

**Table 8**  
**Cost Estimate - Excavation and Offsite Disposal**  
 Missoula White Pine Sash Facility

	Unit	Unit Cost	Quantity	Cost	Other Direct Cost Factor	Adjusted Cost	Source
<b>Sheet Pile Installation in Treatment/AST Areas - see estimate by Muth Engineering</b>							
Sheet pile contractor mobilization	LS	\$1,970.00	2	\$3,940	1.65	\$6,501	Muth Engineering
Sheet Piling Costs - Area 1 Fomer Treating Area	CY		9908				
PZC 18 Sheet Pile (188 sheets)	LB	\$0.65	379008	\$246,355	1.65	\$406,486	Muth Engineering
Wales (772 linear feet)	LB	\$0.62	56356	\$34,941	1.65	\$57,652	Muth Engineering
Anchors	EA	\$3,500.00	56	\$196,000	1.65	\$323,400	Muth Engineering
Thread & Drive	HR	\$410.00	40	\$16,400	1.65	\$27,060	Muth Engineering
Build Template	HR	\$360.00	32	\$11,520	1.65	\$19,008	Muth Engineering
Utility Move	LS	\$13,750.00	1	\$13,750	1.65	\$22,688	Muth Engineering
Traffic Control	LS	\$15,000.00	0	\$0	1.65	\$0	Muth Engineering
Sheet Piling Costs - Area 2 Across Scott Street	CY		9386				
PZC 18 Sheet Pile (188 sheets)	LB	\$0.65	366912	\$238,493	1.65	\$393,513	Muth Engineering
Wales (772 linear feet)	LB	\$0.62	55188	\$34,217	1.65	\$56,457	Muth Engineering
Anchors	EA	\$3,500.00	56	\$196,000	1.65	\$323,400	Muth Engineering
Thread & Drive	HR	\$410.00	16	\$6,560	1.65	\$10,824	Muth Engineering
Build Template	HR	\$360.00	32	\$11,520	1.65	\$19,008	Muth Engineering
Utility Move	LS	\$11,625.00	1	\$11,625	1.65	\$19,181	Muth Engineering
Traffic Control	LS	\$30,000.00	1	\$30,000	1.65	\$49,500	Muth Engineering
<b>SUBTOTAL for two areas per Muth</b>						\$1,734,678.46	
<b>Cost per CY</b>						\$89.91	
Actual Volume to be excavated in former process and AST areas			11125	<b>Cost to Shore Impacted Soil</b>		\$1,000,222.76	
<b>Excavation and Backfill</b>							
Excavation and loading of Treatment/AST Area soil	CY	\$5.50	11125	\$61,188	1.00	\$61,187.50	Muth Engineering
Excavation and loading of soil from other areas	CY	\$5.50	43985	\$241,918	1.00	\$241,917.50	Engineering Estimate Ibey
Replace clean soil, haul, backfill compact - all soils	Ton	\$5.00	51109	\$255,545	1.00	\$255,545.00	Nursery/Landscaping
Abandon Monitoring Wells	EA	\$500.00	12	\$6,000	1.00	\$6,000.00	Engineering Estimate
Confirmation Sampling <sup>3</sup>	EA	\$800.00	100	\$80,000	1.00	\$80,000.00	MWPS History
<b>SUBTOTAL</b>						\$644,650.00	
<b>Disposal</b>							
Transport and dispose of soils from other areas as non-hazardous solid waste <sup>1</sup>	Ton	\$30.00	65978	\$1,979,325	1.00	\$1,979,325.00	Allied Waste
Transport and Incineration of Treatment/AST areas soil (hazardous waste) <sup>1,2</sup>	Ton	\$864.60	10686	\$9,239,116	1.00	\$9,239,115.60	Clean Harbors
<b>SUBTOTAL</b>						\$11,218,441	
Construction Contingencies		25%				\$3,215,828.34	10% Scope, 15% Bid
<b>SUBTOTAL</b>						<b>\$16,813,597.40</b>	
Project Management		6%				\$1,008,815.84	EPA Cost Guidance
Remedial Design		12%				\$2,017,631.69	EPA Cost Guidance
Construction Management		8%				\$1,345,087.79	EPA Cost Guidance
<b>TOTAL CAPITAL COSTS</b>						<b>\$21,185,133</b>	

Notes:

EA = each  
 LS = lump sum  
 LB = pound  
 CY = cubic yard  
 HR = hour

Present Value	No Discount
1 year	<b>\$21,185,133</b>

<sup>1</sup> Soils from the AST and Treating Areas considered hazardous waste, soils from all other areas at the MWPS Facility are considered non-hazardous  
<sup>2</sup> Cost per ton is based on price from Clean Harbors Environmental for 2011 disposal/incineration of soil removed from the former AST area +10% (\$864.60/ton)  
 Excavation work is only expected to take one year  
<sup>3</sup> Confirmation samples based on 8151 and 8290 for most, then final confirmation samples for EPH/VP, 8270BNA, and 8260 long list