

Component	Description	Quantity	Units	Unit Cost	Total Cost	Additional Notes	
A. PRE-CONSTRUCTION AND SITE PREPARATION and FIELD OVERSITE							
A-1	Permits	Permits, Work Plan, CQA Plan, SHSO Plan	1	LS	\$30,000	\$30,000	Per KF Est. of 6/8/09
A-2	Submittals	Pre-Construction Submittals	1	LS	\$50,000	\$50,000	
A-3	Non-Engineering Measures	Permanent Signage	1	LS	\$5,000	\$5,000	
A-4	Non-Engineering Measures	Permanent Fencing	500	LF	\$25	\$12,500	1 Area
A-5	Erosion Control	Silt Fence & Hay Bales	4,000	LF	\$7	\$28,000	ECC and CWA
A-6	Drying Bed Construction	Field Construction	1	Each	\$75,000	\$75,000	
A-7	Construction Field Staff / CQC	Field Crew	2	Month	\$45,000	\$90,000	
A-8	Survey - In Water and On Shore	RTK Survey / Field Survey	2	Month	\$10,000	\$20,000	
A-9	Mobilization / Demobilization	Mob / Demob of Equipment	1	LS	\$75,000	\$75,000	
A-10	Site Security	Off duty hours	2	Month	\$25,000	\$50,000	
A-11	Soil Characterizations	Analytical Sampling	1	LS	\$25,000	\$25,000	
A-12	Clearing/Grubbing/Reclamation	Seed / Mulch / Trees	2.5	Ac	\$50,000	\$125,000	
A-13	Temporary Facilities	Access Roads / Site Offices	1	LS	\$75,000	\$75,000	
B. DREDGING and DREDGE MATERIAL DISPOSAL							
B-1	Equipment/ Material Rehandling/ Dewatering/ Solidification/ Stabilization for Transport	Mechanical Excavation /Dredging Using Long Reach Excavator	2,529	CY	\$95	\$240,255	
B-2	Silt Curtain	Sediment Control Silt Curtain	1,500	LF	\$60	\$90,000	
B-3	Backfill	Material Cost (1.6 TN/CY)	4,046	TN	\$20	\$80,928	
B-4	Backfill	Placement Cost	4,046	TN	\$27	\$109,253	
B-5	Transportation and Disposal	Dredge Material Disposal - Non-Hazardous Waste (1.6 TN/CY)	3,712	TN	\$175	\$649,600	Per LD Quotes
B-6	Transportation and Disposal	Dredge Material Disposal - Hazardous Waste	334	TN	\$275	\$91,850	Per LD Quotes
B-7	Transportation and Disposal	Decant Water Management	126,450	GAL	\$0.50	\$63,225	Assumes 50 gallons/CY of water treated and discharged on-site
C. UPLAND EXCAVATION and MATERIAL DISPOSAL							
C-1	Soil Excavation		1,054	CY	\$15	\$15,810	
C-2	Soil Rehandling/Loading for Disposal		1,054	CY	\$4	\$4,216	
C-3	Backfill of Excavated Areas	Material Cost	1,686	TN	\$20	\$33,728	
C-4	Backfill of Excavated Areas	Backfill with Clean Material	1,686	TN	\$10	\$16,864	
C-5	Confirmatory Sampling	Analytical Sampling	0.28	Acre	\$15,000	\$4,139	
C-6	Transportation and Disposal	Excavated Soil Disposal - Non-Hazardous Waste	183	TN	\$175	\$32,025	Per LD Quotes
C-7	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste	1,503	TN	\$275	\$413,325	Per LD Quotes
C-8	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste that Requires Stabilization	0	TN	\$900	\$0	Per LD Quotes
D. COLD WASTE AREA							
D-1	Field Effort		1	LS	\$630,357	\$630,357	Per CWA Cost Est. 3-27-09
E. LONG TERM MONITORING and MAINTENANCE							
E-1	Long Term Monitoring and Maintenance	Various Media	1	LS	\$0	\$1,080,085	Per JS Cost Est. 5-19-09
					SUBTOTAL	\$4,216,160	
25% Contingency						\$1,054,040	
Remedial Design/ Completion Report			1	LS	\$225,000	\$225,000	
Plans/ Completion Report for CWA			1	LS	\$60,100	\$60,100	
Project Management / Construction Quality Assurance			2	Month	\$105,000	\$210,000	
					Revised Project Total	\$5,765,300	

NOTES AND ASSUMPTIONS:

