# Table 1 Summary of Proposed Financial Assurance CWM Chemical Services, LLC Model City Facility Model City, New York

#### **Closure Cost Estimate Summary**

No.	Facility Activity Area	Proposed Total Cost: Base = 2010 Offsite Waste Disposal
1.0	PCB Warehouse	\$1,001,965
	Drum Management Building	\$962,097
	Fuels & PCB Management Area	\$220,984
	Stabilization Area	\$1,227,316
	AWTS & CSAs	\$1,278,786
6.0	FAC Ponds	\$10,269,970
7.0	CSA 29 (Truck Wash Building)	\$18,509
8.0	CSA 11 (South Trailer Parking)	\$553,363
	Surface Impoundments (Closed)	\$0
	Laboratories	\$98,793
11.0	Roadways	\$37,195
12.0	Site Monitoring (during closure)	\$259,187
13.0	3rd Party Leach. Trt't (during closure)	\$988,460
14.0	Residuals Management Unit - 1	\$5,712,815
	Totals	\$22,629,438

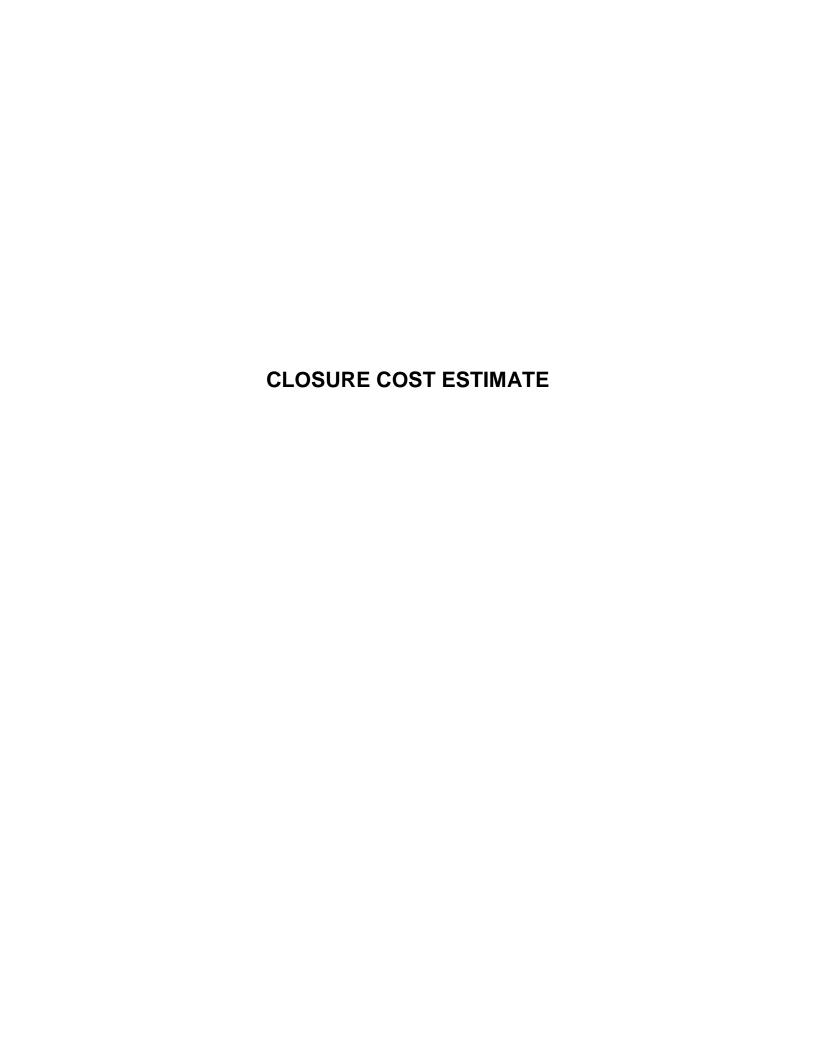
#### **Post-Closure Cost Estimate Summary**

