	0	0	20,202	0	20,202	180.37
Furniture Rental	224.00	MO	0	0	45,617	0	45,617	203.65
Telephone System Rental	224.00	MO	0	0	41,707	0	41,707	186.19
Sanitary Facility: Temporary	224.00	MO	0	0	23,460	0	23,460	104.73
Portable Radios (4 Ea)	224.00	WKS	0	0	13,033	0	13,033	58.18
Personal Computer	224.00	MO	0	0	28,673	0	28,673	128.01
Printer for PC	224.00	MO	0	0	16,943	0	16,943	75.64
Copy Machine	224.00	MO	0	0	43,010	0	43,010	192.01
Fax Machine	224.00	MO	0	0	5,213	0	5,213	23.27

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Video Camera	2.00	EA	0	0	1,164	0	1,164	581.84
Photo Camera	2.00	EA	0	0	698	0	698	349.11
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	56.00	MO	0	13,512	0	0	13,512	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	56.00	MO	0	83,423	0	0	83,423	1489.70
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	56.00	MO	0	17,939	0	0	17,939	320.34
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	56.00	MO	0	104,394	0	0	104,394	1864.18
BOAT, 21' L-GIANT,TRIHULL, 2800#	28800	HR	0	72,358	0	0	72,358	2.51
TOTAL Field Equipment Requirements	56.00	MO	0	291,626	314,009	0	605,636	10814.93
Field Support Utilities								
Electricity	112.00	MO	0	0	0	21,280	21,280	190.00
Telephone (2 Lines)	112.00	MO	0	0	0	28,000	28,000	250.00
Bottled Water Service	480.00	WKS	0	0	0	21,600	21,600	45.00
Dumpster (Trash Pickup Service) Weekly Pickup Service and 5.0Cy Dumpster.	112.00	MO	0	0	0	46,480	46,480	415.00
TOTAL Field Support Utilities	240.00	WKS	0	0	0	117,360	117,360	489.00
Field Support Stores/Supplies								
Janitorial Cleaning Supplies	112.00	WK	0	0	4,562	0	4,562	40.73
Water Kegs (5 Gallon)	60.00	EA	0	0	1,393	0	1,393	23.22
Water Cups (Conical)	4800.00	BOX	0	0	22,064	0	22,064	4.60
Co2 Extinguisher (10Lb)	40.00	EA	0	0	6,565	0	6,565	164.11
Video Tape	240.00	EA	0	0	1,257	0	1,257	5.24
Camera Film and Development	55.00	MO	0	0	1,920	0	1,920	34.91
TOTAL Field Support Stores/Supplies	240.00	WKS	0	0	37,760	0	37,760	157.33
TOTAL Construction Management			7,341,922	291,626	351,769	1,490,684	9,476,001	
TOTAL Construction Management			7,341,922	291,626	351,769	1,490,684	9,476,001	
TOTAL Construction Management	40.00	MON	7,341,922	291,626	351,769	1,490,684	9,476,001	236900.03
Mobilization/Demobilization								
Surveying								
Surveying								
Survey Crew - 3 man	120.00	HRS	0	0	0	13,800	13,800	115.00
Registered Land Surveyor	30.00	HRS	0	0	0	1,500	1,500	50.00
CADD Technician	30.00	HRS	0	0	0	1,260	1,260	42.00
TOTAL Surveying	120.00	HRS	0	0	0	16,560	16,560	138.00

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
TOTAL Surveying	1.00	EA	0	0	0	16,560	16,560	16560.00
Equipment Fabrication								
Equipment Fabrication								
Long Arm Purchase	6.00	EA	0	0	0	510,000	510,000	85000.00
Long Arm Purchase	4.00	EA	0	0	0	312,000	312,000	78000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
TOTAL Equipment Fabrication	1.00	EA	0	0	0	822,000	822,000	822000.00
Equipment Mobilization								
Shallow Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	4,659	0	0	4,659	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Shallow Dredge Crew	4.00	HR	33,573	9,794	0	0	43,367	10841.80
Deep Dredge Crew								
Deckhand for Dredge	320.00	HR	11,485	0	0	0	11,485	35.89
Dredge Engineer	160.00	HR	7,532	0	0	0	7,532	47.08
Oiler	160.00	HR	5,870	0	0	0	5,870	36.69
Excavator Dredge Operator	160.00	HR	8,686	0	0	0	8,686	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	160.00	HR	0	7,717	0	0	7,717	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	160.00	HR	0	1,143	0	0	1,143	7.14
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
Command/Control System	160.00	HR	0	2,556	0	0	2,556	15.98
TOTAL Deep Dredge Crew	4.00	CRW	33,573	13,373	0	0	46,946	11736.57
North Barge Crew Rate								
Deckhand for Tug	200.00	HR	6,972	0	0	0	6,972	34.86
Boat Captain	200.00	HR	8,232	0	0	0	8,232	41.16
500 TO 800 Hp TUG BOAT	200.00	HR	0	13,564	0	0	13,564	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	200.00	HR	0	3,161	0	0	3,161	15.80
TOTAL North Barge Crew Rate	5.00	CRW	15,203	16,725	0	0	31,928	6385.58
South Barge Crew Rate								
Deckhand for Tug	160.00	HR	5,577	0	0	0	5,577	34.86
Boat Captain	160.00	HR	6,585	0	0	0	6,585	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	160.00	HR	0	21,393	0	0	21,393	133.70
DREDGE BARGE, 1000 TON	160.00	HR	0	4,979	0	0	4,979	31.12
TOTAL South Barge Crew Rate	4.00	CRW	12,163	26,372	0	0	38,534	9633.59
Spare Tug Crew Rate								
Spare Tug Crew	80.00	HR	6,908	5,426	0	0	12,333	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	6,908	5,426	0	0	12,333	6166.61
North Unloading Crew								
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	9,461	0	0	9,461	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
TOTAL North Unloading Crew	80.00	HR	7,716	10,045	0	0	17,761	222.02

402574

MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	80.00	HR	3,939	0	0	0	3,939	49.24
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	80.00	HR	0	15,457	0	0	15,457	193.22
Environmental Bucket	80.00	HR	0	845	0	0	845	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	7,716	16,302	0	0	24,018	300.23
North Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	240.00	HR	0	792	0	0	792	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL North Truck Crew	80.00	HR	10,663	7,215	0	0	17,878	223.48
South Truck Crew								
Laborer (pugmill tender)	80.00	HR	2,792	0	0	0	2,792	34.90
Outside Truck Drivers, Heavy	240.00	HR	7,871	0	0	0	7,871	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	240.00	HR	0	2,346	0	0	2,346	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	240.00	HR	0	6,423	0	0	6,423	26.76
TOTAL South Truck Crew	80.00	HR	10,663	8,769	0	0	19,432	242.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	160.00	HR	0	8,055	0	0	8,055	50.34
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Laborer	320.00	HR	11,169	0	0	0	11,169	34.90
SMALL TOOLS	320.00	HR	0	535	0	0	535	1.67
TOTAL Boxcar Loading Crew	80.00	HR	18,723	8,590	0	0	27,313	341.41
TOTAL Equipment Mobilization			156,902	122,610	0	0	279,512	
TOTAL Equipment Mobilization	1.00	EA	156,902	122,610	0	0	279,512	279512.38

402575

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land-locked Transfer Operation								
TOTAL Land-locked Transfer Operation	1.00	EA	0	0	0	0	0	0.00
Annual Remobilization & Startup								
Shallow Dredge Crew								
Deckhand for Dredge	1920.00	HR	68,910	0	0	0	68,910	35.89
Dredge Engineer	960.00	HR	45,194	0	0	0	45,194	47.08
Oiler	960.00	HR	35,223	0	0	0	35,223	36.69
Excavator Dredge Operator	960.00	HR	52,115	0	0	0	52,115	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	960.00	HR	0	27,956	0	0	27,956	29.12
WORK BARGE-S,MED DUTY,60'X16'X5'	960.00	HR	0	6,859	0	0	6,859	7.14
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	960.00	HR	0	7,007	0	0	7,007	7.30
Command/Control System	960.00	HR	0	15,336	0	0	15,336	15.98
TOTAL Shallow Dredge Crew	4.00	CRW	201,441	58,763	0	0	260,203	65050.82
Deep Dredge Crew								
Deckhand for Dredge	1920.00	HR	68,910	0	0	0	68,910	35.89
Dredge Engineer	960.00	HR	45,194	0	0	0	45,194	47.08
Oiler	960.00	HR	35,223	0	0	0	35,223	36.69
Excavator Dredge Operator	960.00	HR	52,115	0	0	0	52,115	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	960.00	HR	0	46,300	0	0	46,300	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	960.00	HR	0	6,859	0	0	6,859	7.14
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	960.00	HR	0	10,137	0	0	10,137	10.56
Command/Control System	960.00	HR	0	15,336	0	0	15,336	15.98
TOTAL Deep Dredge Crew	4.00	HR	201,441	80,237	0	0	281,678	70419.42
North Barge Crew Rate								
Deckhand for Tug	1200.00	HR	41,829	0	0	0	41,829	34.86
Boat Captain	1200.00	HR	49,390	0	0	0	49,390	41.16
500 TO 800 Hp TUG BOAT	1200.00	HR	0	81,383	0	0	81,383	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	1200.00	HR	0	18,966	0	0	18,966	15.80

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL North Barge Crew Rate	5.00	CRW	91,219	100,349	0	0	191,568	38313.50
South Barge Crew Rate								
Deckhand for Tug	960.00	HR	33,464	0	0	0	33,464	34.86
Boat Captain	960.00	HR	39,512	0	0	0	39,512	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	960.00	HR	0	128,357	0	0	128,357	133.70
DREDGE BARGE, 1000 TON	960.00	HR	0	29,875	0	0	29,875	31.12
TOTAL South Barge Crew Rate	4.00	CRW	72,975	158,231	0	0	231,206	57801.57
Spare Tug Crew Rate								
Spare Tug Crew	480.00	HR	41,446	32,553	0	0	73,999	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	41,446	32,553	0	0	73,999	36999.66
North Unloading Crew								
Outside Equip. Operators, Heavy	240.00	HR	11,331	0	0	0	11,331	47.21
Master Mechanic	240.00	HR	11,818	0	0	0	11,818	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	240.00	HR	0	28,383	0	0	28,383	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	240.00	HR	0	1,752	0	0	1,752	7.30
TOTAL North Unloading Crew	40.00	HR	23,149	30,135	0	0	53,284	1332.10
South Unloading Crew								
Master Mechanic	240.00	HR	11,818	0	0	0	11,818	49.24
Outside Equip. Operators, Heavy	240.00	HR	11,331	0	0	0	11,331	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	240.00	HR	0	46,372	0	0	46,372	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	240.00	HR	0	2,534	0	0	2,534	10.56
TOTAL South Unloading Crew	40.00	HR	23,149	48,907	0	0	72,055	1801.38

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MTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	720.00	HR	23,613	0	0	0	23,613	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	720.00	HR	0	2,377	0	0	2,377	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	720.00	HR	0	19,268	0	0	19,268	26.76
TOTAL North Truck Crew	40.00	HR	25,009	21,645	0	0	46,654	1166.35
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	720.00	HR	23,613	0	0	0	23,613	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	720.00	HR	0	7,039	0	0	7,039	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	720.00	HR	0	19,268	0	0	19,268	26.76
TOTAL South Truck Crew	40.00	HR	25,009	26,307	0	0	51,316	1282.90
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	480.00	HR	0	24,164	0	0	24,164	50.34
Outside Equip. Operators, Heavy	480.00	HR	22,662	0	0	0	22,662	47.21
Laborer	960.00	HR	33,508	0	0	0	33,508	34.90
SMALL TOOLS	960.00	HR	0	1,605	0	0	1,605	1.67
TOTAL Boxcar Loading Crew	40.00	HR	56,170	25,770	0	0	81,939	2048.48
TOTAL Equipment Mobilization			761,006	582,896	0	0	1,343,902	
Process Equipment								
Master Mechanic	1920.00	HR	94,543	0	0	0	94,543	49.24
Outside Equip. Operators, Heavy	1920.00	HR	90,646	0	0	0	90,646	47.21
TOTAL Process Equipment	160.00	HR	185,189	0	0	0	185,189	1157.43
TOTAL Process Equipment Start Up			185,189	0	0	0	185,189	
TOTAL Annual Remobilization & Startup	1.00	EA	946,196	582,896	0	0	1,529,092	1529091.87
Annual Demobilization								
Shallow Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	480.00	HR	0	13,978	0	0	13,978	29.12

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket	480.00	HR	0	3,503	0	0	3,503	7.30
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Shallow Dredge Crew	4.00	CRW	100,720	29,381	0	0	130,102	32525.41
Deep Dredge Crew								
Deckhand for Dredge	960.00	HR	34,455	0	0	0	34,455	35.89
Dredge Engineer	480.00	HR	22,597	0	0	0	22,597	47.08
Oiler	480.00	HR	17,611	0	0	0	17,611	36.69
Excavator Dredge Operator	480.00	HR	26,057	0	0	0	26,057	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	480.00	HR	0	23,150	0	0	23,150	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	480.00	HR	0	3,429	0	0	3,429	7.14
SMALL TOOLS	480.00	HR	0	803	0	0	803	1.67
Environmental Bucket	480.00	HR	0	5,068	0	0	5,068	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Command/Control System	480.00	HR	0	7,668	0	0	7,668	15.98
TOTAL Deep Dredge Crew	4.00	CRW	100,720	40,118	0	0	140,839	35209.71
North Barge Crew Rate								
Deckhand for Tug	600.00	HR	20,915	0	0	0	20,915	34.86
Boat Captain	600.00	HR	24,695	0	0	0	24,695	41.16
500 TO 800 Hp TUG BOAT	600.00	HR	0	40,692	0	0	40,692	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	600.00	HR	0	9,483	0	0	9,483	15.80
TOTAL North Barge Crew Rate	5.00	CRW	45,609	50,174	0	0	95,784	19156.75
South Barge Crew Rate								
Deckhand for Tug	480.00	HR	16,732	0	0	0	16,732	34.86
Boat Captain	480.00	HR	19,756	0	0	0	19,756	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	480.00	HR	0	64,178	0	0	64,178	133.70
DREDGE BARGE, 1000 TON	480.00	HR	0	14,937	0	0	14,937	31.12
TOTAL South Barge Crew Rate	4.00	CRW	36,488	79,116	0	0	115,603	28900.78