- 4" of stone applied for road improvements
- Conversion factor of 1.60 Tons/CY used for sediments and soil
- Field Staff with per diems includes SUPT, SHSO, FE, QC, and Field Clerk
- No bond insurance included
- Silt fence, hay bales, and silt curtains used for erosion and sediment migration control
- Reclamation per local specifications, including tree planting @ 215 trees/acre; Includes topsoil placement
- Roads to be left in place
- Drying bed constructed of 6" of stone and 4" of asphalt; Removed following completion of the work
- Assumes 50 gallon of water/CY of sediment generated; Assumed treated and discharged on-site
- Assumes use of a long reach excavator to excavate sediments in areas after water level is lowered
- Assumes use of an excavator mounted on a barge for sediment removal in areas that can not be reached from shore
- Assumes work schedule is 10 hours/day for 5 days/week
- Costs expressed in 2010 dollars (escalation included)
- Site security assumed for non-work hours and weekends @ \$50/hour
- Analytical sampling costs included in post-remedial surveys and monitoring
- Assumes chain-link fencing with gates to be placed around the field office complex and drying beds
- Assumes use of a RTK surveying system to verify excavation elevations with topographic map of soil areas
- Site field office includes rental, electricity, potable water, and cell phone coverage
- Field work to be completed in one work season with reclamation

Component	Description	Quantity	Units	Unit Cost	Total Cost	Additional Notes	
A. PRE-CONSTRUCTION AND SITE PREPARATION and FIELD OVERSITE							
A-1	Permits	Permits, Work Plan, CQA Plan, SHSO Plan	1	LS	\$40,000	\$40,000 Per KF Est. of 6/8/09	
A-2	Submittals	Pre-Construction Submittals	1	LS	\$100,000	\$100,000	
A-3	Non-Engineering Measures	Permanent Signage	1	LS	\$5,000	\$5,000	
A-4	Non-Engineering Measures	Permanent Fencing	1,500	LF	\$25	\$37,500 2 Areas	
A-5	Erosion Control	Silt Fence & Hay Bales	6,000	LF	\$7	\$42,000 ECC and Factory Pond areas	
A-6	Drying Bed Construction	Field Construction	2	Each	\$75,000	\$150,000	
A-7	Construction Field Staff / CQC	Field Crew	6	Month	\$45,000	\$270,000	
A-8	Survey - In Water and On Shore	RTK Survey / Field Survey	6	Month	\$10,000	\$60,000	
A-9	Mobilization / Demobilization	Mob / Demob of Equipment	1	LS	\$100,000	\$100,000	
A-10	Site Security	Off duty hours	6	Month	\$25,000	\$150,000	
A-11	Soil Characterizations	Analytical Sampling	1	LS	\$50,000	\$50,000	
A-12	Clearing/Grubbing/Reclamation	Seed / Mulch / Trees	3	Ac	\$50,000	\$150,000	
A-13	Temporary Facilities	Temporary Dock and Access Roads / Site Offices	1	LS	\$100,000	\$100,000	
B. DREDGING and DREDGE MATERIAL DISPOSAL							
B-1	Equipment/ Material Rehandling/ Dewatering/ Solidification/ Stabilization for Transport	Mechanical Excavation /Dredging Using Long Reach Excavator	24,487	CY	\$95	\$2,326,265	
B-2	Silt Curtain	Sediment Control Silt Curtain	3,000	LF	\$60	\$180,000	
B-3	Backfill	Material Cost (1.6 TN/CY)	39,179	TN	\$20	\$783,584	
B-4	Backfill	Placement Cost	39,179	TN	\$27	\$1,057,838	
B-5	Transportation and Disposal	Dredge Material Disposal - Non-Hazardous Waste (1.6 TN/CY)	38,189	TN	\$175	\$6,683,075 Per LD Quotes	
B-6	Transportation and Disposal	Dredge Material Disposal - Hazardous Waste	990	TN	\$275	\$272,250 Per LD Quotes	
B-7	Transportation and Disposal	Decant Water Management	1,224,350	GAL	\$0.50	\$612,175 Assumes 50 gallons/CY of water treated and discharged on-site	
C. UPLAND EXCAVATION and MATERIAL DISPOSAL							
C-1	Soil Excavation		2,105	CY	\$15	\$31,575	
C-2	Soil Rehandling/Loading for Disposal		2,105	CY	\$4	\$8,420	
C-3	Backfill of Excavated Areas	Material Cost	3,368	TN	\$20	\$67,360	
C-4	Backfill of Excavated Areas	Backfill with Clean Material	3,368	TN	\$4	\$13,472	
C-5	Confirmatory Sampling	Analytical Sampling	0.85	Acre	\$15,000	\$12,750	
C-6	Transportation and Disposal	Excavated Soil Disposal - Non-Hazardous Waste	213	TN	\$175	\$37,275 Per LD Quotes	
C-7	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste	3,157	TN	\$275	\$868,175 Per LD Quotes	
C-8	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste that Requires Stabilization	0	TN	\$900	\$0 Per LD Quotes	
D. COLD WASTE AREA							
D-1	Field Effort		1	LS	\$630,357	\$630,357 Per CWA Cost Est. 3-27-09	
E. LONG TERM MONITORING and MAINTENANCE							
E-1	Long Term Monitoring and Maintenance	Various Media	1	LS	\$0	\$1,080,085 Per JS Cost Est. 5-19-09	
				SUBTOTAL	\$15,919,156		
25% Contingency					\$3,979,789		
Remedial Design/ Completion Report				1	LS	\$650,000	\$650,000
Plans/ Completion Report for CWA				1	LS	\$60,100	\$60,100
Project Management / Construction Quality Assurance				6	Month	\$105,000	\$630,000
Revised Project Total					\$21,239,046		