No.	Facility Activity Area	Proposed Post- Closure One Year Cost: Base = 2010	Post Closure Period	Proposed 30- Year Post Closure Costs
PCC-1	SLF 1 - 6 (Post CI)	\$611,261	30	\$18,337,820
PCC-2	SLF 7 (Post CI)	\$243,792	30	\$7,313,752
PCC-3	SLF 10 (Post CI)	\$231,706	30	\$6,951,166
PCC-4	SLF 11 (Post CI)	\$323,147	30	\$9,694,415
PCC-5	SLF 12 (Post CI)	\$248,737	30	\$7,462,111
PCC-6	Resid Mgmt Unit 1 (Post CI)	\$300,564	30	\$9,016,922
PCC-7	Lagoons/Salts Areas (Post CI)	\$36,015	30	\$1,080,444
PCC-8	Process Tank Area (Post CI)	\$40,469	30	\$1,214,055
CM-1	Corrective Measures (Post CI)	\$426,828	30	\$12,804,855
	Totals	\$2,462,518	n/a	\$73,875,541

Closure Post-Closure & Corrective Measures	\$22,629,438 \$73,875,541
Subtotal	\$96,504,979
Adjusted for inflation 2010-2011	\$98,564,770
Plus General Contingency	\$1,435,230
Total Proposed Financial Assurance	\$100,000,000

The US Department of Commerce - Bureau of Economic Analysis updated the National Income and Product Accounts Table 1.1.9. Implicit Price Deflators for Gross Domestic Product on May 31, 2012 for the year 2011. An implicit deflator and an adjustment for inflation has been applied to the cost estimate. http://www.bea.gov/national/nipaweb/

Implicit Price Deflators for Gross Domestic Product										
2012 Rate = 113.327 (2011 GDP) ÷ 1		Inflation								
	2011	113.361	Factor							
	2010	110.992	1.021							



### Closure Cost Estimate Summary CWM Chemical Services, LLC Model City Facility Model City, New York

No.	Facility Activity Area	Proposed Total Cost: Base = 2011 Offsite Waste Disposal
1.0	PCB Warehouse	\$1,001,965
2.0	Drum Management Building	\$962,097
3.0	Fuels & PCB Management Area	\$220,984
4.0	Stabilization Area	\$1,227,316
5.01	AWTS (CSAs 24/25/26)	\$49,170
5.02	AWTS (CSA 30)	\$15,588
5.03	AWTS (CSA 31)	\$4,209
5.04	AWTS (CSA 32)	\$3,456
5.05	AWTS (CSA 33)	\$44,542
5.06	AWTS (inside w/10 tanks)	\$53,048
5.07	AWTS (i/s Sol Sep w/2 tanks)	\$6,650
5.08	AWTS (o/s north AWT w/3 tnks)	\$133,887
5.09	AWTS (o/s west AWT w/1 tank)	\$68,834
5.10	AWTS (o/s east AWT w/4 tnks)	\$216,473
5.11	AWTS (i/s ww trt bldg w/4 tnks)	\$48,336
5.12	AWTS (o/s sou ww trt w/1 tank)	\$13,913
5.13	AWTS (o/s eas ww trt w/4 tnks)	\$15,409
5.14	AWTS (nor SLF 1 - 6 w/2 tanks)	\$32,445
5.15	AWTS (i/s betw slf 7&11 w/3 tk)	\$16,799
5.16	AWTS (i/s A n/w SLF 10 w/2 tk)	\$7,841
5.17	AWTS (i/s A east LTF w/2 tnks)	\$41,386
5.18	AWTS (i/s A s/e SLF12 w/1 tnk)	\$8,111
5.19	AWTS (i/s former o/w sep w/1 tk)	\$20,745
5.20	AWTS (i&o/s rmu-1 w/2 tks)	\$110,965
5.21	AWTS (o/s leachtnkfrm w/4 tks)	\$231,166
5.22	AWTS (stab mix pit tanks) (1)	\$87,670
5.23	AWTS (stab aqueous tanks)	\$20,628
5.24	AWTS (i/s trk wash bldg w/1 tk)	\$3,692
5.25	AWTS (i/s A west AWT w/2 tks)	\$7,928
5.26	AWTS (i/s A sou SLF 3 w/1 tnk)	\$2,649
5.27	AWTS (i/s A sou SLF 10 w/1 tk)	\$2,149
5.28	AWTS (i/s A east SLF12 w/1 tk)	\$2,149
5.29	AWTS (i/s A sou PCBwh w/1 tk)	\$2,569
5.30	AWTS (i/s TO Build w/1 tk)	\$2,626