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Spare Tug Crew Rate								
Spare Tug Crew	240.00	HR	20,723	16,277	0	0	37,000	154.17
TOTAL Spare Tug Crew Rate	2.00	CRW	20,723	16,277	0	0	37,000	18499.83
North Unloading Crew								
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	160.00	HR	0	18,922	0	0	18,922	118.26
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	160.00	HR	0	1,168	0	0	1,168	7.30
TOTAL North Unloading Crew	80.00	HR	15,432	20,090	0	0	35,523	444.03
South Unloading Crew								
Master Mechanic	160.00	HR	7,879	0	0	0	7,879	49.24
Outside Equip. Operators, Heavy	160.00	HR	7,554	0	0	0	7,554	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	160.00	HR	0	30,915	0	0	30,915	193.22
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	160.00	HR	0	1,689	0	0	1,689	10.56
TOTAL South Unloading Crew	80.00	HR	15,432	32,604	0	0	48,037	600.46
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	480.00	HR	0	1,585	0	0	1,585	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76
TOTAL North Truck Crew	80.00	HR	17,138	14,430	0	0	31,568	394.60
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	480.00	HR	15,742	0	0	0	15,742	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	480.00	HR	0	4,693	0	0	4,693	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	480.00	HR	0	12,845	0	0	12,845	26.76

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL South Truck Crew	80.00	HR	17,138	17,538	0	0	34,676	433.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	320.00	HR	0	16,110	0	0	16,110	50.34
Outside Equip. Operators, Heavy	320.00	HR	15,108	0	0	0	15,108	47.21
Laborer	640.00	HR	22,339	0	0	0	22,339	34.90
SMALL TOOLS	640.00	HR	0	1,070	0	0	1,070	1.67
TOTAL Boxcar Loading Crew	80.00	HR	37,446	17,180	0	0	54,626	682.83
TOTAL Demobilization			406,848	316,909	0	0	723,757	
TOTAL Annual Demobilization	1.00	EA	406,848	316,909	0	0	723,757	723756.75
Final Demob Site Restoration								
Shallow Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	80.00	HR	0	2,330	0	0	2,330	29.12
WORK BARGE-S,MED DUTY,50'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	80.00	HR	0	584	0	0	584	7.30
Command/Control System	80.00	HR	0	1,278	0	0	1,278	15.98
TOTAL Shallow Dredge Crew	4.00	HR	16,787	4,897	0	0	21,684	5420.90
Deep Dredge Crew								
Deckhand for Dredge	160.00	HR	5,742	0	0	0	5,742	35.89
Dredge Engineer	80.00	HR	3,766	0	0	0	3,766	47.08
Oiler	80.00	HR	2,935	0	0	0	2,935	36.69
Excavator Dredge Operator	80.00	HR	4,343	0	0	0	4,343	54.29
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	80.00	HR	0	3,858	0	0	3,858	48.23
WORK BARGE-S,MED DUTY,60'X16'X5'	80.00	HR	0	572	0	0	572	7.14
SMALL TOOLS	80.00	HR	0	134	0	0	134	1.67
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of	80.00	HR	0	845	0	0	845	10.56

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
similar value was selected from database.								
Command/Control System	80.00	HR	0	1,278	0	0	1,278	15.98
TOTAL Deep Dredge Crew	4.00	HR	16,787	6,686	0	0	23,473	5868.28
North Barge Crew Rate								
Deckhand for Tug	100.00	HR	3,486	0	0	0	3,486	34.86
Boat Captain	100.00	HR	4,116	0	0	0	4,116	41.16
500 TO 800 Hp TUG BOAT	100.00	HR	0	6,782	0	0	6,782	67.82
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	100.00	HR	0	1,580	0	0	1,580	15.80
TOTAL North Barge Crew Rate	5.00	HR	7,602	8,362	0	0	15,964	3192.79
South Barge Crew Rate								
Deckhand for Tug	80.00	HR	2,789	0	0	0	2,789	34.86
Boat Captain	80.00	HR	3,293	0	0	0	3,293	41.16
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	80.00	HR	0	10,696	0	0	10,696	133.70
DREDGE BARGE, 1000 TON	80.00	HR	0	2,490	0	0	2,490	31.12
TOTAL South Barge Crew Rate	4.00	HR	6,081	13,186	0	0	19,267	4816.80
Spare Tug Crew Rate								
Spare Tug Crew	40.00	HR	3,454	2,713	0	0	6,167	154.17
TOTAL Spare Tug Crew Rate	2.00	HR	3,454	2,713	0	0	6,167	3083.31
North Unloading Crew								
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	40.00	HR	0	4,731	0	0	4,731	118.26
Environmental Bucket	40.00	HR	0	292	0	0	292	7.30
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
TOTAL North Unloading Crew	80.00	HR	3,858	5,023	0	0	8,881	111.01

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
South Unloading Crew								
Master Mechanic	40.00	HR	1,970	0	0	0	1,970	49.24
Outside Equip. Operators, Heavy	40.00	HR	1,888	0	0	0	1,888	47.21
HYD EXCAV, CRWLR, 4.75 CY BKT	40.00	HR	0	7,729	0	0	7,729	193.22
Environmental Bucket	40.00	HR	0	422	0	0	422	10.56
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
TOTAL South Unloading Crew	80.00	HR	3,858	8,151	0	0	12,009	150.12
North Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	120.00	HR	0	396	0	0	396	3.30
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL North Truck Crew	80.00	HR	5,332	3,608	0	0	8,939	111.74
South Truck Crew								
Laborer (pugmill tender)	40.00	HR	1,396	0	0	0	1,396	34.90
Outside Truck Drivers, Heavy	120.00	HR	3,935	0	0	0	3,935	32.80
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	120.00	HR	0	1,173	0	0	1,173	9.78
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	120.00	HR	0	3,211	0	0	3,211	26.76
TOTAL South Truck Crew	80.00	HR	5,332	4,385	0	0	9,716	121.45
Boxcar Loading Crew								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	80.00	HR	0	4,027	0	0	4,027	50.34
Outside Equip. Operators, Heavy	80.00	HR	3,777	0	0	0	3,777	47.21
Laborer	160.00	HR	5,585	0	0	0	5,585	34.90
SMALL TOOLS	160.00	HR	0	268	0	0	268	1.67
TOTAL Boxcar Loading Crew	80.00	HR	9,362	4,295	0	0	13,657	170.71
TOTAL Demobilization			78,451	61,305	0	0	139,756	
TOTAL Site Restoration			0	0	0	500,000	500,000	
TOTAL Final Demob Site Restoration	1.00	EA	78,451	61,305	0	500,000	639,756	639756.19
TOTAL Mobilization/Demobilization	1.00	EA	1,588,398	1,083,719	0	1,338,560	4,010,677	4010677.20

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Site Prep and Fac Const - North								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Dredging Channel								
Dredging Channel					** OVERTIME **			
Deckhand for Dredge	214.50	HR	10,203	0	0	0	10,203	47.57
Dredge Engineer	107.25	HR	6,693	0	0	0	6,693	62.40
Oiler	107.25	HR	5,217	0	0	0	5,217	48.64
Excavator Dredge Operator	107.25	HR	7,732	0	0	0	7,732	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	89.37	HR	0	19,673	0	0	19,673	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT	17.87	HR	0	1,043	0	0	1,043	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	107.25	HR	0	860	0	0	860	8.02
SMALL TOOLS	107.25	HR	0	200	0	0	200	1.86
Environmental Bucket	107.25	HR	0	877	0	0	877	8.18
Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.								
Command/Control System	107.25	HR	0	2,073	0	0	2,073	19.33
Per Diem	53.62	MDY	0	0	0	4,746	4,746	88.51
TOTAL Dredging Channel	10400	BCY	29,845	24,726	0	4,746	59,317	5.70
TOTAL Dredging Channel	1.00	EA	29,845	24,726	0	4,746	59,317	59316.83
Barging					** OVERTIME **			
Deckhand for Tug	111.72	HR	5,340	0	0	0	5,340	47.80
Boat Captain	111.72	HR	6,331	0	0	0	6,331	56.67
500 TO 800 Hp TUG BOAT	111.72	HR	0	8,804	0	0	8,804	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	558.59	HR	0	10,260	0	0	10,260	18.37
Per Diem for tug crew	22.34	MDY	0	0	0	1,978	1,978	88.51
Spare Tug Crew Per Diem days	12.00	MDY	0	0	0	1,062	1,062	88.51
TOTAL Barging	10400	BCY	11,672	19,064	0	3,040	33,775	3.25

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Barging	1.00	EA	11,672	19,064	0	3,040	33,775	33775.26
TOTAL Dredging Channel	1.00	EA	41,516	43,790	0	7,786	93,092	93092.08
Site Preparation								
Outside Equip. Cp. Heavy 1 - excavator 1 - Front end Loader	176.00	HR	11,448	0	0	0	11,448	65.04
Laborer	352.00	HR	17,128	0	0	0	17,128	48.66
Outside Truck Drivers, Heavy	88.00	HR	3,993	0	0	0	3,993	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	88.00	HR	0	4,842	0	0	4,842	55.02
Hydraulic Excavator Thumb	88.00	HR	0	289	0	0	289	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	88.00	HR	0	3,558	0	0	3,558	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	88.00	HR	0	6,484	0	0	6,484	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	88.00	HR	0	907	0	0	907	10.31
TOTAL Clearing and Grubbing	11.00	ACR	32,569	16,079	0	0	48,648	4422.58
Outside Equip. Cp. Heavy 1 - dozer 1 - Front end Loader	511.99	HR	33,302	0	0	0	33,302	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	256.00	HR	0	9,252	0	0	9,252	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	256.00	HR	0	10,349	0	0	10,349	40.43
Outside Truck Drivers, Heavy	64.00	HR	2,904	0	0	0	2,904	45.38
WATER TANK TRUCK, 2000 GAL	64.00	HR	0	270	0	0	270	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	64.00	HR	0	1,377	0	0	1,377	21.52
TOTAL Earth Shaping	10000	CY	36,207	21,249	0	0	57,455	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	3500.00	LF	5,452	0	89,970	0	95,422	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	3.00	EA	491	169	1,832	0	2,492	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	3500.00	LF	9,820	1,146	0	0	10,966	3.13
TOTAL Install/Remove Fence	5000.00	LF	19,670	1,362	93,931	0	114,963	22.99
Fine grade, for roadway, base or leveling course	6.36	MSY	4,192	1,752	0	0	5,944	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6360.00	SY	5,951	3,638	0	0	9,590	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6360.00	SY	8,413	6,622	144,613	0	159,648	25.10

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Asphaltic conc pavement, highway, wearing course, 6" thick	2162.40	TON	19,385	6,721	87,827	0	113,933	52.69
TOTAL Construct New Road	6360.00	SY	37,941	18,734	232,440	0	289,115	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	3000.00	SY	0	0	0	184,800	184,800	61.60
TOTAL Hardstand for Process Equipment	3000.00	SY	0	0	0	184,800	184,800	61.60
Equip. Operator, Foreman	117.65	HR	7,545	0	0	0	7,545	64.14
Outside Equip. Operators, Light	117.65	HR	6,912	0	0	0	6,912	58.75
Outside Equip. Operators, Medium	235.29	HR	14,919	0	0	0	14,919	63.41
Outside Laborers, (Semi-Skilled)	235.29	HR	11,449	0	0	0	11,449	48.66
Outside Truck Drivers, Heavy	117.65	HR	5,339	0	0	0	5,339	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	117.65	HR	0	5,865	0	0	5,865	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	117.65	HR	0	1,731	0	0	1,731	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	117.65	HR	0	4,919	0	0	4,919	41.81
WATER TANK, 3000 GAL (ADD TRK	117.65	HR	0	556	0	0	556	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	117.65	HR	0	3,724	0	0	3,724	31.65
SMALL TOOLS (2 ea)	235.29	HR	0	462	0	0	462	1.96
Material Cost for Gravel Includes delivery to site	1700.00	CY	0	0	53,619	0	53,619	31.54
TOTAL Repair Road/Work Area	10000	SY	46,165	17,257	53,619	0	117,040	11.70
Electrical Primary	5000.00	LF	0	0	0	126,500	126,500	25.30
Primary Substations	3.00	EA	0	0	0	132,825	132,825	44275.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00
TOTAL Electrical Power	1.00	EA	0	0	0	321,310	321,310	321310.00
4" Water Line	3000.00	LF	0	0	0	110,880	110,880	36.96
TOTAL Water Line	1.00	EA	0	0	0	110,880	110,880	110880.00
Catch Basins	12.00	EA	0	0	0	44,352	44,352	3696.00
Piping	6000.00	LF	0	0	0	295,680	295,680	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	4.00	EA	0	0	0	24,640	24,640	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	487,872	487,872	487872.00
TOTAL Site Preparation	1.00	EA	204,646	95,457	630,107	1,104,862	2,035,072	2035072.09
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	300.00	LF	15,989	0	0	51,744	67,733	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	2.00	EA	0	0	0	98,560	98,560	49280.00
Conveyor Belt-4' - Horizontal	200.00	LF	10,659	0	0	34,496	45,155	225.78
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
TOTAL Set Up Material Handling Equip	1.00	EA	29,313	0	0	190,960	220,273	220272.50
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	1.00	EA	0	0	0	616,000	616,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of								

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
materials stabilized and added. The purchase and set up cost for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	616,000	616,000	616000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl					** OVERTIME **			
Cover Building #2 This building is a rain cover for railroad cars.	5000.00	SF	0	0	0	369,600	369,600	73.92
Concrete Slab and Hardstand	4000.00	SY	0	0	0	246,400	246,400	61.60
Storage Building #1 This building is a rain cover for material.	15000	SF	0	0	0	1,108,800	1,108,800	73.92
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	1,724,800	1,724,800	1724800.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	50,000	50,000	50000.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,163	0	0	7,000	9,163	183.26
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,163	0	0	5,000	7,163	143.26
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	40,000	40,000	40000.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	4,326	0	0	102,000	106,326	106325.93