NOTES AND ASSUMPTIONS:

- 1 4" of stone applied for road improvements
- 2 Conversion factor of 1.60 Tons/CY used for sediments and soil
- 3 Field Staff with per diems includes SUPT, SHSO, FE, QC, and Field Clerk
- 4 No bond insurance included
- 5 Silt fence, hay bales, and silt curtains used for erosion and sediment migration control
- 6 Reclamation per local specifications, including tree planting @ 215 trees/acre; Includes topsoil placement
- 7 Roads to be left in place
- 8 Drying bed constructed of 6" of stone and 4" of asphalt; Removed following completion of the work
- 9 Assumes 50 gallon of water/CY of sediment generated; Assumed treated and discharged on-site
- 10 Assumes use of a long reach excavator to excavate sediments in areas after water level is lowered
- 11 Assumes use of an excavator mounted on a barge for sediment removal in areas that can not be reached from shore
- 12 Assumes work schedule is 10 hours/day for 5 days/week
- 13 Costs expressed in 2010 dollars (escalation included)
- 14 Site security assumed for non-work hours and weekends @ \$50/hour
- 15 Analytical sampling costs included in post-remedial surveys and monitoring
- 16 Assumes chain-link fencing with gates to be placed around the field office complex and drying beds
- 17 Assumes use of a RTK surveying system to verify excavation elevations with topographic map of soil areas
- 18 Site field office includes rental, electricity, potable water, and cell phone coverage
- 19 Field work to be completed in one work season with reclamation completed the following season

Component	Description	Quantity	Units	Unit Cost	Total Cost	Additional Notes	
A. PRE-CONSTRUCTION AND SITE PREPARATION and FIELD OVERSITE							
A-1	Permits	Permits, Work Plan, CQA Plan, SHSO Plan	1	LS	\$40,000	\$40,000 Per KF Est. of 6/8/09	
A-2	Submittals	Pre-construction Submittals	1	LS	\$100,000	\$100,000	
A-3	Non-engineering Measures	Permanent Signage	1	LS	\$5,000	\$5,000	
A-4	Non-engineering Measures	Permanent Fencing	1,500	LF	\$25	\$37,500 2 Areas	
A-5	Erosion Control	Silt Fence and Hay Bales	6,000	LF	\$7	\$42,000 ECC and Factory Pond areas	
A-6	Drying Bed Construction	Field Construction	2	Each	\$75,000	\$150,000	
A-7	Construction Field Staff/CQC	Field Crew	8	Month	\$45,000	\$360,000	
A-8	Survey - In Water and On Shore	RTK Survey/Field Survey	8	Month	\$10,000	\$80,000	
A-9	Mobilization/Demobilization	Mob/Demob of Equipment	1	LS	\$100,000	\$100,000	
A-10	Site Security	Off-duty Hours	8	Month	\$25,000	\$200,000	
A-11	Soil Characterizations	Analytical Sampling	1	LS	\$50,000	\$50,000	
A-12	Clearing/Grubbing/Reclamation	Seed/Mulch/Trees	7	Ac	\$50,000	\$350,000	
A-13	Temporary Facilities	Temporary Dock and Access Roads/Site Offices	1	LS	\$120,000	\$120,000	
B. DREDGING and DREDGE MATERIAL DISPOSAL							
B-1	Equipment/Material	Mechanical Excavation	24,487	CY	\$95	\$2,326,265	
		Rehandling/Dewatering/Solidification /Stabilization for Transport					
B-2	Silt Curtain	Reach Excavator	3,000	LF	\$60	\$180,000	
		Sediment Control Silt Curtain					
B-3	Backfill	Material Cost (1.6 TN/CY)	39,179	TN	\$20	\$783,584	
B-4	Backfill	Placement Cost	39,179	TN	\$27	\$1,057,838	
B-5	Transportation and Disposal	Dredge Material Disposal - Non-hazardous Waste (1.6 TN/CY)	38,189	TN	\$175	\$6,683,040 Per LD Quotes	
B-6	Transportation and Disposal	Dredge Material Disposal - Hazardous Waste	990	TN	\$275	\$272,360 Per LD Quotes	
B-7	Transportation and Disposal	Decant Water Management	1,224,350	GAL	\$0.50	\$612,175 Assumes 50 gallons/CY of water treated and discharged on-site	
C. UPLAND EXCAVATION and MATERIAL DISPOSAL							
C-1	Soil Excavation		9,578	CY	\$15	\$143,670	
C-2	Soil Rehandling/Loading for Disposal		9,578	CY	\$4	\$38,312	
C-3	Backfill of Excavated Areas	Material Cost	15,325	TN	\$20	\$306,496	
C-4	Backfill of Excavated Areas	Backfill with Clean Material	15,325	TN	\$4	\$61,299	
C-5	Confirmatory Sampling	Analytical Sampling	5.80	Acre	\$15,000	\$87,000	
C-6	Transportation and Disposal	Excavated Soil Disposal - Non-hazardous Waste	4,989	TN	\$175	\$873,040 Per LD Quotes	
C-7	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste	10,338	TN	\$275	\$2,842,840 Per LD Quotes	
C-8	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste that Requires Stabilization	0	TN	\$900	\$0 Per LD Quotes	
D. COLD WASTE AREA							
D-1	Field Effort		1	LS	\$630,357	\$630,357 Per CWA Cost Est. 3-27-09	
E. LONG-TERM MONITORING and MAINTENANCE							
E-1	Long-term Monitoring and Maintenance	Various Media	1	LS	\$0	\$1,330,876 Per JS Cost Est. 5-19-09	
				SUBTOTAL	\$19,863,653		
25% Contingency					\$4,965,913		
Remedial Design/Completion Report				1	LS	\$650,000	\$650,000
Plans/Completion Report for CWA				1	LS	\$60,100	\$60,100
Project Management/Construction Quality Assurance				8	Month	\$105,000	\$840,000
Revised Project Total					\$26,379,666		