### Closure Cost Estimate Summary CWM Chemical Services, LLC Model City Facility Model City, New York

No.	Facility Activity Area	Proposed Total Cost: Base = 2011 Offsite Waste Disposal
5.31	AWTS (i/s A sou Full Trailer w/1 tk)	\$3,752
	subtotal - 5.0 AWTS CSAs	\$1,278,786
6.0	FAC Ponds	\$10,269,970
7.0	CSA 29 (Truck Wash Building)	\$18,509
8.0	CSA 11 (South Trailer Parking)	\$553,363
9.0	Surface Impoundments (Closed)	\$0
10.0	Laboratories	\$98,793
11.0	Roadways	\$37,195
12.0	Site Monitoring (during closure)	\$259,187
13.0	3rd Party Leach. Trt't (during closure)	\$988,460
14.0	Residuals Management Unit - 1	\$5,712,815
	Totals	\$22,629,438

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Producti	ion and Quantities	for In-house Esti	nate		In-house Pricing References
		1	1	1				@		- 10	
1.1 Inventory Verification						break/hour	two persons req a	@ average of two	drums/minute/crew with	a 10-min	
Laborer	27.3	hours	\$39.00	\$1,065	\$1,065	2726 drums	@ 100 drums/hr/	* 27 2 hours	@ 1 units/crew =	27.3 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	27.3	nours	\$39.00	\$1,065 <b>\$1,065</b>	\$1,065 <b>\$1,065</b>	2/26 druins	@ 100 drums/m/	£ 27.3 Hours	@ 1 units/crew =	27.3 Hours	(note: labor rate provided by local contractor)
(Subt: Assemblies 1.1 thru 1.1)	+			\$1,065	\$1,065	survey and inver	ntory of maximum o	canacity of PCR W	arehouse activity		(note: labor rate provided by local contractor)
(Jubi: Assemblies 1.1 till d 1.1)				\$1,005	31,003	survey and inven	itory of maximum c	upacity of 1 CD W	arenouse activity		
1.2 Load PCB Solids Drums						production rate =	80 drums/hour/pe	erson: Facility exn	erience		
Laborer	34.2	hours	\$39.00	\$1,334	\$1,334	1363 drums @	80 drums/hr =	17.0 hours @	2 units/crew =	34.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	17.1	hours	\$22.21	\$380	\$380	1363 drums @	80 drums/hr =	17.0 hours @	1 units/crew =	17.1 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	17.1	hours	\$6.26	\$107	\$107	1363 drums @	80 drums/hr =	17.0 hours @	1 units/crew =	17.1 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load PCB Sol Drms to L'Fill			72,20	\$1,821	\$1,821	312 2. 4			, 5. 0		- , - p (
1.3 Transport to Onsite Landfill						assumes on-site o	lisposal				
Road Tractor (4 x 2, 30-ton)	8.5	hours	\$32.45	\$0	\$276	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/load =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	8.5	hours	\$45.00	\$0	\$383	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/load =	8.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	8.5	hours	\$6.26	\$0	\$53	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/load =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transp Drms to Onsite L'Fill				\$0	\$712						
1.4 Unload PCB Solids Drums/L'Fill									/hour/person; Facility exp		