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Railroad Spur								
Railroad Spur					** OVERTIME **			
Railroad,sdg,100lb rail,yd spur, lvl gr,wd ties & ballast,ARA-A & AREA	3796.00	LF	166,026	9,960	330,081	0	506,067	133.32
Switch AREA, 90 lb turnout	3.00	EA	23,272	6,804	88,324	0	118,401	39466.84
Switch to Major Track AREA, 90 lb turnout	1.00	EA	77,574	22,681	44,162	0	144,417	144417.36
Railroad, car bumpers, std	3.00	EA	3,740	224	5,776	0	9,740	3246.75
Railroad, crossing insert, 24' road, 6", precast conc, std ga	12.00	EA	8,619	2,520	61,678	0	72,818	6068.15
TOTAL Railroad Spur	3796.00	LF	279,232	42,190	530,021	0	851,443	224.30
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
TOTAL Railroad Spur	1.00	EA	279,232	42,190	530,021	0	851,443	851443.16
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Unloading Facility (Wharf)								
Unloading Facility (Wharf)								
Bulkhead	500.00	LF	0	0	0	158,125	158,125	316.25
Decking (6")	50400	SF	0	0	0	3,442,824	3,442,824	68.31
Piles	2500.00	VLF	0	0	0	85,388	85,388	34.16
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Unloading Facility (Wharf)	1.00	EA	0	0	0	3,686,337	3,686,337	3686336.50
TOTAL Water Treatment Facility	1.00	EA	0	0	0	15,000,000	15,000,000	15000000.00
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Water Separation Cyclone	1.00	EA	0	0	0	1,000,000	1,000,000	1000000.00
TOTAL Site Prep and Fac Const - North	1.00	EA	580,870	764,259	1,186,870	23,742,745	26,274,743	26274743.08
Site Prep and Fac Const - South								
Field Office Personnel Facility								
Field Office Personnel Facility								
Set Up Office Trailers	1.00	LS	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Field Office Personnel Facility	1.00	EA	0	0	0	5,000	5,000	5000.00
Site Preparation								
Outside Equip. Op. Heavy 1 - excavator 1 - Front end Loader	40.00	HR	2,602	0	0	0	2,602	65.04
Laborer	80.00	HR	3,893	0	0	0	3,893	48.66
Outside Truck Drivers, Heavy	20.00	HR	908	0	0	0	908	45.38
HYD EXCAV, CRWLR, 1.125CY BKT, REACH BOOM	20.00	HR	0	1,100	0	0	1,100	55.02
Hydraulic Excavator Thumb	20.00	HR	0	66	0	0	66	3.28
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	20.00	HR	0	809	0	0	809	40.43
TRK,OFF-HWY,R-DUMP, 15-19CY, 25T	20.00	HR	0	1,474	0	0	1,474	73.68
B-CHIPPER, 6" DIA LOG, TRLR-MTD	20.00	HR	0	206	0	0	206	10.31
TOTAL Clearing and Grubbing	2.50	ACR	7,402	3,654	0	0	11,056	4422.58
Outside Equip. Op. Heavy 1 - dozer 1 - Front end Loader	204.80	HR	13,321	0	0	0	13,321	65.04
DOZER,CWLR, 650G,W/HYD BLADE,PS	102.40	HR	0	3,701	0	0	3,701	36.14
LDR,FE, WH, 2.25 CY, 4WD, ARTIC	102.40	HR	0	4,140	0	0	4,140	40.43
Outside Truck Drivers, Heavy	25.60	HR	1,162	0	0	0	1,162	45.38
WATER TANK TRUCK, 2000 GAL	25.60	HR	0	108	0	0	108	4.22
TRK,HWY, 30,000 GVW, 4X2, 2 AXLE	25.60	HR	0	551	0	0	551	21.52
TOTAL Earth Shaping	4000.00	CY	14,483	8,499	0	0	22,982	5.75
Fence, misc metal, security, std FE-6, 6' high, no gates/signs	1500.00	LF	2,337	0	38,558	0	40,895	27.26
Fence, CL, 7' high, dbl, 20'W, indl, gates, swing, galv, w/o barb wire	2.00	EA	328	113	1,221	0	1,662	830.80
Orange Fence-Misc Constructin F	1500.00	LF	3,907	47	2,129	0	6,083	4.06
Site dml, chain link, remove only, 8' to 10' high	1500.00	LF	4,209	491	0	0	4,700	3.13
TOTAL Install/Remove Fence	1.00	EA	10,779	651	41,909	0	53,339	53338.93
Fine grade, for roadway, base or leveling course	1.90	MSY	1,252	523	0	0	1,776	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	1900.00	SY	1,778	1,087	0	0	2,865	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	1900.00	SY	2,513	1,978	43,202	0	47,694	25.10
Asphaltic conc pavement, highway, wearing course, 6" thick	646.00	TON	5,791	2,008	26,238	0	34,037	52.69

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Construct New Road	1900.00	SY	11,335	5,597	69,440	0	86,371	45.46
Fine grade, for roadway, base or leveling course	6.00	MSY	3,955	1,653	0	0	5,608	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	6000.00	SY	5,614	3,432	0	0	9,047	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	6000.00	SY	7,937	6,248	136,427	0	150,612	25.10
TOTAL Construct Equipment Area	6000.00	SY	17,506	11,333	136,427	0	165,266	27.54
Fine grade, for roadway, base or leveling course	5.00	MSY	3,296	1,378	0	0	4,673	934.67
Base, prepare & roll sub-base, small areas to 2500 SY	5000.00	SY	4,679	2,860	0	0	7,539	1.51
Base course, compacted to 12" deep, crushed 3/4" stone, large areas	5000.00	SY	6,614	5,206	113,689	0	125,510	25.10
TOTAL Construct Admin/w parking	5000.00	SY	14,588	9,444	113,689	0	137,722	27.54
Concrete Slab and Hardstand 750psi, incl forms,reinf, flexural on grade	6000.00	SY	0	0	0	369,600	369,600	61.60
TOTAL Hardstand for Process Equipment	6000.00	SY	0	0	0	369,600	369,600	61.60
Equip. Operator, Foreman	58.82	HR	3,773	0	0	0	3,773	64.14
Outside Equip. Operators, Light	58.82	HR	3,456	0	0	0	3,456	58.75
Outside Equip. Operators, Medium	117.65	HR	7,460	0	0	0	7,460	63.41
Outside Laborers, (Semi-Skilled)	117.65	HR	5,725	0	0	0	5,725	48.66
Outside Truck Drivers, Heavy	58.82	HR	2,669	0	0	0	2,669	45.38
GRADER,MOTOR, ARTIC, CAT 140-G	58.82	HR	0	2,932	0	0	2,932	49.85
PUMP,SUBM, 6"D,1950GPM/40'HD, EL	58.82	HR	0	865	0	0	865	14.71
ROLLER,VIB,SD,S/P,13.0T,66"W,PAD	58.82	HR	0	2,460	0	0	2,460	41.81
WATER TANK, 3000 GAL (ADD TRK	58.82	HR	0	278	0	0	278	4.72
TRK,HWY, 41,000 GVW, 6X4, 3 AXLE	58.82	HR	0	1,862	0	0	1,862	31.65
SMALL TOOLS (2 ea)	117.65	HR	0	231	0	0	231	1.96
Material Cost for Gravel Includes delivery to site	1000.00	CY	0	0	31,541	0	31,541	31.54
TOTAL Repair Road/Work Area -	5000.00	SY	23,082	8,628	31,541	0	63,251	12.65
Electrical Primary	3000.00	LF	0	0	0	75,900	75,900	25.30
Primary Substations	3.00	EA	0	0	0	189,750	189,750	63250.00
Secondary Feeds	600.00	SF	0	0	0	11,385	11,385	18.98
Exterior Lighting	20.00	EA	0	0	0	50,600	50,600	2530.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Electrical Power	1.00	EA	0	0	0	327,635	327,635	327635.00
4" Water Line	1500.00	LF	0	0	0	55,440	55,440	36.96
TOTAL Water Line	1.00	EA	0	0	0	55,440	55,440	55440.00
Catch Basins	8.00	EA	0	0	0	29,568	29,568	3696.00
Piping	2000.00	LF	0	0	0	98,560	98,560	49.28
This is total cost per LF for piping to bring contaminated water from work area to water treatment plant. Total cost for underground pipe, excavation, pipe, backfill.								
Holding sumps	2.00	EA	0	0	0	12,320	12,320	6160.00
Pumping System	1.00	LS	0	0	0	123,200	123,200	123200.00
TOTAL Contaminated Water Control Systm	1.00	EA	0	0	0	263,648	263,648	263648.00
TOTAL Site Preparation	1.00	EA	99,175	47,807	393,006	1,016,323	1,556,311	1556310.87
Set Up Material Handling Equip								
Set Up Material Handling Equip					** OVERTIME **			
Conveyor Belt-4' - Horizontal	600.00	LF	31,977	0	0	103,488	135,465	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	100.00	LF	5,330	0	0	12,320	17,650	176.50
Hopper - Mechanized-200 CY	4.00	EA	0	0	0	197,120	197,120	49280.00
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
TOTAL Set Up Material Handling Equip	1.00	EA	37,307	0	0	312,928	350,235	350234.82
Set Up Sediment Stabilization Eq								
Soil Stabilization Unit	2.00	EA	0	0	0	1,232,000	1,232,000	616000.00
The exact nature of this unit will only be known after demonstration test run and final project design. Discussion with equipment suppliers indicate that it is difficult to predict what will be required depending on the final design and type of materials stabilized and added. The purchase and set up cost								

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
for a complete system to process 1500 tons per day (hopper/conveyor/pugmill(batch plant)/dump conveyor/cement silos) will be in the order of $400,000 to $500,000 in direct costs.								
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	1,232,000	1,232,000	1232000.00
TOTAL Set Up Sediment Stabilization Eq	1.00	EA	0	0	0	1,232,000	1,232,000	1232000.00
Construct Sediment Storage Facl								
Construct Sediment Storage Facl								
Storage Building #1	30000	SF	0	0	0	2,217,600	2,217,600	73.92
This building is a rain cover for material.								
Cover Building #2	4000.00	SF	0	0	0	295,680	295,680	73.92
This building is a rain cover for railroad cars.								
Concrete Slab and Hardstand	10000	SY	0	0	0	616,000	616,000	61.60
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	3,129,280	3,129,280	3129280.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	3,129,280	3,129,280	3129280.00
TOTAL Construct Sediment Storage Facl	1.00	EA	0	0	0	3,129,280	3,129,280	3129280.00
Set Up Rail Car Load Fac-w/scale								
Set Up Rail Car Load Fac-w/scale					** OVERTIME **			
Scales for Railroad Car 150 tns fdn, 60" x 48", 8000 lb cap	1.00	EA	0	0	0	61,600	61,600	61600.00
Conveyor Belt-4' - Horizontal	50.00	LF	2,665	0	0	8,624	11,289	225.78
Conveyor Belt -4' - Inclined long, 25 deg incline, inclined belt	50.00	LF	2,665	0	0	6,160	8,825	176.50
Hopper - Mechanized-200 CY	1.00	EA	0	0	0	49,280	49,280	49280.00
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55
TOTAL Set Up Rail Car Load Fac-w/scale	1.00	EA	5,330	0	0	125,664	130,994	130993.55

Tue 28 Nov 2000 TAMS Consultants, Inc. TIME 18:35:08
Eff. Date 04/01/00 PROJECT HUD00S: HUDSON RIVER PCB 2000 R-11/21/00 - Dredging of Hudson River to
DETAILED ESTIMATE Hudson River PCB DETAIL PAGE 471
66. Alt Hydraulic Dredging 0/0/3Sel

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Decon Facility								
Decontamination Pad					** OVERTIME **			
2" Sch 40 PVC Press Pipe	150.00	LF	414	6	162	0	581	3.88
2" 90 Degree Elbow, PVC Sch 40	4.00	EA	80	1	4	0	85	21.25
Submersible Pump	1.00	EA	0	0	215	0	215	215.05
Trench, 1 CY Hyd Excav, Med Soil	7.50	CY	7	5	0	0	11	1.53
Electrical Hookup	1.00	EA	0	0	0	0	0	0.00
Graded Crushed Agg Rdwy Base Crs	180.00	CY	2,676	2,008	5,419	0	10,104	56.13
Slab on Gr Edge Forms, Up to 6"H (15 cm) High, Based on 4 Uses	400.00	LF	1,115	19	573	0	1,707	4.27
Gr 50 Resteel,Ftgs & Slabs,#3-#6	13.00	TON	9,776	60	8,201	0	18,037	1387.46
Pour Slab on Gr,>= 6", Dir Chute >= (15 cm) Place 3000 PSI Conc	180.00	CY	2,578	79	12,167	0	14,824	82.36
Concrete Floor Finishes, Broom	9000.00	SF	5,193	218	0	0	5,411	0.60
TOTAL Decontamination Pad	1000.00	SY	21,838	2,396	26,742	0	50,976	50.98
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
TOTAL Decon Facility	1.00	EA	21,838	2,396	26,742	0	50,976	50975.83
Water Treatment Facility								
Design cost	1.00	EA	152,250	0	0	0	152,250	152250.00
Skid Mounted WWTP	1.00	EA	0	0	0	350,000	350,000	350000.00
Influent Tanks, no pipe/pumps, 100000 gal, steel, gnd lvl, incl fdn	2.00	EA	0	0	0	200,000	200,000	100000.00
Effluent Tanks, no pipe/pumps, 100000 gal, steel, gnd lvl, incl fdn	3.00	EA	0	0	0	300,000	300,000	100000.00
TOTAL South Plant - 100 gpm			152,250	0	0	850,000	1,002,250	
TOTAL Water Treatment Facility	1.00	EA	152,250	0	0	850,000	1,002,250	1002250.00
Testing Laboratory								
Capital Costs								
Onsite Laboratory (Modular Bldg)	1.00	EA	0	0	0	300,000	300,000	300000.00
Equipment - GCMS	2.00	EA	0	191,700	0	0	191,700	95850.00
Equipment - ICAP	1.00	EA	0	186,375	0	0	186,375	186375.00
Equipment - GCECD	1.00	EA	0	42,600	0	0	42,600	42600.00
Equipment - Ancilliary	1.00	EA	0	79,875	0	0	79,875	79875.00
Equipment - Computer System	1.00	EA	0	79,875	0	0	79,875	79875.00
Laboratory Certification Cost	1.00	EA	0	0	0	5,000	5,000	5000.00
TOTAL Capital Costs			0	580,425	0	305,000	885,425	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Capital Costs			0	580,425	0	305,000	885,425	
TOTAL Testing Laboratory	1.00	EA	0	580,425	0	305,000	885,425	885425.00
TOTAL Site Prep and Fac Const - South	1.00	EA	315,899	630,628	419,748	6,976,195	8,342,470	8342470.06
Dredging								
Deep Draft Dredging								
Dredging Reach 1					** OVERTIME **			
TOTAL Dredging Reach 1		MDY	0	0	0	0	0	
TOTAL Reach #1			0	0	0	0	0	
Dredging Reach 2					** OVERTIME **			
TOTAL Dredging Reach 2		MDY	0	0	0	0	0	
TOTAL Reach #2			0	0	0	0	0	
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	7442.10	HR	353,997	0	0	0	353,997	47.57
Dredge Engineer	3721.05	HR	232,210	0	0	0	232,210	62.40
Oiler	3721.05	HR	180,993	0	0	0	180,993	48.64
Excavator Dredge Operator	3721.05	HR	268,272	0	0	0	268,272	72.10
HYD EXCAV, CRWLR, 4.75 CY BKT	3189.47	HR	0	702,053	0	0	702,053	220.12
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	531.58	HR	0	31,022	0	0	31,022	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3721.05	HR	0	29,838	0	0	29,838	8.02
SMALL TOOLS	3721.05	HR	0	6,927	0	0	6,927	1.86
Command/Control System	3721.05	HR	0	71,927	0	0	71,927	19.33
Environmental Bucket	3721.05	HR	0	44,037	0	0	44,037	11.83
Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.								
Per Diem	1860.53	MDY	0	0	0	164,678	164,678	88.51
TOTAL Dredging Reach 3	231964	BCY	1,035,471	885,804	0	164,678	2,085,953	8.99
TOTAL Reach #3	231964	BCY	1,035,471	885,804	0	164,678	2,085,953	8.99
TOTAL Deep Draft Dredging	231964	BCY	1,035,471	885,804	0	164,678	2,085,953	8.99