NOTES AND ASSUMPTIONS:

- 1 4 inches of stone applied for road improvements.
- 2 Conversion factor of 1.60 Tons/CY used for sediments and soil.
- 3 Field staff with per diems includes SUPT, SHSO, FE, QC, and Field Clerk.
- 4 No bond insurance included.
- 5 Silt fence, hay bales, and silt curtains used for erosion and sediment migration control.
- 6 Reclamation per local specifications, including tree planting @ 215 trees/acre; Includes topsoil placement.
- 7 Roads to be left in place.
- 8 Drying bed constructed of 6 inches of stone and 4 inches of asphalt. Removed following completion of the work.
- 9 Assumes 50 gallon of water/CY of sediment generated. Assumed treated and discharged on-site.
- 10 Assumes use of a long reach excavator to excavate sediments in areas after water level is lowered.
- 11 Assumes use of an excavator mounted on a barge for sediment removal in areas that can not be reached from shore.
- 12 Assumes work schedule is 10 hours/day for 5 days/week.
- 13 Costs expressed in 2010 dollars (escalation included).
- 14 Site security assumed for non-work hours and weekends @ \$50/hour.
- 15 Analytical sampling costs included in post-remedial surveys and monitoring.
- 16 Assumes chain-link fencing with gates to be placed around the field office complex and drying beds.
- 17 Assumes use of an RTK surveying system to verify excavation elevations with topographic map of soil areas.
- 18 Site field office includes rental, electricity, potable water, and cell phone coverage.
- 19 Field work to be completed in one work season with reclamation completed the following season.

Component	Description	Quantity	Units	Unit Cost	Total Cost	Additional Notes	
A. PRE-CONSTRUCTION AND SITE PREPARATION and FIELD OVERSITE							
A-1	Permits	Permits, Work Plan, CQA Plan, SHSO Plan	1	LS	\$40,000	\$40,000 Per KF Est. of 6/8/09	
A-2	Submittals	Pre-construction Submittals	1	LS	\$100,000	\$100,000	
A-3	Non-engineering Measures	Permanent Signage	1	LS	\$5,000	\$5,000	
A-4	Non-engineering Measures	Permanent Fencing	1,500	LF	\$25	\$37,500	2 Areas
A-5	Erosion Control	Silt Fence and Hay Bales	6,000	LF	\$7	\$42,000	ECC and Factory Pond areas
A-6	Drying Bed Construction	Field Construction	2	Each	\$75,000	\$150,000	
A-7	Construction Field Staff/CQC	Field Crew	8	Month	\$45,000	\$360,000	
A-8	Survey - In Water and On Shore	RTK Survey/Field Survey	8	Month	\$10,000	\$80,000	
A-9	Mobilization/Demobilization	Mob/Demob of Equipment	1	LS	\$100,000	\$100,000	
A-10	Site Security	Off-duty Hours	8	Month	\$25,000	\$200,000	
A-11	Soil Characterizations	Analytical Sampling	1	LS	\$50,000	\$50,000	
A-12	Clearing/Grubbing/Reclamation	Seed/Mulch/Trees	8	Ac	\$50,000	\$400,000	
A-13	Temporary Facilities	Temporary Dock and Access Roads/Site Offices	1	LS	\$120,000	\$120,000	
B. DREDGING and DREDGE MATERIAL DISPOSAL							
B-1	Equipment/Material	Mechanical	24,487	CY	\$95	\$2,326,265	
	Rehandling/Dewatering/Solidification/Stabilization for Transport	Excavation/Dredging Using Long Reach Excavator					
B-2	Silt Curtain	Sediment Control Silt Curtain	3,000	LF	\$60	\$180,000	
B-3	Backfill	Material Cost (1.6 TN/CY)	39,179	TN	\$20	\$783,584	
B-4	Backfill	Placement Cost	39,179	TN	\$27	\$1,057,838	
B-5	Transportation and Disposal	Dredge Material Disposal - Non-hazardous Waste (1.6 TN/CY)	38,189	TN	\$175	\$6,683,075	Per LD Quotes
B-6	Transportation and Disposal	Dredge Material Disposal - Hazardous Waste	990	TN	\$275	\$272,250	Per LD Quotes
B-7	Transportation and Disposal	Decant Water Management	1,224,350	GAL	\$0.50	\$612,175	Assumes 50 gallons/CY of water treated and discharged on-site
C. UPLAND EXCAVATION and MATERIAL DISPOSAL							
C-1	Soil Excavation		15,465	CY	\$15	\$231,975	
C-2	Soil Rehandling/Loading for Disposal		15,465	CY	\$4	\$61,860	
C-3	Backfill of Excavated Areas	Material Cost	24,744	TN	\$20	\$494,880	
C-4	Backfill of Excavated Areas	Backfill with Clean Material	24,744	TN	\$4	\$98,976	
C-5	Confirmatory Sampling	Analytical Sampling	5.80	Acre	\$15,000	\$87,000	
C-6	Transportation and Disposal	Excavated Soil Disposal - Non-hazardous Waste	12,653	TN	\$175	\$2,214,275	Per LD Quotes
C-7	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste	12,093	TN	\$275	\$3,325,575	Per LD Quotes
C-8	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste that Requires Stabilization	0	TN	\$900	\$0	Per LD Quotes
D. COLD WASTE AREA							
D-1	Field Effort		1	LS	\$630,357	\$630,357	Per CWA Cost Est. 3-27-09
E. LONG-TERM MONITORING and MAINTENANCE							
E-1	Long-term Monitoring and Maintenance	Various Media	1	LS	\$0	\$1,330,876	Per JS Cost Est. 5-19-09
					SUBTOTAL	\$22,075,461	
25% Contingency						\$5,518,865	
Remedial Design/Completion Report			1	LS	\$650,000	\$650,000	
Plans/Completion Report for CWA			1	LS	\$60,100	\$60,100	
Project Management/Construction Quality Assurance			8	Month	\$105,000	\$840,000	
					Revised Project Total	\$29,144,427	