Laborer	34.2	hours	\$39.00	\$0	\$1,334	1363 drums @	80 drums/load =		2 units/crew =	34.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	17.1	hours	\$22.21	\$0	\$380	1363 drums @	80 drums/load =		1 units/crew =	17.1 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	17.1	hours	\$6.26	\$0	\$107	1363 drums @	80 drums/load =	17.1 loads @	1 units/crew =	17.1 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Drms at Onsite L'Fill				\$0	\$1,821						
1.5 Offsite Disp:PCB Solids Drm						assumes off site!	and disposal; 80 dr	mas/load			
Offsite Transportation	6583.5	miles	\$3.50	\$23,042	\$0	1363 drums @	80 drums/ld =	17.1 loads @	385 miles/trip =	6583.5 miles	Rate: transporters quote/site experience
Offsite Transportation Offsite Disposal - Landfill	1363	drums	\$100.00	\$136,300	\$0 \$0	1363.00 drums	60 urums/iu –	17.1 loaus @	363 Illiles/trip =	0303.3 IIIIles	HWC/ETC 2004 & CWM 2011
Subt - Offsite Disp:PCB Solids Drm	1303	urums	\$100.00	\$159,342	\$0 <b>\$0</b>	1505.00 0101115					HWC/ETC 2004 & CWW 2011
(Subt: Assemblies 1.2 thru 1.5)				\$161,163	\$4,353	loadina, off-site	transporting, and o	off-site disposal of	drummed PCB solids		
,,		l		Ų101,103	<b>\$4,000</b>			,,,,			
1.6 Load Drums for Bulking		1				nroduction rate =	80 drums/hour; fa	cility experience			
Laborer	34.2	hours	\$39.00	\$1,334	\$1,334	1363 drums @	80 drums/hr =	17.1 hours @	2 units/crew =	34.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	17.1	hours	\$22.21	\$380	\$380	1363 drums @	80 drums/hr =	17.1 hours @	1 units/crew	17.1 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	17.1	hours	\$6.26	\$107	\$107	1363 drums @	80 drums/hr =	17.1 hours @	1 units/crew	17.1 hours	RSM/HC p. 470 (line item 01 54 33 40 6600)
Subt - Load Drums for Bulking			Ţ0. <u>2</u> 0	\$1,821	\$1,821		22 0. 0		_ a		,, p ( c o o o . o . o . o . o .
2. 2. 2. 2	İ	i e		. ,	. ,						<u> </u>
1.7 Transport to Onsite Bulking		1				production rate =	0.5 hours for onsit	e travel			
Road Tractor (4 x 2, 30-ton)	8.5	hours	\$32.45	\$276	\$276	1363 drums @	80 drum/load =		0.5 hours/trip =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
, , , , , , , , , , , , , , , , , , , ,	8.5	hours	\$45.00	\$383	\$383	1363 drums @	80 drum/load =	17.1 loads @	0.5 hours/trip =	8.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Driver							00 1 // 1	4=41 1 0	0=1 /	0.51	DCA4(UC 472 (I) II 04 F4 22 40 CC00)
Flatbed Trailer (40-ton)	8.5	hours	\$6.26	\$53	\$53	1363 drums @	80 drum/load =	17.1 loads @	0.5 hours/trip =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities for In-house Estimate In-house Pricing References
1.8 Unload Drums for Bulking						production rate = 80 drums/hour; facility experience
Laborer	34.2	hours	\$39.00	\$1,334	\$1,334	1363 drums @ 80 drums/hr = 17.1 hours @ 2 units/crew = 34.2 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	17.1	hours	\$22.21	\$380	\$380	1363 drums @ 80 drums/hr = 17.1 hours @ 1 units/crew 17.1 hours RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	17.1	hours	\$6.26	\$107	\$107	1363 drums @ 80 drums/hr = 17.1 hours @ 1 units/crew 17.1 hours RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Drums for Bulking				\$1,821	\$1,821	