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Hydraulic Dredging								
Hydraulic Dredge					** OVERTIME **			
Dredge Engineer	8351.03	HR	521,140	0	0	0	521,140	62.40
Chief Engineer	26.77	MO	328,728	0	0	0	328,728	12281.50
Leverman	8351.03	HR	592,203	0	0	0	592,203	70.91
Deckhand	8351.03	HR	397,231	0	0	0	397,231	47.57
Maintenance Engineer	8351.03	HR	498,843	0	0	0	498,843	59.73
Mate	8351.03	HR	467,785	0	0	0	467,785	56.02
Welder	8351.03	HR	492,010	0	0	0	492,010	58.92
Welder	8351.03	HR	408,254	0	0	0	408,254	48.89
12" Cutter head Dredge (ADD 8"DIA DISCHARGE LINE)	26.77	MO	0	1,862,575	0	0	1,862,575	69587.10
SMALL TOOLS	8351.03	HR	0	15,546	0	0	15,546	1.86
Per Diem	6680.82	MDY	0	0	688,123	0	688,123	103.00
Pontoon Line	26.77	MO	0	278,352	0	0	278,352	10399.41
Submerged Line	26.77	MO	0	1,588,535	0	0	1,588,535	59348.78
Shore Line	26.77	MO	0	56,257	0	0	56,257	2101.79
TOTAL Hydraulic Dredge	2087757	BCY	3,706,193	3,801,265	688,123	0	8,195,581	3.93
Tender Tug					** OVERTIME **			
Boat Captain	8351.03	HR	456,609	0	0	0	456,609	54.68
Boat Master	8351.03	HR	473,649	0	0	0	473,649	56.72
Deckhand for Tug	8351.03	HR	385,563	0	0	0	385,563	46.17
TUG BOAT, 150 - 400 HP (112 - 298 KW)	26.77	MO	0	210,402	0	0	210,402	7860.77
Per Diem	2505.31	MDY	0	0	258,046	0	258,046	103.00
TOTAL Tender Tug	2087757	BCY	1,315,821	210,402	258,046	0	1,734,269	0.85
Skimmer/Debris Collector					** OVERTIME **			
Boat Captain	8351.03	HR	456,609	0	0	0	456,609	54.68
Boat Master	8351.03	HR	473,649	0	0	0	473,649	56.72
Deckhand for Tug	8351.03	HR	385,563	0	0	0	385,563	46.17
WORKBCAT,TRKABLE,25.25'X10'X3.5' WITH PILOT HOUSE & PUSH KNEES	26.77	MO	0	115,526	0	0	115,526	4316.12
Per Diem	2505.31	MDY	0	0	258,046	0	258,046	103.00
TOTAL Skimmer/Debris Collector	2087757	BCY	1,315,821	115,526	258,046	0	1,689,392	0.81
Survey Boat					** OVERTIME **			
Boat Operator	8351.03	HR	456,609	0	0	0	456,609	54.68
Per Diem	835.10	MDY	0	0	86,015	0	86,015	103.00
LAUNCH,22.83', SURVEYOR, 4000#	26.77	MO	0	263,553	0	0	263,553	9846.52
TOTAL Survey Boat	2087757	BCY	456,609	263,553	86,015	0	806,178	0.39

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Booster Pump					** OVERTIME **			
Maintenance Engineer	8351.03	HR	498,843	0	0	0	498,843	59.73
Oiler	8351.03	HR	406,196	0	0	0	406,196	48.64
Booster Pump	40.15	MO	0	1,660,591	0	0	1,660,591	41360.51
Per Diem	1670.21	MDY	0	0	172,031	0	172,031	103.00
TOTAL Booster Pump	2087757	BCY	905,039	1,660,591	172,031	0	2,737,661	1.31
Derrick Barge					** OVERTIME **			
Deckhand	16702	HR	794,462	0	0	0	794,462	47.57
Operator	8351.03	HR	602,073	0	0	0	602,073	72.10
Derrick Barge	26.77	MO	0	100,027	0	0	100,027	3737.09
Per Diem	1670.21	MDY	0	0	172,031	0	172,031	103.00
TOTAL Derrick Barge	2087757	BCY	1,396,536	100,027	172,031	0	1,668,594	0.80
Fuel Barge					** OVERTIME **			
Fuel barge	26.77	MO	0	60,361	0	0	60,361	2255.14
TOTAL Fuel Barge	2553450	BCY	0	60,361	0	0	60,361	0.02
Work Barge					** OVERTIME **			
Work Barge	26.77	MO	0	37,941	0	0	37,941	1417.52
TOTAL Work Barge	2553450	BCY	0	37,941	0	0	37,941	0.01
TOTAL Hydraulic Dredging- Thompson Isl	2087757	BCY	9,096,018	6,249,667	1,634,292	0	16,979,976	8.13
Hydraulic Dredge					** OVERTIME **			
Dredge Engineer	4547.80	HR	283,802	0	0	0	283,802	62.40
Chief Engineer	14.58	MO	179,019	0	0	0	179,019	12281.50
Leverman	4547.80	HR	322,501	0	0	0	322,501	70.91
Deckhand	9095.59	HR	432,648	0	0	0	432,648	47.57
Maintenance Engineer	4547.80	HR	271,659	0	0	0	271,659	59.73
Mate	4547.80	HR	254,746	0	0	0	254,746	56.02
Welder	4547.80	HR	267,938	0	0	0	267,938	58.92
Welder	4547.80	HR	222,326	0	0	0	222,326	48.89
12" Cutter head Dredge (ADD 8"DIA DISCHARGE LINE)	14.58	MO	0	1,014,322	0	0	1,014,322	69587.10
SMALL TOOLS	4547.80	HR	0	8,466	0	0	8,466	1.86
Pontoon Line	14.58	MO	0	175,440	0	0	175,440	12035.99
Submerged Line	14.58	MO	0	2,078,553	0	0	2,078,553	142598.14
Shore Line	14.58	MO	0	65,349	0	0	65,349	4483.21
Per Diem	4093.02	MDY	0	0	421,580	0	421,580	103.00
TOTAL Hydraulic Dredge	1136949	BCY	2,234,640	3,342,131	421,580	0	5,998,350	5.28

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Tender Tug					** OVERTIME **			
Boat Captain	4547.80	HR	248,660	0	0	0	248,660	54.68
Boat Master	4547.80	HR	257,939	0	0	0	257,939	56.72
Deckhand for Tug	4547.80	HR	209,969	0	0	0	209,969	46.17
TUG BOAT, 150 - 400 HP (112 - 298 KW)	14.58	MO	0	114,581	0	0	114,581	7860.77
Per Diem	1364.34	MDY	0	0	140,527	0	140,527	103.00
TOTAL Tender Tug	1136949	BCY	716,569	114,581	140,527	0	971,676	0.85
Skimmer/Debris Collector					** OVERTIME **			
Boat Captain	4547.80	HR	248,660	0	0	0	248,660	54.68
Boat Master	4547.80	HR	257,939	0	0	0	257,939	56.72
Deckhand for Tug	4547.80	HR	209,969	0	0	0	209,969	46.17
WORKBOAT,TRKABLE,25.25'X10'X3.5' WITH PILOT HOUSE & PUSH KNEES	14.58	MO	0	62,913	0	0	62,913	4316.12
Per Diem	1364.34	MDY	0	0	140,527	0	140,527	103.00
TOTAL Skimmer/Debris Collector	1136949	BCY	716,569	62,913	140,527	0	920,008	0.81
Survey Boat					** OVERTIME **			
Boat Operator	4547.80	HR	248,660	0	0	0	248,660	54.68
Per Diem	454.78	MDY	0	0	46,842	0	46,842	103.00
LAUNCH,22.83', SURVEYOR, 4000#	14.58	MO	0	143,526	0	0	143,526	9846.52
TOTAL Survey Boat	1136949	BCY	248,660	143,526	46,842	0	439,028	0.39
Booster Pump					** OVERTIME **			
Maintenance Engineer	18191	HR	1,086,637	0	0	0	1,086,637	59.73
Oiler	18191	HR	884,824	0	0	0	884,824	48.64
Booster Pump	58.31	MO	0	2,411,529	0	0	2,411,529	41360.51
Per Diem	3638.24	MDY	0	0	374,737	0	374,737	103.00
TOTAL Booster Pump	1136949	BCY	1,971,461	2,411,529	374,737	0	4,757,727	4.18
Derrick Barge					** OVERTIME **			
Deckhand	9095.59	HR	432,648	0	0	0	432,648	47.57
Operator	4547.80	HR	327,877	0	0	0	327,877	72.10
Derrick Barge	14.58	MO	0	54,473	0	0	54,473	3737.09
Per Diem	909.56	MDY	0	0	93,684	0	93,684	103.00
TOTAL Derrick Barge	1136949	BCY	760,524	54,473	93,684	0	908,682	0.80

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Fuel Barge					** OVERTIME **			
Fuel barge	14.58	MO	0	32,872	0	0	32,872	2255.14
TOTAL Fuel Barge	2553450	BCY	0	32,872	0	0	32,872	0.01
Work Barge					** OVERTIME **			
Work Barge	14.58	MO	0	20,662	0	0	20,662	1417.52
TOTAL Work Barge	2553450	BCY	0	20,662	0	0	20,662	0.01
TOTAL Hydraulic Dredging- Lock 6	1136949	BCY	6,648,422	6,182,686	1,217,897	0	14,049,004	12.36
Hydraulic Dredge					** OVERTIME **			
TOTAL Hydraulic Dredge		MDY	0	0	0	0	0	
Tender Tug					** OVERTIME **			
TOTAL Tender Tug		MDY	0	0	0	0	0	
Skimmer/Debris Collector					** OVERTIME **			
TOTAL Skimmer/Debris Collector		MDY	0	0	0	0	0	
Survey Boat					** OVERTIME **			
TOTAL Survey Boat		MO	0	0	0	0	0	
Booster Pump					** OVERTIME **			
TOTAL Booster Pump		MDY	0	0	0	0	0	
Derrick Barge					** OVERTIME **			
TOTAL Derrick Barge		MDY	0	0	0	0	0	
Fuel Barge					** OVERTIME **			
TOTAL Fuel Barge	2553450	BCY	0	0	0	0	0	0.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Work Barge					** OVERTIME **			
TOTAL Work Barge	2553450	BCY	0	0	0	0	0	0.00
TOTAL Hydraulic Dredging- Lock 5			0	0	0	0	0	
TOTAL Hydraulic Dredging	3224706	BCY	15,744,440	12,432,353	2,852,188	0	31,028,981	9.62
Shallow Draft Dredging								
Dredging Reach 1					** OVERTIME **			
TOTAL Dredging Reach 1		MDY	0	0	0	0	0	
TOTAL Reach 1			0	0	0	0	0	
Dredging Reach 2					** OVERTIME **			
TOTAL Dredging Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
Dredging Reach 3					** OVERTIME **			
Deckhand for Dredge	43927	HR	2,089,466	0	0	0	2,089,466	47.57
Dredge Engineer	21964	HR	1,370,617	0	0	0	1,370,617	62.40
Oiler	21964	HR	1,068,311	0	0	0	1,068,311	48.64
Excavator Dredge Operator	21964	HR	1,583,476	0	0	0	1,583,476	72.10
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	18826	HR	0	2,538,494	0	0	2,538,494	134.84
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	3137.65	HR	0	110,557	0	0	110,557	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	21964	HR	0	176,120	0	0	176,120	8.02
SMALL TOOLS	21964	HR	0	40,887	0	0	40,887	1.86
Command/Control System	21964	HR	0	424,549	0	0	424,549	19.33
Environmental Bucket Capital cost of bucket is approx. $30,500 - $4000 for seals = $34,500. Bucket of similar value was selected.	21964	HR	0	179,675	0	0	179,675	8.18
Per Diem	10982	MDY	0	0	0	972,012	972,012	88.51
TOTAL Dredging Reach 3	456390	BCY	6,111,870	3,470,283	0	972,012	10,554,166	23.13
TOTAL Reach 3	456390	BCY	6,111,870	3,470,283	0	972,012	10,554,166	23.13
TOTAL Shallow Draft Dredging	456390	BCY	6,111,870	3,470,283	0	972,012	10,554,166	23.13