NOTES AND ASSUMPTIONS:

- 1 4inches of stone applied for road improvements.
- 2 Conversion factor of 1.60 Tons/CY used for sediments and soil.
- 3 Field staff with per diems includes SUPT, SHSO, FE, QC, and Field Clerk.
- 4 No bond insurance included.
- 5 Silt fence, hay bales, and silt curtains used for erosion and sediment migration control.
- 6 Reclamation per local specifications, including tree planting @ 215 trees/acre; Includes topsoil placement.
- 7 Roads to be left in place.
- 8 Drying bed constructed of 6 inches of stone and 4 inches of asphalt. Removed following completion of the work.
- 9 Assumes 50 gallon of water/CY of sediment generated. Assumed treated and discharged on-site.
- 10 Assumes use of a long reach excavator to excavate sediments in areas after water level is lowered.
- 11 Assumes use of an excavator mounted on a barge for sediment removal in areas that can not be reached from shore.
- 12 Assumes work schedule is 10 hours/day for 5 days/week.
- 13 Costs expressed in 2010 dollars (escalation included).
- 14 Site security assumed for non-work hours and weekends @ \$50/hour.
- 15 Analytical sampling costs included in post-remedial surveys and monitoring.
- 16 Assumes chain-link fencing with gates to be placed around the field office complex and drying beds.
- 17 Assumes use of a RTK surveying system to verify excavation elevations with topographic map of soil areas.
- 18 Site field office includes rental, electricity, potable water, and cell phone coverage.
- 19 Field work to be completed in one work season with reclamation completed the following season.