(Subt: Assemblies 1.6 thru 1.8)				\$4,353	\$4,353	loading, onsite transporting, and unloading of drummed PCB liquids/sludges for bulking
1.9 Bulk Liquids into Tankers						prod'n rate = facility estimate = 5 min/drum (bulking only); employs a 2-person crew
Laborer	26.7	hours	\$39.00	\$1,041	\$1,041	160 drums @ 12 drums/hr = 13.3 hours @ 2 units/crew 26.7 hours two laborers; rate 2011 3rd party quote
Pumping Equipment	13.3	hours	\$71.47	\$951	\$951	160 drums @ 12 drums/hr = 13.3 hours @ 1 units/crew 13.3 hours RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,000 Gallons)	0	hours	\$6.31	\$0	\$0	T&D rate below includes tanker
Decon Drums (no decon performed)	0	drums	\$0.00	\$0	\$0	0 drums
Subt - PCB Liquids into Tankers				\$1,992	\$1,992	
1.10 Transport Liquids Offsite						capacity per 5,000-gal tanker = ninety (90) 55-gal drums
Transport in 5,000 Gal Tanker	3058	miles	\$3.50	\$10,703	\$10,703	160 drums @ 90 drm/tankr = 1.8 (\^2) loads @ 1529 miles/trip = 3058 miles Rate: transporters quote/site experience
Subt - Offsite Transp/PCB Liquids				\$10,703	\$10,703	
1.11 Offsite Liquids Disposal						incineration of liquid PCB wastes
Disposal Cost (Incin PCB Liquids)	8800	gallons	\$4.68	\$41,184	\$41,184	160 drums @ 55 gal/drum = 8800 gallons HWC/ETC 2004 & Current third party rate
Subt - Offsite Liquids Disposal				\$41,184	\$41,184	
(Subt: Assemblies 1.9 thru 1.11)				\$53,879	\$53,879	bulking and off-site transportation and disposal of PCB liquids
1.12 Bulk Sludges for Offsite T&D		I				prod'n rate = facility estimate = 5 min/drum (bulking only); employs 2-person crew
Laborer	200.6	hours	\$39.00	\$7,823	\$7,823	1203 drums @ 12 drums/hr = 100.3 hours @ 2 units/crew = 200.6 hours one forklift oper plus one helper; rate 2011 3rd party quote
Forklift	100.3	hours	\$22.21	\$2,228	\$2,228	1203 drums @ 12 drums/hr = 100.3 hours @ 1 units/crew = 100.3 hours RSM/HC p. 470 (line item 01 54 33 40 2020)
Dump Trailer (20 CY)	100.3	hours	\$5.20	\$522	\$522	1203 drums @ 12 drums/hr = 100.3 hours @ 1 units/crew = 100.3 hours RSM/HC p. 469 (line item 01 54 33 20 5400)
Decon Drums (no decon performed)	0	drums	\$0.00	\$0	\$0	O drums
Subt - Bulk PCB Sludges for T&D			,	\$10,573	\$10,573	
1.13 Transport Sludges Offsite						capacity per 22-ton dump trailer = eighty-eight (88) drums @ 500# per drum
Truck Transport @ 88 drums/load	21406	miles	\$2.70	\$57,796	\$57,796	1203 drums @ 88 drum/load = 13.7 (\gamma 14.1) loads @ 1529 miles/trip = 21406 miles  Rate: transporters quote/site experience
Subt - Transport Sludges Offsite			7	\$57,796	\$57,796	The second secon
1.14 Offsite Sludges Disposal						incineration of PCB sludges; 500Lb/drum facility estimate
Disposal Cost (Incin PCB Sludges)	601500	pounds	\$0.64	\$384,960	\$384,960	1203 drums @ 500 lbs/drm = 601500 pounds Current CWM 2011 third party rate
Subt - Offsite Sludges Disposal				\$384,960	\$384,960	
(Subt: Assemblies 1.12 thru 1.14)				\$453,329	\$453,329	bulking and offsite transportation and disposal of PCB sludges