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Land Locked Area								
Dredging Reach 2				** OVERTIME **				
TOTAL Dredging Reach 2		MDY	0	0	0	0	0	
TOTAL Shallow Draft Dredging	342349	BCY	0	0	0	0	0	0.00
Reach 2								
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Small Barging to Transfer Site			0	0	0	0	0	
Transfer of Mat'l to Large barge								
TOTAL Transfer of Mat'l to Large barge		MDY	0	0	0	0	0	
TOTAL Transfer of Mat'l to 200T Barge			0	0	0	0	0	
TOTAL Mobilization/Demobilization			0	0	0	0	0	
TOTAL Land Locked Area	1.00	BCY	0	0	0	0	0	0.00
Turbidity Curtain/Resuspension								
Shallow Turbidity Control								
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	24300	HR	0	1,110,833	0	0	1,110,833	45.71
SMALL TOOLS	2429.99	HR	0	4,916	0	0	4,916	2.02
Deckhand for Tug	24300	HR	1,024,922	0	0	0	1,024,922	42.18
Boat Captain	24300	HR	1,210,163	0	0	0	1,210,163	49.80
TOTAL Shallow Turbidity Control	2.00	CRW	2,235,085	1,115,749	14,081	0	3,364,915	1682457.28
Deep Turbidity Control								
Crews shown is dredge crews. Number of crews to maintain curtains will be two crews as shown in the worksheets.								
Turbidity Barrier	6000.00	LF	0	0	109,829	0	109,829	18.30
Anchoring System	120.00	EA	0	0	40,552	0	40,552	337.93
Mooring Buoy Light w/Photocell	60.00	EA	0	0	10,560	0	10,560	176.01
Freight to Site	3.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	8999.97	HR	0	411,420	0	0	411,420	45.71
SMALL TOOLS	900.00	HR	0	1,821	0	0	1,821	2.02
Deckhand for Tug	8999.97	HR	379,601	0	0	0	379,601	42.18
Boat Captain	8999.97	HR	448,209	0	0	0	448,209	49.80

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Deep Turbidity Control	3.00	CRW	827,809	413,240	160,941	0	1,401,991	467330.36
TOTAL Turbidity Control			3,062,894	1,528,990	175,022	0	4,766,906	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	3,062,894	1,528,990	175,022	0	4,766,906	4766905.63
TOTAL Dredging	3913060	BCY	25,954,675	18,317,430	3,027,210	1,136,690	48,436,005	12.38
Testing and Monitoring (remed)								
Weekly Field Sampling								
Chemist	15652	HR	1,085,186	0	0	0	1,085,186	69.33
Sampling Technician	15652	HR	666,409	0	0	0	666,409	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	15652	HR	0	212,945	0	0	212,945	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	1,751,595	214,292	0	0	1,965,887	1080.16
Sampling Equipment/Materials	8.00	LS	0	0	11,777	0	11,777	1472.06
TOTAL Materials			0	0	11,777	0	11,777	
Congener Specific PCB's	3328.00	EA	0	0	881,826	0	881,826	264.97
Total Suspended Solids	3328.00	EA	0	0	122,476	0	122,476	36.80
Fraction Organic Carbon On TSS	3328.00	EA	0	0	244,952	0	244,952	73.60
TOTAL Analytical	416.00	EA	0	0	1,249,253	0	1,249,253	3003.01
TOTAL Weekly Field Sampling	52.00	WKS	1,751,595	214,292	1,261,029	0	3,226,916	62056.08
Event Based Field Sampling								
Chemist	11550	HR	800,786	0	0	0	800,786	69.33
Sampling Technician	11550	HR	491,760	0	0	0	491,760	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	11550	HR	0	157,137	0	0	157,137	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1750.00	HR	1,292,545	158,484	0	0	1,451,030	829.16
Sampling Equipment/Materials	6.00	LS	0	0	8,832	0	8,832	1472.06
TOTAL Materials			0	0	8,832	0	8,832	
Congener Specific PCB's	400.00	EA	0	0	105,989	0	105,989	264.97
Total Suspended Solids	400.00	EA	0	0	14,721	0	14,721	36.80
Fraction Organic Carbon On TSS	400.00	EA	0	0	29,441	0	29,441	73.60
TOTAL Analytical	400.00	EA	0	0	150,151	0	150,151	375.38

TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Event Based Field Sampling	50.00	EVT	1,292,545	158,484	158,983	0	1,610,013	32200.26
Confirmation Cores- 0/0/3 (dg)								
Chemist	7430.00	HR	515,137	0	0	0	515,137	69.33
Chemist, Jr.	7430.00	HR	454,440	0	0	0	454,440	61.16
Sampling Technician	7430.00	HR	316,344	0	0	0	316,344	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	7430.00	HR	0	353,729	0	0	353,729	47.61
TOTAL Labor/Equipment	7430.00	HR	1,285,921	353,729	0	0	1,639,650	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	9362.00	EA	0	0	275,629	0	275,629	29.44
Total PCB's	2341.00	EA	0	0	620,299	0	620,299	264.97
Cesium - 137	2341.00	EA	0	0	258,458	0	258,458	110.40
Organic Carbon	2341.00	EA	0	0	172,305	0	172,305	73.60
TOTAL Analytical	7430.00	EA	0	0	1,326,691	0	1,326,691	178.56
TOTAL Confirmation Cores- 0/0/3 (dg)	743.00	DAY	1,285,921	353,729	1,341,412	0	2,981,062	4012.20
Confirmation Cores- 0/0/3 (bf)								
Chemist	2820.00	HR	195,516	0	0	0	195,516	69.33
Chemist, Jr.	2820.00	HR	172,479	0	0	0	172,479	61.16
Sampling Technician	2820.00	HR	120,066	0	0	0	120,066	42.58
BOAT, 19' L-GIANT,TRIHULL, 2400#	2820.00	HR	0	134,255	0	0	134,255	47.61
TOTAL Labor/Equipment	2820.00	HR	488,062	134,255	0	0	622,317	220.68
Sampling Equipment/Materials	1.00	LS	0	0	14,721	0	14,721	14720.65
TOTAL Materials			0	0	14,721	0	14,721	
Total PCB's by immunoassay	3553.00	EA	0	0	104,605	0	104,605	29.44
Total PCB's	888.00	EA	0	0	235,295	0	235,295	264.97
Organic Carbon	888.00	EA	0	0	65,360	0	65,360	73.60
TOTAL Analytical	2820.00	EA	0	0	405,259	0	405,259	143.71
TOTAL Confirmation Cores- 0/0/3 (bf)	282.00	DAY	488,062	134,255	419,980	0	1,042,297	3696.09

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Geophysical Surveys- 0/0/3 (dg)								
Chemist	2020.00	HR	140,051	0	0	0	140,051	69.33
Survey Crew	202.00	DAY	829,961	0	0	0	829,961	4108.72
Post Processing	353.50	HR	40,850	0	0	0	40,850	115.56
Per Diem	202.00	DAY	0	0	80,286	0	80,286	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	2020.00	HR	1,014,457	0	80,286	0	1,094,743	541.95
TOTAL Geophysical Surveys- 0/0/3 (dg)	202.00	DAY	1,014,457	0	80,286	0	1,094,743	5419.52
TOTAL Fish Sample Analysis	7.00	EA	0	0	0	4,550,000	4,550,000	650000.00
Annual Reporting								
Project Manager	168.00	HR	19,406	0	0	0	19,406	115.51
Chemist	280.00	HR	19,413	0	0	0	19,413	69.33
Engineers, Quality Control	168.00	HR	10,316	0	0	0	10,316	61.40
Clerks, Typists, Bookkeepers & Receptionist	112.00	HR	3,689	0	0	0	3,689	32.93
Reproduction Operators	56.00	HR	1,182	0	0	0	1,182	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Quarterly Report	7.00	WK	58,437	0	383	0	58,819	8402.78
Project Manager	336.00	HR	38,812	0	0	0	38,812	115.51
Chemist	560.00	HR	38,826	0	0	0	38,826	69.33
Engineers, Quality Control	336.00	HR	20,632	0	0	0	20,632	61.40
Clerks, Typists, Bookkeepers & Receptionist	224.00	HR	7,377	0	0	0	7,377	32.93
Reproduction Operators	112.00	HR	2,363	0	0	0	2,363	21.10
Copies	200.00	EA	4,220	0	15	0	4,235	21.18
Fed Ex	10.00	EA	211	0	368	0	579	57.90
TOTAL Lbr/Matls for Annual Report	14.00	WK	112,442	0	383	0	112,825	8058.91
TOTAL Annual Reporting	7.00	YR	170,879	0	765	0	171,644	24520.59
TOTAL Testing and Monitoring (remed)	1.00	EA	6,003,459	860,761	3,262,456	4,550,000	14,676,675	14676675.45

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Barging								
Barging to North - 1000T Hopper								
TOTAL Reach 1			0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3	100.00	BCY	0	0	0	0	0	0.00
TOTAL Barging to North - 1000T Hopper	1.00	EA	0	0	0	0	0	0.00
Barging to North - 200T Deck								
TOTAL Reach 1			0	0	0	0	0	
Reach 2					** OVERTIME **			
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
TOTAL Reach 3			0	0	0	0	0	
TOTAL Barging to North - 200T Deck	342349	BCY	0	0	0	0	0	0.00
Barging to South - 1000T Hopper								
Reach 1					** OVERTIME **			
Deckhand for Tug	57734	HR	2,759,836	0	0	0	2,759,836	47.80
Boat Captain	57734	HR	3,271,899	0	0	0	3,271,899	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	57734	HR	0	9,067,583	0	0	9,067,583	157.06
DREDGE BARGE, 1000 TON	173202	HR	0	6,521,819	0	0	6,521,819	37.65
Per Diem	11547	DAY	0	0	0	1,022,026	1,022,026	88.51
Spare Tug Crew	9622.35	HR	1,005,331	789,622	0	0	1,794,952	186.54
Spare Tug Crew Per Diem days	1924.00	MDY	0	0	0	170,296	170,296	88.51
TOTAL Reach 1	1784526	BCY	7,037,066	16,379,024	0	1,192,322	24,608,412	13.79
TOTAL Reach 1	1784526	BCY	7,037,066	16,379,024	0	1,192,322	24,608,412	13.79
TOTAL Reach 2			0	0	0	0	0	

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 3					** OVERTIME **			
Deckhand for Tug	3986.84	HR	190,581	0	0	0	190,581	47.80
Boat Captain	3986.84	HR	225,942	0	0	0	225,942	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3986.84	HR	0	626,164	0	0	626,164	157.06
DREDGE BARGE, 1000 TON	19934	HR	0	750,610	0	0	750,610	37.65
Per Diem	797.37	DAY	0	0	0	70,576	70,576	88.51
Spare Tug Crew	3986.84	HR	416,540	327,165	0	0	743,705	186.54
Spare Tug Crew Per Diem days	798.00	MDY	0	0	0	70,632	70,632	88.51
TOTAL Reach 3	231964	BCY	833,063	1,703,939	0	141,208	2,678,210	11.55
TOTAL Reach 3	231964	BCY	833,063	1,703,939	0	141,208	2,678,210	11.55
TOTAL Barging to South - 1000T Hopper	2016490	BCY	7,870,129	18,082,963	0	1,333,531	27,286,622	13.53
Barging to South - 200T Deck								
Reach 1								
TOTAL Reach 1		MDY	0	0	0	0	0	
TOTAL Reach 1			0	0	0	0	0	
Reach 2								
TOTAL Reach 2		MDY	0	0	0	0	0	
TOTAL Reach 2			0	0	0	0	0	
Reach 3					** OVERTIME **			
Deckhand for Tug	54909	HR	2,624,784	0	0	0	2,624,784	47.80
Boat Captain	54909	HR	3,111,789	0	0	0	3,111,789	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	54909	HR	0	8,623,861	0	0	8,623,861	157.06
DREDGE BARGE, 1000 TON	86285	HR	0	3,249,020	0	0	3,249,020	37.65
Per Diem	10982	DAY	0	0	0	972,013	972,013	88.51
Spare Tug Crew	7844.12	HR	819,544	643,699	0	0	1,463,243	186.54
Spare Tug Crew Per Diem days	1568.00	MDY	0	0	0	138,786	138,786	88.51
TOTAL Reach 3	456390	BCY	6,556,117	12,516,580	0	1,110,799	20,183,496	44.22
TOTAL Reach 3	456390	BCY	6,556,117	12,516,580	0	1,110,799	20,183,496	44.22
TOTAL Barging to South - 200T Deck	456390	BCY	6,556,117	12,516,580	0	1,110,799	20,183,496	44.22

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Canal/Lock Usage Fees			0	0	0	50,000	50,000	
TOTAL Barging	2472880	BCY	14,426,246	30,599,542	0	2,494,330	47,520,118	19.22
Water Separation Cyclone-Operate								
Water Separation Cyclone-Operate								
Water Separation Cyclone Operate (30) ** OVERTIME ** To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	12899	HR	0	627,225	0	0	627,225	48.63
Equipment Costs	12899	HR	0	357,998	0	0	357,998	27.75
Outside Equip. Oper Light	12899	HR	615,128	0	0	0	615,128	47.69
Outside Equip. Oper Med	12899	HR	671,485	0	0	0	671,485	52.06
Outside Laborer (Semi-Skilled)	25798	HR	1,018,885	0	0	0	1,018,885	39.50
TOTAL Water Separation Cyclone Operate	3224706	CY	2,305,498	985,223	0	0	3,290,721	1.02
TOTAL Water Separation Cyclone-Operate	1.00	EA	2,305,498	985,223	0	0	3,290,721	3290720.58
TOTAL Water Separation Cyclone-Operate	1.00	EA	2,305,498	985,223	0	0	3,290,721	3290720.58
TOTAL Water Separation Cyclone-Operate	3224706	BCY	2,305,498	985,223	0	0	3,290,721	1.02
Dewater Hydraulic Dredge Mat								
Dewater Hydraulic Dredge Mat								
Dewater Hydraulic Dredge Materil	3224706	CY	0	0	0	32,247,060	32,247,060	10.00
TOTAL Dewater Hydraulic Dredge Mat	3224706	BCY	0	0	0	32,247,060	32,247,060	10.00
TOTAL Dewater Hydraulic Dredge Mat	3224706	BCY	0	0	0	32,247,060	32,247,060	10.00
TOTAL Dewater Hydraulic Dredge Mat	3224706	BCY	0	0	0	32,247,060	32,247,060	10.00
Stabilization								
Transfer Cyclone to Hold								
Transfer Cyclone to Pugmil ** OVERTIME **								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	24658	HR	0	1,516,768	0	0	1,516,768	61.51
Outside Equip. Operators, Heavy	24658	HR	1,646,824	0	0	0	1,646,824	66.79
Laborer	49316	HR	2,463,939	0	0	0	2,463,939	49.96
SMALL TOOLS	49316	HR	0	99,440	0	0	99,440	2.02