Component	Description	Quantity	Units	Unit Cost	Total Cost	Additional Notes		
A. PRE-CONSTRUCTION AND SITE PREPARATION and FIELD OVERSITE								
A-1	Permits	Permits, Work Plan, CQA Plan, SHSO Plan	1	LS	\$40,000	\$40,000	Per KF Est. of 6/8/09	
A-2	Submittals	Pre-construction Submittals	1	LS	\$100,000	\$100,000		
A-3	Non-engineering Measures	Permanent Signage	1	LS	\$5,000	\$5,000		
A-4	Non-engineering Measures	Permanent Fencing	1,500	LF	\$25	\$37,500	2 Areas	
A-5	Erosion Control	Silt Fence and Hay Bales	6,000	LF	\$7	\$42,000	ECC and Factory Pond areas	
A-6	Drying Bed Construction	Field Construction	2	Each	\$75,000	\$150,000		
A-7	Construction Field Staff/CQC	Field Crew	8	Month	\$45,000	\$360,000		
A-8	Survey - In Water and On Shore	RTK Survey/Field Survey	8	Month	\$10,000	\$80,000		
A-9	Mobilization/Demobilization	Mob/Demob of Equipment	1	LS	\$100,000	\$100,000		
A-10	Site Security	Off-duty Hours	8	Month	\$25,000	\$200,000		
A-11	Soil Characterizations	Analytical Sampling	1	LS	\$50,000	\$50,000		
A-12	Clearing/Grubbing/Reclamation	Seed/Mulch/Trees	10	AC	\$50,000	\$500,000		
A-13	Temporary Facilities	Temporary Dock and Access Roads/Site Offices	1	LS	\$120,000	\$120,000		
B. DREDGING and DREDGE MATERIAL DISPOSAL								
B-1	Equipment/Material Rehandling/Dewatering/Solidification/Stabilization for Transport	Mechanical Excavation /Dredging Using Long Reach Excavator	25,093	CY	\$95	\$2,383,835		
B-2	Silt Curtain	Sediment Control Silt Curtain	3,000	LF	\$60	\$180,000		
B-3	Backfill	Material Cost (1.6 TN/CY)	40,149	TN	\$20	\$802,976		
B-4	Backfill	Placement Cost	40,149	TN	\$27	\$1,084,018		
B-5	Transportation and Disposal	Dredge Material Disposal - Non-hazardous Waste (1.6 TN/CY)	39,165	TN	\$175	\$6,853,875	Per LD Quotes	
B-6	Transportation and Disposal	Dredge Material Disposal - Hazardous Waste	990	TN	\$275	\$272,250	Per LD Quotes	
B-7	Transportation and Disposal	Decant Water Management	1,254,650	GAL	\$0.50	\$627,325	Assumes 50 gallons/CY of water treated and discharged on-site	
C. UPLAND EXCAVATION and MATERIAL DISPOSAL								
C-1	Soil Excavation		17,574	CY	\$15	\$263,610		
C-2	Soil Rehandling/Loading for Disposal		17,574	CY	\$4	\$70,296		
C-3	Backfill of Excavated Areas	Material Cost	28,118	TN	\$20	\$562,368		
C-4	Backfill of Excavated Areas	Backfill with Clean Material	28,118	TN	\$10	\$281,184		
C-5	Confirmatory Sampling	Analytical Sampling	7.10	Acre	\$15,000	\$106,500		
C-6	Transportation and Disposal	Excavated Soil Disposal - Non-hazardous Waste	13,632	TN	\$175	\$2,385,600	Per LD Quotes	
C-7	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste	14,488	TN	\$275	\$3,984,200	Per LD Quotes	
C-8	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste that Requires Stabilization	0	TN	\$900	\$0	Per LD Quotes	
D. COLD WASTE AREA								
D-1	Field Effort		1	LS	\$630,357	\$630,357	Per CWA Cost Est. 3-27-09	
E. LONG-TERM MONITORING and MAINTENANCE								
E-1	Long-term Monitoring and Maintenance	Various Media	1	LS	\$0	\$1,330,876	Per JS Cost Est. 5-19-09	
					SUBTOTAL	\$23,603,770		
25% Contingency						\$5,900,942		
Remedial Design/Completion Report					1	LS	\$650	\$650
Plans/Completion Report for CWA					1	LS	\$60,100	\$60,100
Project Management/Construction Quality Assurance					8	Month	\$105,000	\$840,000
					Revised Project Total	\$30,405,462		

NOTES AND ASSUMPTIONS:

- 4 inches of stone applied for road improvements.
- Conversion factor of 1.60 Tons/CY used for sediments and soil.
- Field Staff with per diems includes SUPT, SHSO, FE, QC, and Field Clerk.
- No bond insurance included.
- Silt fence, hay bales, and silt curtains used for erosion and sediment migration control.
- Reclamation per local specifications, including tree planting @ 215 trees/acre. Includes topsoil placement.
- Roads to be left in place.
- Drying bed constructed of 6 inches of stone and 4 inches of asphalt. Removed following completion of the work.
- Assumes 50 gallon of water/CY of sediment generated. Assumed treated and discharged on-site.
- Assumes use of a long reach excavator to excavate sediments in areas after water level is lowered.
- Assumes use of an excavator mounted on a barge for sediment removal in areas that can not be reached from shore.
- Assumes work schedule is 10 hours/day for 5 days/week.
- Costs expressed in 2010 dollars (escalation included).
- Site security assumed for non-work hours and weekends @ \$50/hour.
- Analytical sampling costs included in post-remedial surveys and monitoring.
- Assumes chain-link fencing with gates to be placed around the field office complex and drying beds.
- Assumes use of a RTK surveying system to verify excavation elevations with topographic map of soil areas.
- Site field office includes rental, electricity, potable water, and cell phone coverage.
- Field work to be completed in one work season with reclamation completed the following season.