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities	for In-house Estimat	In-house Pricing References		
							-	<del> </del>			
1.15 Load Empty Drums						prod'n rate = 160	drums/hour (assu	me double the rate of	f full drums @ site ex	rperience)	
Laborer	17.0	hours	\$39.00	\$663	\$663	1363 drums @	160 drums/hr =	8.5 hours @	2 units/crew =	17.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	8.5	hours	\$22.21	\$189	\$189	1363 drums @	160 drums/hr =	8.5 hours @	1 units/crew=	8.5 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40 ton)	8.5	hours	\$6.26	\$53	\$53	1363 drums @	160 drums/hr =	8.5 hours @	1 units/crew =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Empty Drums				\$905	\$905						
1.16 Transp Drums to On-Site Shrd						production rate =	= 0.5 hours for onsi	te travel			
Road Tractor (4 x 2, 30-ton)	8.5	hours	\$32.45	\$276	\$0	1363 drums @	80 drums/load =		0.5 hr/trip =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	8.5	hours	\$45.00	\$383	\$0	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/trip =	8.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40 ton)	8.5	hours	\$6.26	\$53	\$0	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/trip =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transport Drums to Shredder				\$712	\$0				·		
1.17 Unload Empty Drums						prod'n rate = 160	) drums/hour (assu	me double the rate of	f full drums @ site ex	xperience)	
Laborer	17.0	hours	\$39.00	\$663	\$0	1363 drums @	160 drums/hr =		2 units/crew =	17.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	8.5	hours	\$22.21	\$189	\$0	1363 drums @	160 drums/hr =		1 units/crew==	8.5 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40 ton)	8.5	hours	\$6.26	\$53	\$0	1363 drums @	160 drums/hr =	8.5 hours @	1 units/crew =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Empty Drums				\$905	\$0		·	_			
1.18 Onsite Drum Shredding						prod'n = 80 drum	ns/hour; debris shre	edded into rolloff			
Laborer	34	hours	\$39.00	\$1,326	\$0	1363 drums @	80 drums/hr =	16.6 hours @	2 units/crew =	34.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Shredder	17.0	hours	\$329.70	\$5,605	\$0	1363 drums @	80 drums/hr =	16.6 hours @	1 unit/crew =	17.0 hours	2004 DEC Rate * Implicit Deflator
Rolloff (30-CY)	17.0	hours	\$19.02	\$323	\$0	1363 drums @	80 drums/hr =	16.6 hours @	1 unit/crew =	17.0 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Onsite Drum Shredding				\$7,254	\$0						
1.19 On-site Transp of Empty Drms						Transport whole	drums to onsite lar	ndfill for disposal: pro	oduction rate = 0.5 h	ours for onsite travel	
Road Tractor (4 x 2, 30-ton)	8.5	hours	\$32.45	\$0	\$276	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/trip =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	8.5	hours	\$45.00	\$0	\$383	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/trip =	8.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	8.5	hours	\$6.26	\$0	\$53	1363 drums @	80 drums/load =	17.1 loads @	0.5 hr/trip =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transp Mat'l to Landfill				\$0	\$712	Drums crushed in	n landfill				
1.20 Unload Empty Drum						prod'n rate = 160	) drums/hour (assu	me double the rate of	f full drums @ site ex	kperience)	
Laborer	8.5	hours	\$39.00	\$0	\$332	1363 drums @	160 drums/hr =		1 units/crew =	8.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader (small)	8.5	hours	\$14.39	\$0	\$122	1363 drums @	160 drums/hr =	8.5 hours @	1 units/crew==	8.5 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Flatbed Trailer (40-ton)	8.5	hours	\$6.26	\$0	\$53	1363 drums @	160 drums/hr =		1 units/crew =	8.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Drums at Landfill			, -	\$0	\$507				,		. , , , , , , , , , , , , , , , , , , ,
1.21 Offsite Disp/Shred'd Drums						assumes off-site	non-haz land dispo	sal of shredded drum:	s; 20 tons/load		
Offsite Transportation	5	miles	\$3.25	\$16	\$0	13.6 tons @	20 tons/load =	0.7 loads (个1.0) @		5.0 miles	Rate: transporters quote/site experience
<u> </u>	42.6	tone	\$35.00	\$476	\$0	1363 drums @	20 lbs/drum =	13.6 tons @	1 tons/CY =	13.6 CY	Modern Disposal/Site Experience
Offsite Disposal - Landfill	13.6	tons	\$35.00	3470	ŞU	1303 ulullis @	20 ibs/urum –	13.0 (0115 @	1 (0115/ C1 -	13.0 C1	Widdell Disposal/Site Experience