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NTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Transfer Cyclone to Pugmil	3224706	BCY	4,110,764	1,616,208	0	0	5,726,971	1.78
TOTAL Transfer Cyclone to Pugmil	1.00	EA	4,110,764	1,616,208	0	0	5,726,971	5726971.37
TOTAL Transfer Cyclone to Hold	3224706	BCY	4,110,764	1,616,208	0	0	5,726,971	1.78
Unload from Barge								
Unloading at Northern Facility					** OVERTIME **			
TOTAL Unloading at Northern Facility		HR	0	0	0	0	0	
TOTAL Unload Barge - North	1.00	BCY	0	0	0	0	0	0.00
Unloading at Southern Facility					** OVERTIME **			
Master Mechanic	16001	HR	1,116,572	0	0	0	1,116,572	69.78
Outside Equip. Operators, Heavy	16001	HR	1,068,647	0	0	0	1,068,647	66.79
HYD EXCAV, CRWLR, 4.75 CY BKT	16001	HR	0	3,777,107	0	0	3,777,107	236.06
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	16001	HR	0	204,511	0	0	204,511	12.78
TOTAL Unloading at Southern Facility	2472880	BCY	2,185,219	3,981,618	0	0	6,166,837	2.49
TOTAL Unload Barge - South	2472880	BCY	2,185,219	3,981,618	0	0	6,166,837	2.49
TOTAL Unload from Barge	2472880	BCY	2,185,219	3,981,618	0	0	6,166,837	2.49
Load Barge								
Unloading at Northern Facility								
Outside Equip. Operators, Heavy	23094	HR	1,379,217	0	0	0	1,379,217	59.72
Master Mechanic	23094	HR	1,438,502	0	0	0	1,438,502	62.29
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	23094	HR	0	3,454,908	0	0	3,454,908	149.60
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	23094	HR	0	213,225	0	0	213,225	9.23
TOTAL Unloading at Northern Facility	1784526	BCY	2,817,719	3,668,133	0	0	6,485,853	3.63

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Load Barge - North	1.00	EA	2,817,719	3,668,133	0	0	6,485,853	6485852.66
TOTAL Load Barge	1784526	BCY	2,817,719	3,668,133	0	0	6,485,853	3.63
Stabilization Processing								
Soil Stabilization (30)					** OVERTIME **			
To dewater the sediments to a level acceptable to the disposal facility, portland cement is mixed with the sediment prior to loading into shipping units.								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	6883.54	HR	0	423,424	0	0	423,424	61.51
Mixing Equipment	6883.54	HR	0	1,391,052	0	0	1,391,052	202.08
Outside Equip. Oper Light	6883.54	HR	415,257	0	0	0	415,257	60.33
Outside Equip. Oper Med	6883.54	HR	453,303	0	0	0	453,303	65.85
Outsiae Laborer (Semi-Skilled)	13767	HR	687,824	0	0	0	687,824	49.96
TOTAL Soil Stabilization	688354	CY	1,556,385	1,814,476	0	0	3,370,860	4.90
TOTAL Soil Stabilization			1,556,385	1,814,476	0	0	3,370,860	
TOTAL Stabilization Processing	688354	BCY	1,556,385	1,814,476	0	0	3,370,860	4.90
Stabilization Agents/Chemical								
Stabilization Agents/Chemical					** OVERTIME **			
Portland Cement - Material Cost BCY x 1.4tons/cy x 8% cement by weight = .112 multiplier $84.00 x 1.0825 sales tax = $90.93	77096	TNS	0	0	0	7,010,307	7,010,307	90.93
TOTAL Stabilization Agents/Chemical	688354	BCY	0	0	0	7,010,307	7,010,307	10.18
TOTAL Stabilization Agents/Chemical	1.00	EA	0	0	0	7,010,307	7,010,307	7010307.27
TOTAL Stabilization Agents/Chemical	688354	BCY	0	0	0	7,010,307	7,010,307	10.18
Transfer to RR Holding Area								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (pugmill tender)	18638	HR	931,216	0	0	0	931,216	49.96
Outside Truck Drivers, Heavy	55915	HR	2,605,263	0	0	0	2,605,263	46.59
REAR DUMP BODY, 12.0CY (ADD 36,000 GVW TRUCK)	55915	HR	0	224,980	0	0	224,980	4.02
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	55915	HR	0	1,851,420	0	0	1,851,420	33.11
TOTAL Truck Cycle Times-North Facility	1440180	BCY	3,536,479	2,076,400	0	0	5,612,879	3.90

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Truck Cycle Times-South Facility					** OVERTIME **			
Laborer (pugmill tender)	16357	HR	817,229	0	0	0	817,229	49.96
Outside Truck Drivers, Heavy	49070	HR	2,286,361	0	0	0	2,286,361	46.59
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	49070	HR	0	582,288	0	0	582,288	11.87
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	49070	HR	0	1,624,794	0	0	1,624,794	33.11
TOTAL Truck Cycle Times-South Facility	2527948	BCY	3,103,590	2,207,082	0	0	5,310,671	2.10
TOTAL Truck Cycle Times	1.00	EA	6,640,068	4,283,482	0	0	10,923,550	10923550.24
TOTAL Transfer to RR Holding Area	3968128	BCY	6,640,068	4,283,482	0	0	10,923,550	2.75
TOTAL Stabilization	688354	BCY	17,310,155	15,363,917	0	7,010,307	39,684,379	57.65
Transport/Landfill Fee								
Load RR Car								
LDR,FE, WH, 3.25 CY, ARTIC, 950F	11012	HR	0	677,401	0	0	677,401	61.51
Outside Equip. Operators, Heavy	11012	HR	735,471	0	0	0	735,471	66.79
Laborer	22025	HR	1,100,393	0	0	0	1,100,393	49.96
SMALL TOOLS	22025	HR	0	44,411	0	0	44,411	2.02
TOTAL Loader Cycle Time - North Site	1440180	BCY	1,835,864	721,812	0	0	2,557,675	1.78
LDR,FE, WH, 3.25 CY, ARTIC, 950F	19330	HR	0	1,189,042	0	0	1,189,042	61.51
Outside Equip. Operators, Heavy	19330	HR	1,290,972	0	0	0	1,290,972	66.79
Laborer	38660	HR	1,931,519	0	0	0	1,931,519	49.96
SMALL TOOLS	38660	HR	0	77,954	0	0	77,954	2.02
TOTAL Loader Cycle Time - South Site	2527948	BCY	3,222,492	1,266,996	0	0	4,489,488	1.78
TOTAL Load RR Car	3968128	BCY	5,058,356	1,988,807	0	0	7,047,163	1.78
Transp/Disposal >33 ppm - Texas								
Rail Transport Fee (>33ppm)								
Rail transportation to Texas	22950	TRP	0	0	0	114,747,945	114,747,945	5000.00
TOTAL Rail Transport Fee (>33ppm)	2065463	TNS	0	0	0	114,747,945	114,747,945	55.56
TOTAL Rail Transport Fee (>33ppm)	2065463	TNS	0	0	0	114,747,945	114,747,945	55.56

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sediment Disposal (>-33 ppm)								
Disposal Fee/Taxes - Texas	2065463	TNS	0	0	0	108,436,808	108,436,808	52.50
TOTAL Sediment Disposal (>-33 ppm)	2065463	EA	0	0	0	108,436,808	108,436,808	52.50
TOTAL Sediment Disposal (>33 ppm)	2065463	TNS	0	0	0	108,436,808	108,436,808	52.50
TOTAL Transp/Disposal >33 ppm - Texas	2065463	TNS	0	0	0	223,184,752	223,184,752	108.06
Transp/Disposal(0-33) Northeast								
Transp/Disposal(0-33) Northeast								
Transp/disposal at Northeast This includes both the total transportation and disposal costs for northeastern disposal facility.	1134000	TON	0	0	0	56,700,000	56,700,000	50.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	56,700,000	56,700,000	56700000.00
TOTAL Transp/Disposal(0-33) Northeast	1.00	EA	0	0	0	56,700,000	56,700,000	56700000.00
TOTAL Transp/Disposal(0-33) Northeast	1134000	TNS	0	0	0	56,700,000	56,700,000	50.00
Transp/Disposal(0-33) Southeast								
Transp/Disposal(0-33) Southeast								
Transp/disposal at Southeast This includes both the total transportation and disposal costs for southeastern dispoal facility.	2355915	TNS	0	0	0	117,795,750	117,795,750	50.00
TOTAL Transp/Disposal(0-33) Southeast	2355915	TNS	0	0	0	117,795,750	117,795,750	50.00
TOTAL Transp/Disposal(0-33) Southeast	1.00	EA	0	0	0	117,795,750	117,795,750	117795750
TOTAL Transp/Disposal(0-33) Southeast	2355915	TNS	0	0	0	117,795,750	117,795,750	50.00
Sediment Sample & Analysis								
Analytical costs for Disposal								
Total PCB's - Sediment Assume 1 test/1000 tns	5919.91	EA	0	0	0	887,986	887,986	150.00
Total TCLP Assume 1 test/10000 tns	591.63	EA	0	0	0	709,959	709,959	1200.00
Paint Filter Test Assume 1 test/1000 tns	5919.91	EA	0	0	0	118,398	118,398	20.00

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Duplicates	296.00	EA	0	0	0	44,399	44,399	150.00
Assume 5% of Total PCB's								
Quality Assurance	296.00	EA	0	0	0	44,399	44,399	150.00
Assume 5% of Total PCB's								
TOTAL Analytical costs for Disposal	3913060	BCY	0	0	0	1,805,143	1,805,143	0.46
TOTAL Analytical costs for Disposal			0	0	0	1,805,143	1,805,143	
TOTAL Sediment Sample & Analysis	5555378	TNS	0	0	0	1,805,143	1,805,143	0.32
TOTAL Transport/Landfill Fee	3913060	BCY	5,058,356	1,988,807	0	399,485,645	406,532,808	103.89
Water Treatment (operation)								
Water Treatment Process								
O&M at North Plant								
Wastewater Treatment Operator	16800	HR	544,764	0	0	0	544,764	32.43
Laborer	16800	HR	741,782	0	0	0	741,782	44.15
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	49.00	MON	0	0	108,197	0	108,197	2208.10
O&M Phone usage	49.00	MO	0	0	3,607	0	3,607	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	428397	LB	0	0	56,756	0	56,756	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants .0001671b/gal	1052104	LB	0	0	175,320	0	175,320	0.17
TOTAL O&M at North Plant	********	GAL	1,286,546	674	343,880	0	1,631,100	0.00
O&M at South Plant								
Wastewater Treatment Operator	1679.99	HR	54,476	0	0	0	54,476	32.43
Laborer	1679.99	HR	74,178	0	0	0	74,178	44.15
Lawn Mower	1.00	EA	0	674	0	0	674	673.61
O&M Electrical Usage	49.00	MON	0	0	108,197	0	108,197	2208.10
O&M Phone usage	49.00	MO	0	0	3,607	0	3,607	73.60
HTRW, acid-base neut, sulfuric acid, 750# drummed liquid .000068#/gal	7479.94	LB	0	0	991	0	991	0.13
HTRW, pri trtmt, aluminum sulfate (al), bulk, primary coagulants 110,000,000gal x .0001671b/gal = 18,3701bs	18370	LB	0	0	3,061	0	3,061	0.17

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ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL O&M at South Plant	********	GAL	128,655	674	115,855	0	245,184	0.00
TOTAL Water Plant Operation			1,415,201	1,347	459,735	0	1,876,283	
TOTAL Water Treatment Process	1.00	EA	1,415,201	1,347	459,735	0	1,876,283	1876283.37
Effluent Monitoring								
Total Suspended Solids assume 1 test per 25000 gallons	140.00	EA	0	0	0	4,428	4,428	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	140.00	EA	0	0	0	11,512	11,512	82.22
COD assume 1 test per 25000 gallons	140.00	EA	0	0	0	3,011	3,011	21.51
PCB assume 1 test/25000 gallons	140.00	EA	0	0	0	26,565	26,565	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	140.00	EA	0	0	0	35,420	35,420	253.00
Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	32,764	32,764	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	60,214	60,214	430.10
TOTAL Discharge at Southern Facility	140.00	EA	0	0	0	173,912	173,912	1242.23
Total Suspended Solids assume 1 test per 25000 gallons	140.00	EA	0	0	0	4,428	4,428	31.63
BOD (immunoassay) Assume 1 test per 25000 gallons	140.00	EA	0	0	0	11,512	11,512	82.22
COD assume 1 test per 25000 gallons	140.00	EA	0	0	0	3,011	3,011	21.51
PCB assume 1 test/25000 gallons	140.00	EA	0	0	0	26,565	26,565	189.75
Metals (Priority Pollutant -13) assume 1 test per 25000 gallons	140.00	EA	0	0	0	35,420	35,420	253.00
Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	32,764	32,764	234.03
Semi Volatile Organics assume 1 test per 25000 gallons	140.00	EA	0	0	0	60,214	60,214	430.10
TOTAL Discharge at Northern Facility	140.00	EA	0	0	0	173,912	173,912	1242.23
TOTAL Effluent Monitoring	1.00	EA	0	0	0	347,824	347,824	347824.40