Component	Description	Quantity	Units	Unit Cost	Total Cost	Additional Notes		
A. PRE-CONSTRUCTION AND SITE PREPARATION & FIELD OVERSITE								
A-1	Permits	Permits, Work Plan, CQA Plan, SHSO Plan	1	LS	\$125,000	\$125,000 Per KF Est. of 6/8/09		
A-2	Submittals	Pre-construction Submittals	1	LS	\$100,000	\$100,000		
A-3	Non-engineering Measures	Permanent Signage	1	LS	\$5,000	\$5,000		
A-4	Non-engineering Measures	Permanent Fencing	1,500	LF	\$25	\$37,500 2 Areas		
A-5	Erosion Control	Silt Fence and Hay Bales	4,000	LF	\$7	\$28,000 ECC and Factory Pond areas		
A-6	Drying Bed Construction	Field Construction	2	Each	\$75,000	\$150,000		
A-7	Construction Field Staff/CQC	Field Crew	12	Month	\$45,000	\$540,000		
A-8	Survey - In Water and On Shore	RTK Survey/Field Survey	12	Month	\$10,000	\$120,000		
A-9	Mobilization/Demobilization	Mob/Demob of Equipment	1	LS	\$100,000	\$100,000		
A-10	Site Security	Off-duty Hours	12	Month	\$25,000	\$300,000		
A-11	Soil Characterizations	Analytical Sampling	1	LS	\$50,000	\$50,000		
A-12	Clearing/Grubbing/Reclamation	Seed/Mulch/Trees	17	AC	\$50,000	\$850,000		
A-13	Temporary Facilities	Temporary Dock and Access Roads/Site Offices	1	LS	\$150,000	\$150,000		
B. DREDGING & DREDGE MATERIAL DISPOSAL								
B-1	Equipment/Material Rehandling/Dewatering/Solidification/Stabilization for Transport	Mechanical Excavation/Dredging Using Long Reach Excavator	205,050	CY	\$95	\$19,479,750		
B-2	Silt Curtain	Sediment Control Silt Curtain	5,000	LF	\$60	\$300,000		
B-3	Backfill	Material Cost (1.6 TN/CY)	328,080	TN	\$20	\$6,561,600		
B-4	Backfill	Placement Cost	328,080	TN	\$27	\$8,858,160		
B-5	Transportation and Disposal	Dredge Material Disposal - Non-hazardous Waste (1.6 TN/CY)	326,872	TN	\$175	\$57,202,600 Per LD Quotes		
B-6	Transportation and Disposal	Dredge Material Disposal - Hazardous Waste	1,208	TN	\$275	\$332,200 Per LD Quotes		
B-7	Transportation and Disposal	Decant Water Management	10,252,500	GAL	\$0.50	\$5,126,250 Assumes 50 gallons/CY of water treated and discharged on-site		
C. UPLAND EXCAVATION & MATERIAL DISPOSAL								
C-1	Soil Excavation		56,995	CY	\$15	\$854,925		
C-2	Soil Rehandling/Loading for Disposal		56,995	CY	\$4	\$227,980		
C-3	Backfill of Excavated Areas	Material Cost	91,192	TN	\$20	\$1,823,840		
C-4	Backfill of Excavated Areas	Backfill with Clean Material	91,192	TN	\$15	\$1,367,880		
C-5	Confirmatory Sampling	Analytical Sampling	14.10	Acre	\$15,000	\$211,500		
C-6	Transportation and Disposal	Excavated Soil Disposal - Non-hazardous Waste	70,163	TN	\$175	\$12,278,525 Per LD Quotes		
C-7	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste	21,030	TN	\$275	\$5,783,250 Per LD Quotes		
C-8	Transportation and Disposal	Excavated Soil Disposal - Hazardous Waste that Requires Stabilization	0	TN	\$900	\$0 Per LD Quotes		
D. COLD WASTE AREA								
D-1	Field Effort		1	LS	\$630,357	\$630,357 Per CWA Cost Est. 3-27-09		
E. LONG-TERM MONITORING & MAINTENANCE								
E-1	Long-term Monitoring and Maintenance	Various Media	1	LS	\$0	\$1,330,876 Per JS Cost Est. 5-19-09		
					SUBTOTAL	\$124,925,193		
25% ContingenCY						\$31,231,298		
Remedial Design/Completion Report					1	LS	\$650,000	\$650,000
Plans/Completion Report for CWA					1	LS	\$60,100	\$60,100
Project Management/Construction Quality Assurance					12	Month	\$105,000	\$1,260,000
					Revised Project Total		\$158,126,591	

NOTES AND ASSUMPTIONS:

- 1 4 inches of stone applied for road improvements.
- 2 Conversion factor of 1.60 Tons/CY used for sediments and soil.
- 3 Field staff with per diems includes SUPT, SHSO, FE, QC, and Field Clerk.
- 4 No bond insurance included.
- 5 Silt fence, hay bales, and silt curtains used for erosion and sediment migration control.
- 6 Reclamation per local specifications, including tree planting @ 215 trees/acre. Includes topsoil placement.
- 7 Roads to be left in place.
- 8 Drying bed constructed of 6 inches of stone and 4 inches of asphalt. Removed following completion of the work.
- 9 Assumes 50 gallon of water/CY of sediment generated. Assumed treated and discharged on-site.
- 10 Assumes use of a long reach excavator to excavate sediments in areas after water level is lowered.
- 11 Assumes use of an excavator mounted on a barge for sediment removal in areas that can not be reached from shore.
- 12 Assumes work schedule is 10 hours/day for 5 days/week.
- 13 Costs expressed in 2010 dollars (escalation included).
- 14 Site security assumed for non-work hours and weekends @ \$50/hour.
- 15 Analytical sampling costs included in post-remedial surveys and monitoring.
- 16 Assumes chain-link fencing with gates to be placed around the field office complex and drying beds.
- 17 Assumes use of a RTK surveying system to verify excavation elevations with topographic map of soil areas.
- 18 Site field office includes rental, electricity, potable water, and cell phone coverage.
- 19 Field work to be completed in one work season with reclamation completed the following season.