#### 1.0 PCB Warehouse

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities for In-house Estimate					In-house Pricing References
1.21a Containment Pan Demolition						2010 SW Permit	Modification: 4 con	tainment nans for 1	160 liquid drums		
Pan Demolition Lump Sum	4	Each	\$600.00	\$2.400	\$2.400		inment equivalent t				Site Experience
Subt - Pan Demolition	7	Lucii	\$000.00	\$2,400	\$2,400	2,2 10 gais conta	mment equivalent t	o 4 500 gai tank. an	ne rate \$000/ tank		one Experience
1.21b On-site Transp of Pans						•	= 0.5 hours for onsit	• • • • • • • • • • • • • • • • • • • •			
Road Tractor (4 x 2, 30-ton)	0.5	hours	\$32.45	\$0	\$16	4 pans =	1880 SF @	1 CF/48 SF =	39.2 CF =	1.5 CY	
Driver	0.5	hours	\$45.00	\$0	\$23	470 SF/pan @	1 CF/48 SF =	9.8 CF @	480 lb/CF =	2.4 tons	loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY)	0.5	hours	\$19.02	\$0	\$10						dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Onsite Transp Pans				\$0	\$48						
1.21c Offsite T&D - Pan Demo											
Offsite Transportation	385	miles	\$3.25	\$1,251	\$0	1 Rolloff @ 1 rol	loff/load = 1 load @	385 miles/trip = 38	5 miles		Rate: transporters quote/site experience
Offsite Disposal - Landfill	1.5	CY	\$337.50	\$506	\$0	4 pans =	1880 SF @	1 CF/48 SF =	39.2 CF =	1.5 CY	DEC 2004 Estimate accounting for inflation
Subt - Offsite Disp:PCB Whs Pans				\$1,758	\$0	·					· ·
(Subt: Assemblies 1.15 thru 1.21c)				\$14,425	\$4,572	onsite drum shr	redding and off-site	disposal: off-site pa	n disposal		
									·		
1.22 Decon PCB W'house (Wash)						production rate	= 105 SF/hr for 1-pe	rson crew w/ one u	inits; facility experience		
Laborer	148.8	hours	\$39.00	\$5,803	\$5,803	15626 SF @	105 SF/hr =	148.8 hours @	1 units/crew =	148.8 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04	\$0	\$0	Vacuum-Pressur	e Wash Combo Use	d Below			RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41	\$0	\$0						RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum-Pressure Wash Combo	148.8	hours	\$22.94	\$3,413	\$3,413	15626 SF @	105 SF/hr =	148.8 hours @	1 units/crew =	148.8 hours	2001 Rate * Implicit Deflator
Subt - Decon PCB W'house (wash)				\$9,216	\$9,216						
1.23 Decon PCB W'house (Rinse)						production rate	= 105 SF/hr for 1-pe	rson crew w/ one u	inits; facility experience		
Laborer	148.8	hours	\$39.00	\$5,803	\$5,803		e Wash Combo Use		, често, стротото		two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04	\$0	\$0			-			RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41	\$0	\$0	15626 SF @	105 SF/hr =	148.8 hours @	1 units/crew =	148.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum-Pressure Wash Combo	148.8	hours	\$22.94	\$3,413	\$3,413		_55 5. 7	5.0 0 0 0	_ 3	0.000.0	2001 Rate * Implicit Deflator
Subt - Decon PCB W'house (rinse)	1.0.0		Ψ22.3	\$9,216	\$9,216						2001 Nate Implication
1.24 Decon Water Samp/Dispose						nroduction rate	= 0.5 hours/sample	for two techs			
Technician	2.0	hours	\$38.00	\$76	\$76	2.0 samp @	0.5 hr/samp =	1.0 hours @	2 units/crew =	2.0 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)	2.0	samp	\$105.00	\$210	\$210	2.0 areas @	1.0 samp/area =		= amajaraw =	2.0 110013	analytical price: average of three quotes
On-site Water Disposal	1562.6	gal	\$0.0313	\$49	\$49	15626 SF @	0.05 gal/sf/wa =	<u> </u>	0.05 gal/SF/rinse =	781.3 gals	site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt Decon Water Samp/Dispose	1302.0	Pui	70.0313	\$335	\$335	13020 31 W	3.03 Bai/3i/ wa -	. 01.0 Ballolia I	3.03 Bail 31 / 11113c -	, 01.3 Pais	and material material and prince , for the oliver guild (equip in)
1 2E DCD Wine 9 Dectwest Server						production rate	- 0 E hours/samala	for two tachs hassa	d upon facility ovn		
1.25 PCB Wipe & Destruct Samp	38	hours	\$38.00	¢1 444	\$1,444	•	= 0.5 hours/sample 0.5 hr/samp =			20 0 hours	tachnician rate: rate 2011 2rd party quete
Technician		hours		\$1,444	' '	38.0 samp @		19.0 hours @	2 units/crew =	38.0 hours	technician rate: rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	2	samp	\$446.67	\$893	\$893	2.0 areas @	1.0 samp/area =	<u> </u>	11 some v = +	2C same !	analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	36	samp	\$83.33	\$3,000	\$3,000	15626 SF @	625 SF/samp =	25.0 samples	11 samp post rinse =	36 samples	analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp (Subt: Assemblies 1.22 thru 1.25)				\$5,337	\$5,337	huilding dosont	amination and sam	nlina			<u> </u>
Subt. Assemblies 1.22 thru 1.25)	1			\$24,105	\$24,105	pullaing aecont	amination and sam	viirig			1