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Sludge Disposal								
TOTAL Sludge Disposal	1.00	EA	0	0	0	0	0	0.00
Chemical(flocculation Agent etc)								
TOTAL Chemical(flocculation Agent etc)	1.00	EA	0	0	0	0	0	0.00
TOTAL Water Treatment (operation)	1.00	EA	1,415,201	1,347	459,735	347,824	2,224,108	2224107.77
Backfilling								
Material 1 (topsoil type)								
Material 1 (topsoil type)								
Fine	343216	TNS	0	0	0	4,983,496	4,983,496	14.52
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,983,496	4,983,496	4983496.32
TOTAL Material 1 (topsoil type)	1.00	EA	0	0	0	4,983,496	4,983,496	4983496.32
TOTAL Material 1 (topsoil type)	343216	TNS	0	0	0	4,983,496	4,983,496	14.52
Material 2 (sand, gravel)								
Material 2 (sand, gravel)								
Fine Cement Sand (at Plant)	863579	TNS	0	0	0	7,314,514	7,314,514	8.47
Graded Gravel (at Plant)	863579	TNS	0	0	0	7,314,514	7,314,514	8.47
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	14,629,028	14,629,028	14629028.26
TOTAL Material 2 (sand, gravel)	1.00	EA	0	0	0	14,629,028	14,629,028	14629028.26
TOTAL Material 2 (sand, gravel)	1727158	TNS	0	0	0	14,629,028	14,629,028	8.47
Material Verification Testing								
Material Verification Testing								
Material Testing	1.00	LS	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00
TOTAL Material Verification Testing	1.00	EA	0	0	0	12,100	12,100	12100.00

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TRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Transportation to River								
Truck Cycle Times-North Facility					** OVERTIME **			
Laborer (Hopper tender)	7702.28	HR	368,094	0	0	0	368,094	47.79
Outside Truck Drivers, Heavy	53916	HR	2,402,905	0	0	0	2,402,905	44.57
TRLR,END DUMP, 20CY, 24T (ADD TOWING TRUCK)	53916	HR	0	611,969	0	0	611,969	11.35
TRK,HWY, 43,220 GVW, 6X4, 3 AXLE	53916	HR	0	1,707,616	0	0	1,707,616	31.67
TOTAL Truck Cycle Times-North Facility	1478838	BCY	2,770,999	2,319,585	0	0	5,090,584	3.44
TOTAL Truck Cycle Times			2,770,999	2,319,585	0	0	5,090,584	
TOTAL Transportation to River	1478838	BCY	2,770,999	2,319,585	0	0	5,090,584	3.44
Barge Loading								
Loader Cycle Time - North Site					** OVERTIME **			
LDR,FE, WH, 5.00 CY, ARTIC, 970F	6576.50	HR	0	517,571	0	0	517,571	78.70
Outside Equip. Operators, Heavy	6576.50	HR	420,128	0	0	0	420,128	63.88
Laborer	13153	HR	628,585	0	0	0	628,585	47.79
SMALL TOOLS	13153	HR	0	25,368	0	0	25,368	1.93
TOTAL Loader Cycle Time - North Site	1478838	BCY	1,048,713	542,939	0	0	1,591,652	1.08
TOTAL Barge Loading	1.00	EA	1,048,713	542,939	0	0	1,591,652	1591652.07
TOTAL Barge Loading	1478838	BCY	1,048,713	542,939	0	0	1,591,652	1.08
Barging to Backfill Site								
Reach 1					** OVERTIME **			
Deckhand for Tug	3729.24	HR	178,267	0	0	0	178,267	47.80
Boat Captain	3729.24	HR	211,343	0	0	0	211,343	56.67
500 TO 800 Hp TUG BOAT	3729.24	HR	0	293,883	0	0	293,883	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	5966.78	HR	0	109,595	0	0	109,595	18.37
Per Diem for tug crew	745.85	MDY	0	0	0	66,016	66,016	88.51
Spare Tug Crew	745.85	HR	77,925	61,205	0	0	139,130	186.54
Spare Tug Crew Per Diem days	150.00	MDY	0	0	0	13,277	13,277	88.51
TOTAL Reach 1	92995	BCY	467,535	464,683	0	79,293	1,011,511	- 10.88

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HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Reach 2					** OVERTIME **			
Deckhand for Tug	25227	HR	1,205,925	0	0	0	1,205,925	47.80
Boat Captain	25227	HR	1,429,674	0	0	0	1,429,674	56.67
500 TO 800 Hp TUG BOAT	25227	HR	0	1,988,036	0	0	1,988,036	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	36039	HR	0	661,945	0	0	661,945	18.37
Per Diem for tug crew	5045.44	MDY	0	0	0	446,580	446,580	88.51
Spare Tug Crew	3603.89	HR	376,530	295,739	0	0	672,269	186.54
Spare Tug Crew Per Diem days	720.00	MDY	0	0	0	63,728	63,728	88.51
TOTAL Reach 2	449346	BCY	3,012,128	2,945,720	0	510,308	6,468,156	14.39
Reach 3					** OVERTIME **			
Deckhand for Tug	41019	HR	1,960,831	0	0	0	1,960,831	47.80
Boat Captain	41019	HR	2,324,646	0	0	0	2,324,646	56.67
500 TO 800 Hp TUG BOAT	41019	HR	0	3,232,541	0	0	3,232,541	78.81
DREDGE BARGE, 100 - 400 TON (90.7 - 362.9 MT)	48711	HR	0	894,691	0	0	894,691	18.37
Per Diem for tug crew	8203.88	MDY	0	0	0	726,137	726,137	88.51
Spare Tug Crew	2563.71	HR	267,853	210,381	0	0	478,235	186.54
Spare Tug Crew Per Diem days	512.00	MDY	0	0	0	45,318	45,318	88.51
TOTAL Reach 3	319653	BCY	4,553,330	4,337,614	0	771,455	9,662,399	30.23
TOTAL Barging for Shallow Backfill	861994	BCY	8,032,993	7,748,017	0	1,361,056	17,142,066	19.89
Reach 1					** OVERTIME **			
Deckhand for Tug	762.48	HR	36,448	0	0	0	36,448	47.80
Boat Captain	762.48	HR	43,211	0	0	0	43,211	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	762.48	HR	0	119,753	0	0	119,753	157.06
DREDGE BARGE, 1000 TON	1524.96	HR	0	57,421	0	0	57,421	37.65
Per Diem for tug crew	152.50	MDY	0	0	0	13,498	13,498	88.51
Spare Tug Crew	381.24	HR	39,831	31,285	0	0	71,116	186.54
Spare Tug Crew Per Diem days	76.00	MDY	0	0	0	6,727	6,727	88.51
TOTAL Reach 1	66547	BCY	119,491	208,460	0	20,225	348,175	5.23
Reach 2					** OVERTIME **			
Deckhand for Tug	3684.25	HR	176,117	0	0	0	176,117	47.80
Boat Captain	3684.25	HR	208,794	0	0	0	208,794	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	3684.25	HR	0	578,641	0	0	578,641	157.06
DREDGE BARGE, 1000 TON	9210.64	HR	0	346,821	0	0	346,821	37.65
Per Diem for tug crew	736.85	MDY	0	0	0	65,220	65,220	88.51
Spare Tug Crew	1842.13	HR	192,463	151,167	0	0	343,630	186.54
Spare Tug Crew Per Diem days	368.00	MDY	0	0	0	32,572	32,572	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Reach 2	321551	BCY	577,373	1,076,628	0	97,792	1,751,794	5.45
Reach 3					** OVERTIME **			
Deckhand for Tug	6552.21	HR	313,212	0	0	0	313,212	47.80
Boat Captain	6552.21	HR	371,326	0	0	0	371,326	56.67
INLAND TUG, 44' X 14', INCL RADAR & 8 KW GEN SET	6552.21	HR	0	1,029,074	0	0	1,029,074	157.06
DREDGE BARGE, 1000 TON	10484	HR	0	394,751	0	0	394,751	37.65
Per Diem for tug crew	1310.44	MDY	0	0	0	115,989	115,989	88.51
Spare Tug Crew	1310.44	HR	136,913	107,536	0	0	244,450	186.54
Spare Tug Crew Per Diem days	262.00	MDY	0	0	0	23,190	23,190	88.51
TOTAL Reach 3	228743	BCY	821,451	1,531,361	0	139,179	2,491,992	10.89
TOTAL Barging for Deep Backfill	616842	BCY	1,518,316	2,816,449	0	257,196	4,591,961	7.44
TOTAL Barging to Backfill Site	1478838	BCY	9,551,309	10,564,466	0	1,618,252	21,734,027	14.70
Material Placement (Fines)								
Backfill - Fines					** OVERTIME **			
Deckhand for Dredge	6741.67	HR	332,096	0	0	0	332,096	49.26
Dredge Engineer	3370.83	HR	217,858	0	0	0	217,858	64.63
Oiler	3370.83	HR	169,812	0	0	0	169,812	50.38
Excavator Dredge Operator	3370.83	HR	251,862	0	0	0	251,862	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	2696.67	HR	0	372,866	0	0	372,866	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	674.17	HR	0	23,755	0	0	23,755	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	3370.83	HR	0	27,906	0	0	27,906	8.28
SMALL TOOLS	3370.83	HR	0	6,501	0	0	6,501	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	3370.83	HR	0	28,486	0	0	28,486	8.45
Command/Control System	3370.83	HR	0	65,157	0	0	65,157	19.33
Per Diem	2106.77	MDY	0	0	0	186,473	186,473	88.51
TOTAL Backfill - Fines	245154	BCY	971,629	524,672	0	186,473	1,682,774	6.86
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill - Fines			971,629	524,672	0	186,473	1,682,774	

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Material Placement (Fines)	245154	BCY	971,629	524,672	0	186,473	1,682,774	6.86
Material Placement (Material 2)								
Shallow Draft Backfilling					** OVERTIME **			
Deckhand for Dredge	9894.51	HR	487,406	0	0	0	487,406	49.26
Dredge Engineer	4947.26	HR	319,743	0	0	0	319,743	64.63
Oiler	4947.26	HR	249,228	0	0	0	249,228	50.38
Excavator Dredge Operator	4947.26	HR	369,649	0	0	0	369,649	74.72
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	3957.80	HR	0	547,242	0	0	547,242	138.27
HYD EXCAV, CRWLR, 3.50 CY BKT, MASS BOOM	989.45	HR	0	34,864	0	0	34,864	35.24
WORK BARGE-S,MED DUTY,60'X16'X5'	4947.26	HR	0	40,957	0	0	40,957	8.28
SMALL TOOLS	4947.26	HR	0	9,542	0	0	9,542	1.93
Environmental Bucket Capital cost of bucket is approx. $30,500 + $4000 for seals = $34,500. Bucket of similar value was selected.	4947.26	HR	0	41,808	0	0	41,808	8.45
Command/Control System	4947.26	HR	0	95,629	0	0	95,629	19.33
Per Diem	3092.03	MDY	0	0	0	273,681	273,681	88.51
TOTAL Shallow Draft Backfilling	616842	BCY	1,426,026	770,042	0	273,681	2,469,749	4.00
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Shallow Draft Backfilling			1,426,026	770,042	0	273,681	2,469,749	
Backfill Reach 1					** OVERTIME **			
Deckhand for Dredge	7067.63	HR	348,153	0	0	0	348,153	49.26
Dredge Engineer	3533.81	HR	228,392	0	0	0	228,392	64.63
Oiler	3533.81	HR	178,023	0	0	0	178,023	50.38
Excavator Dredge Operator	3533.81	HR	264,039	0	0	0	264,039	74.72
HYD EXCAV, CRWLR, 4.75 CY BKT	2827.05	HR	0	638,330	0	0	638,330	225.79
HYD EXCAV, CRWLR, 4.75 CY BKT 5.00 CY BKT	706.76	HR	0	41,245	0	0	41,245	58.36
WORK BARGE-S,MED DUTY,60'X16'X5'	3533.81	HR	0	29,255	0	0	29,255	8.28
SMALL TOOLS	3533.81	HR	0	6,816	0	0	6,816	1.93
Environmental Bucket Capital cost of bucket is approx. $45,300 + $4000 for seals = $49,300. Bucket of similar value was selected from database.	3533.81	HR	0	43,203	0	0	43,203	12.23
Command/Control System	3533.81	HR	0	68,308	0	0	68,308	19.33
Per Diem	2208.63	MDY	0	0	0	195,489	195,489	88.51

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Backfill Reach 1	616842	BCY	1,018,607	827,157	0	195,489	2,041,254	3.31
TOTAL Backfill Reach 2	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Backfill Reach 3	1000.00	BCY	0	0	0	0	0	0.00
TOTAL Deep Draft Backfilling			1,018,607	827,157	0	195,489	2,041,254	
TOTAL Material Placement (Material 2)	1233684	BCY	2,444,633	1,597,199	0	469,170	4,511,002	3.66
Turbidity Curtain/Resuspension								
Shallow Turbidity Control					** OVERTIME **			
Turbidity Barrier Complete	1.00	EA	0	0	14,081	0	14,081	14080.62
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Shallow Turbidity Control	1.00	CRW	376,107	163,762	14,081	0	553,949	553949.17
Deep Turbidity Control					** OVERTIME **			
Turbidity Barrier	2000.00	LF	0	0	36,610	0	36,610	18.30
Anchoring System	40.00	EA	0	0	13,517	0	13,517	337.93
Mooring Buoy Light w/Photocell	20.00	EA	0	0	3,520	0	3,520	176.01
Freight to Site	1.00	EA	0	0	0	0	0	0.00
BOAT, 21' L-GIANT,TRIHULL, 2800#	3599.99	HR	0	163,068	0	0	163,068	45.30
SMALL TOOLS	360.00	HR	0	694	0	0	694	1.93
Deckhand for Tug	3599.99	HR	172,089	0	0	0	172,089	47.80
Boat Captain	3599.99	HR	204,018	0	0	0	204,018	56.67
TOTAL Deep Turbidity Control	1.00	CRW	376,107	163,762	53,647	0	593,516	593515.71
TOTAL Turbidity Control			752,213	327,524	67,728	0	1,147,465	
TOTAL Turbidity Curtain/Resuspension	1.00	EA	752,213	327,524	67,728	0	1,147,465	1147464.88
TOTAL Backfilling	1478838	BCY	17,539,496	15,876,385	67,728	21,898,520	55,382,129	37.45

ITRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Habitat & Vegetation Restoration								
Shallow River Restoration-Crit Critical area with shallow river restoration. Information from TAMS	37.00	AC	0	0	0	1,221,000	1,221,000	33000.00
Emergent Wetland Restoration-C Critical area with emergent wetland restoration. Information from TAMS	37.00	AC	0	0	0	296,000	296,000	8000.00
Shallow River Restoration-Add Additional area with shallow river restoration. Information from TAMS	114.00	AC	0	0	0	3,762,000	3,762,000	33000.00
TOTAL Habitat & Vegetation Restoration			0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration			0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration			0	0	0	5,279,000	5,279,000	
TOTAL Habitat & Vegetation Restoration	188.00	AC	0	0	0	5,279,000	5,279,000	28079.79
River Bank Restoration								
Shoreline Protect <2'-Hydroseed								
Shoreline Protection <2'						** OVERTIME **		
Assume production rate to be slower than applying material on land due to mobilization and down time between sites. Assume a 30% reduction in production from an average production rate of 8900sy/day. Therefore 8900sy/day x .7 = 6230sy/day/10hrs/day = 623sy/hr...say 625sy/hr								
Boat Captain	330.67	HR	19,591	0	0	0	19,591	59.25
Deckhand	330.67	HR	17,029	0	0	0	17,029	51.50
Outside Equip. Operators, Heavy	330.67	HR	22,084	0	0	0	22,084	66.79
Laborer	330.67	HR	16,521	0	0	0	16,521	49.96
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	330.67	HR	0	6,085	0	0	6,085	18.40
WORK FLOAT, MED DUTY, 20'X 8'X2'	330.67	HR	0	536	0	0	536	1.62
Hydroseeder	330.67	HR	0	3,564	0	0	3,564	10.78
SMALL TOOLS	330.67	HR	0	667	0	0	667	2.02
Seed, Mulch, Fertlizer	206667	SY	0	0	76,057	0	76,057	0.37
TOTAL Shoreline Protection <2'	206667	SY	75,226	10,851	76,057	0	162,133	0.78

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protect <2'-Hydroseed			75,226	10,851	76,057	0	162,133	
TOTAL Shoreline Protect <2'-Hydroseed	93000	LF	75,226	10,851	76,057	0	162,133	1.74
Shoreline Protect 2'-3' Mat								
Shoreline Protection 2'-3'					** OVERTIME **			
Assume a 50% reduction in production due to site accessibility, underwater work, and travel between sites. Therefore, 2400sy/day x .5 = 1200sy/day/10hr/day = 120sy/hr								
Boat Captain	925.93	HR	43,367	0	0	0	43,367	46.84
Deckhand	925.93	HR	37,695	0	0	0	37,695	40.71
Labor Foreman	925.93	HR	37,119	0	0	0	37,119	40.09
Laborer	2777.78	HR	109,711	0	0	0	109,711	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	925.93	HR	0	13,470	0	0	13,470	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	925.93	HR	0	1,186	0	0	1,186	1.28
SMALL TOOLS	925.93	HR	0	1,476	0	0	1,476	1.59
Staples	74074	EA	0	0	6,896	0	6,896	0.09
Erosion Control Mat w/seeds	111111	SY	0	0	168,088	0	168,088	1.51
Waders for workers	3.00	EA	0	0	698	0	698	232.74
TOTAL Shoreline Protection 2'-3'	111111	SY	227,892	16,131	175,682	0	419,706	3.78
TOTAL Shoreline Protect 2'-3' Mat			227,892	16,131	175,682	0	419,706	
TOTAL Shoreline Protect 2'-3' Mat	50000	LF	227,892	16,131	175,682	0	419,706	8.39
Shoreline Protect >3' Logs								
Shoreline Protection >3'					** OVERTIME **			
Assume 50% reduction in productivity due to site accessibility, underwater work, and travel between sites. Therefore, 2500lf/day * .50 = 1250lf/day/10hr/day = 125lf/hr								
Boat Captain	256.00	HR	11,990	0	0	0	11,990	46.84
Deckhand	256.00	HR	10,422	0	0	0	10,422	40.71
Labor Foreman	256.00	HR	10,263	0	0	0	10,263	40.09
Laborer	768.00	HR	30,333	0	0	0	30,333	39.50
WORKBOAT,TRKABLE,20.25'X 8'X3' WITH PILOT HOUSE & PUSH KNEES	256.00	HR	0	3,724	0	0	3,724	14.55
WORK FLOAT, MED DUTY, 20'X 8'X2'	256.00	HR	0	328	0	0	328	1.28
SMALL TOOLS	256.00	HR	0	408	0	0	408	1.59
Stakes	21333	EA	0	0	12,413	0	12,413	0.58
Biologs - 12" dia	32000	LF	0	0	186,190	0	186,190	5.82
BioLogs - 16" dia	32000	LF	0	0	223,428	0	223,428	6.98
TOTAL Shoreline Protection >3'	32000	LF	63,008	4,460	422,031	0	489,498	15.30

HTRW/Remediation/Construction	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Shoreline Protect >3' Logs			63,008	4,460	422,031	0	489,498	
TOTAL Shoreline Protect >3' Logs	32000	LF	63,008	4,460	422,031	0	489,498	15.30
TOTAL River Bank Restoration	173773	LF	366,125	31,442	673,770	0	1,071,337	6.17
Construction Monitoring								
Construction Management								
Field Office Labor Requirements								
Project Manager	14400	HR	1,314,924	0	0	0	1,314,924	91.31
Engineers, Project	14400	HR	918,642	0	0	0	918,642	63.79
Inspectors	14400	HR	424,886	0	0	0	424,886	29.51
Engineers, Quality Control	14400	HR	698,979	0	0	0	698,979	48.54
Clerks, Typists, Bookkeepers & Receptionist	11520	HR	299,919	0	0	0	299,919	26.03
Per Diem 5men/10hr/day = .5 multiplier	7199.98	MDY	0	0	0	526,678	526,678	73.15
Air Fare (Round Trip) 5 men/3wks = 1.67 multiplier	400.80	EA	0	0	0	200,399	200,399	500.00
TOTAL Field Office Labor Requirements			3,657,349	0	0	727,078	4,384,427	
Field Equipment Requirements								
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	64.00	MO	0	15,443	0	0	15,443	241.29
TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	64.00	MO	0	95,341	0	0	95,341	1489.70
BOAT, 21' L-GIANT,TRIHULL, 2800#	32914	HR	0	82,695	0	0	82,695	2.51
TOTAL Field Equipment Requirements	64.00	MO	0	193,478	0	0	193,478	3023.10
TOTAL Construction Management			3,657,349	193,478	0	727,078	4,577,905	
TOTAL Construction Management			3,657,349	193,478	0	727,078	4,577,905	
TOTAL Construction Monitoring	48.00	MON	3,657,349	193,478	0	727,078	4,577,905	95373.03
TOTAL HTRW/Remediation/Construction	3913060	BCY	136,696,220	86,988,565	9,878,512	509,134,573	712,697,871	182.13

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) & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
O & M								
Weekly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	2002.00	HR	138,803	0	0	0	138,803	69.33
Sampling Technician	2002.00	HR	85,238	0	0	0	85,238	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	1820.00	HR	0	24,761	0	0	24,761	13.60
Jon boat w/ Carrier and misc eqp	1.00	EA	0	1,347	0	0	1,347	1347.23
TOTAL Labor/Equipment	1820.00	HR	224,041	26,108	0	0	250,149	137.44
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	416.00	EA	0	0	110,228	0	110,228	264.97
Total Suspended Solids	416.00	EA	0	0	15,309	0	15,309	36.80
Fraction Organic Carbon On TSS	416.00	EA	0	0	30,619	0	30,619	73.60
TOTAL Analytical	416.00	EA	0	0	156,157	0	156,157	375.38
TOTAL Weekly Field Sampling (1 YR)	52.00	WKS	224,041	26,108	157,629	0	407,778	7841.89
Monthly Field Sampling (1 YR)								
Labor/Equipment								
Chemist	528.00	HR	36,607	0	0	0	36,607	69.33
Sampling Technician	528.00	HR	22,480	0	0	0	22,480	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	528.00	HR	0	7,183	0	0	7,183	13.60
TOTAL Labor/Equipment	480.00	HR	59,088	7,183	0	0	66,271	138.07
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	60.00	EA	0	0	15,898	0	15,898	264.97
Total Suspended Solids	60.00	EA	0	0	2,208	0	2,208	36.80
Fraction Organic Carbon On TSS	60.00	EA	0	0	4,416	0	4,416	73.60

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
TOTAL Analytical	60.00	EA	0	0	22,523	0	22,523	375.38
TOTAL Monthly Field Sampling (1 YR)	12.00	MO	59,088	7,183	23,995	0	90,266	7522.15
Suspended Solids Monitoring(1YR)								
Labor/Equipment								
Chemist	960.00	HR	66,559	0	0	0	66,559	69.33
Chemist, Jr.	1920.00	HR	117,433	0	0	0	117,433	61.16
Sampling Technician	1920.00	HR	81,747	0	0	0	81,747	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	960.00	HR	0	13,061	0	0	13,061	13.60
Jon Boat Cost included in float surveys	2.00	EA	0	0	0	0	0	0.00
TOTAL Labor/Equipment	4.00	QTR	265,738	13,061	0	0	278,799	69699.80
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Total Suspended Solids	1144.00	EA	0	0	42,101	0	42,101	36.80
Fraction Organic Carbon On TSS	1144.00	EA	0	0	84,202	0	84,202	73.60
TOTAL Analytical	4.00	QTR	0	0	126,303	0	126,303	31575.79
TOTAL Suspended Solids Monitoring(1YR)	1.00	YR	265,738	13,061	127,775	0	406,574	406574.42
Float Surveys (1 YR)								
Labor/Equipment								
Chemist	288.00	HR	19,968	0	0	0	19,968	69.33
Chemist, Jr.	576.00	HR	35,230	0	0	0	35,230	61.16
Sampling Technician	1152.00	HR	49,048	0	0	0	49,048	42.58
TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	864.00	HR	0	11,755	0	0	11,755	13.60
Jon Boat with carriers/misc eqp cost of one boat included with weekly monitoring	2.00	EA	0	2,694	0	0	2,694	1347.23
TOTAL Labor/Equipment	4.00	QTR	104,246	14,449	0	0	118,695	29673.70

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,472	0	1,472	1472.06
TOTAL Materials			0	0	1,472	0	1,472	
Analytical								
Congener Specific PCB's	968.00	EA	0	0	256,493	0	256,493	264.97
Total Suspended Solids	968.00	EA	0	0	35,624	0	35,624	36.80
Fraction Organic Carbon On TSS	968.00	EA	0	0	71,248	0	71,248	73.60
TOTAL Analytical	4.00	QTR	0	0	363,364	0	363,364	90841.11
TOTAL Float Surveys (1 YR)	1.00	YR	104,246	14,449	364,837	0	483,531	483531.30
Core Sampling-1,4,9,14,19,24								
Labor/Equipment Upper Hudson								
Chemist	63.00	HR	3,453	0	0	0	3,453	54.81
Chemist, Jr.	63.00	HR	3,046	0	0	0	3,046	48.35
Sampling Technician	63.00	HR	2,120	0	0	0	2,120	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	63.00	HR	0	2,371	0	0	2,371	37.63
TOTAL Labor/Equipment Upper Hudson	60.00	HR	8,619	2,371	0	0	10,990	183.17
Labor/Equipment Lower Hudson								
Chemist	81.90	HR	4,489	0	0	0	4,489	54.81
Chemist, Jr.	81.90	HR	3,960	0	0	0	3,960	48.35
Sampling Technician	81.90	HR	2,757	0	0	0	2,757	33.66
BOAT, 19' L-GIANT,TRIHULL, 2400#	81.90	HR	0	3,082	0	0	3,082	37.63
TOTAL Labor/Equipment Lower Hudson	78.00	HR	11,205	3,082	0	0	14,287	183.17
Materials								
Sampling Equipment/Materials	1.00	LS	0	0	1,164	0	1,164	1163.69
TOTAL Materials			0	0	1,164	0	1,164	
Analytical								
Congener Specific PCB's	315.00	EA	0	0	65,981	0	65,981	209.46
Cesium - 137/Beryllium -7	315.00	EA	0	0	27,492	0	27,492	87.28
Organic Carbon	315.00	EA	0	0	18,328	0	18,328	58.18
TOTAL Analytical	300.00	EA	0	0	111,801	0	111,801	372.67

Tue 28 Nov 2000 TAMS Consultants, Inc. TIME 18:35:08
Eff. Date 04/01/00 PROJECT HUD00S: HUDSON RIVER PCB 2000 R-11/21/00 - Dredging of Hudson River to
DETAILED ESTIMATE Hudson River PCB DETAIL PAGE 505
66. Alt Hydraulic Dredging 0/0/3Sel

O & M	QUANTY	UOM	LABOR	EQUIPMNT	MATERIAL	SUBCONTR	TOTAL COST	UNIT COST
Geophysical Surveys 0/0/3 (d)								
Labor/Equipment								
Chemist	1170.00	HR	81,119	0	0	0	81,119	69.33
Survey Crew	117.00	DAY	480,720	0	0	0	480,720	4108.72
Post Processing	204.75	HR	23,660	0	0	0	23,660	115.56
Per Diem	117.00	DAY	0	0	46,503	0	46,503	397.46
Mob/Demob	1.00	EA	3,595	0	0	0	3,595	3595.13
TOTAL Labor/Equipment	1170.00	HR	589,094	0	46,503	0	635,597	543.25
TOTAL Geophysical Surveys 0/0/3 (d)	117.00	DAY	589,094	0	46,503	0	635,597	5432.45
TOTAL O & M	1.00	EA	1,596,019	91,249	1,008,753	650,000	3,346,021	3346021.14
TOTAL Alt Hydraulic Dredging 0/0/3Sel	3913060	BCY	111,995,290	87,796,794	18,098,086	520,284,573	738,174,743	188.64
TOTAL HUDSON RIVER PCB 2000 R-11/21/00			758,508,763	590,429,937	118,443,119	3068733624	4536115443	