APPENDIX B-5

LONG-TERM MONITORING OF ECOLOGICAL RESOURCES AND HABITAT RECOVERY- SWAs 2 and 3

PRE-REMEDATION ACTIVITIES

		Quantity	Unit	Unit Cost	Total Cost
1	Preparation of a Work Plan and a Field Sampling and Analysis Plan	1	LS	\$20,000	\$20,000
2	Baseline Fisheries/Fish Tissue Sampling	1	LS	\$40,476	\$40,476
3	Baseline Sediment Survey	1	LS	\$33,663	\$33,663
4	Preparation of Baseline Monitoring	1	LS	\$32,235	\$32,235
				Subtotal	\$126,374

POST-REMEDATION ACTIVITIES (Years 1-5 After Completion of Remediation)

1	Annual Fisheries/Fish Tissue Sampling	1	LS	\$40,476	\$40,476
2	Post Remediation Sediment Survey	1	LS	\$33,663	\$33,663
3	Preparation of Annual Monitoring Report	1	LS	\$25,000	\$25,000
				Subtotal	\$99,139

POST-REMEDATION ACTIVITIES (Years 10, 15, 20, 25 and 30 After Completion of Remediation)

1	Annual Fisheries/Fish Tissue Sampling	1	LS	\$40,476	\$40,476
2	Post Remediation Sediment Survey	1	LS	\$33,663	\$37,760
3	Preparation of Annual Monitoring Report	1	LS	\$25,000	\$25,000
				Subtotal	\$103,236

POST-REMEDATION ACTIVITIES (Year 30 After Completion of Remediation)

1	Preparation of a Summary Monitoring Report	1	LS	\$40,975	\$40,975
				Subtotal	\$40,975

TOTAL \$1,080,085

ASSUMPTIONS

- 1 Maximum 10-year monitoring period for fish tissue and sediments;
- 2 Annual monitoring to begin one year after the completion of remediation;
- 3 Sample collection assumes two Associate-level Scientists and one Principal Scientist;
- 4 Work will be self-performed;
- 5 Standard turnaround times apply for chemistry samples; and
- 6 Sediment monitoring for MeHg and THg only.

APPENDIX B-5

LONG-TERM MONITORING OF ECOLOGICAL RESOURCES AND HABITAT RECOVERY - SWAs 4-1, 4-2, 4-3 and 5

PRE-REMEDATION ACTIVITIES

		Quantity	Unit	Unit Cost	Total Cost
1	Preparation of a Work Plan and a Field Sampling and Analysis Plan	1	LS	\$20,000	\$20,000
2	Baseline Fisheries/Fish Tissue Sampling	1	LS	\$40,476	\$40,476
3	Baseline Sediment Benthic Community and Aquatic Plant Survey	1	LS	\$62,960	\$62,960
4	Baseline Wildlife Survey	1	LS	\$15,353	\$15,353
5	Endangered/Threatened Species Survey	1	LS	\$10,000	\$10,000
6	Preparation of Baseline Monitoring Report	1	LS	\$40,975	\$40,975
				Subtotal	\$189,764

POST-REMEDATION ACTIVITIES (Years 1-5 After Completion of Remediation)

1	Annual Fisheries/Fish Tissue Sampling	1	LS	\$36,630	\$36,630
2	Annual Benthic Community and Aquatic Plant Survey	1	LS	\$62,960	\$62,960
3	Annual Wildlife Survey	1	LS	\$15,353	\$15,353
4	Preparation of Annual Monitoring Report	1	LS	\$40,975	\$40,975
				Subtotal	\$155,918

POST-REMEDATION ACTIVITIES (Years 10, 15, 20, 25 and 30 After Completion of Remediation)

1	Annual Fisheries/Fish Tissue Sampling	1	LS	\$36,630	\$36,630
2	Sediment Monitoring Survey	1	LS	\$33,663	\$33,663
3	Preparation of Annual Monitoring Report	1	LS	\$25,000	\$25,000
				Subtotal	\$95,293

POST-REMEDATION ACTIVITIES (Year 30 After Completion of Remediation)

1	Preparation of a Summary Monitoring Report	1	LS	\$40,975	\$40,975
				Subtotal	\$40,975

TOTAL \$1,330,876

ASSUMPTIONS

- 1 Maximum 10-year monitoring period for fish tissue; 5-year monitoring period for habitat recovery;
- 2 Annual monitoring to begin one year after the completion of remediation;
- 3 Sample collection assumes two Associate-level Scientists and one Principal Scientist;
- 4 Work will be self-performed;
- 5 Standard turnaround times apply for chemistry samples;
- 6 Sediment monitoring for MeHg and THg only; and
- 7 Cap integrity monitoring not included.