**Total Labor Hours** 

840.0

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure		2011 CWM Extended Price Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities for In-house Estimate In-house Pricing References
1.26 PPE Usage & H&S Planning						Level C @ 75%; Mod Level C @ 25% for total non-supv hrs for all tasks; HASP @ 2.5% of non-supv hrs
PPE Usage - Modified Level C	26.2	days	\$9.00	\$236	\$236	839.5 hours @ 8 hr/day = 104.9 days @ 25% "Mod C" days = 26.2 days 25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	78.7	days	\$25.00	\$1,968	\$1,968	839.5 hours @ 8 hr/day = 104.9 days @ 75% "C" days = 78.7 days 75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	21	hours	\$75.00	\$1,575	\$1,575	839.5 hours @ 0.025 hr/hr = 21.0 hours Safety Eng Rate: rate 2011 3rd party quote
Subt -PPE Usage/H&S Planning				\$3,778	\$3,778	
1.27 Supervision						4 weeks for closure of PCB warehouse
Foreman	160	hours	\$65.00	\$10,400	\$10,400	4 weeks @ 40 hrs/wk = 160.0 hours Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	\$0	Included in Gen'l Contractor G&A/Home Office indirect costs  Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$10,400	\$10,400	
1.28 Certification						Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks
Engineer	12.6	hours	\$130.00	\$1,638	\$1,638	839.5 hours @ 0.015 hr/hr = 12.6 hours Engineer rate: 2011 3rd party quote
Clerical	12.6	hours	\$45.00	\$567	\$567	839.5 hours @ 0.015 hr/hr = 12.6 hours Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$2,205	\$2,205	
(Subt: Assemblies 1.26 thru 1.28)				\$16,383	\$16,383	supervision, health & safety, and certification

1.0 PCB Warehouse	Direct Cost	Total	Basic	\$728,702	\$562,038

Proposed	Dronocod	Cost Range
-	-	Cost Range
Percent		
-f D:t Ct		
of Direct Cost	•	
<del></del>	\$728,702	
		note: DEC uses 7%
4.00%		note: DEC uses 4%
6.00%	\$43,722	note: DEC uses 6%
2.00%	\$14,574	note: DEC uses 2%
6.00%	\$43,722	Note DEC adds 6%
25.00%	\$182,175	
	\$910,877	
10.00%	\$91.088	CWM and DEC 10%
	<del>+</del>	
	\$1,001,965	
<del></del>	71,001,303	
	2.00% 6.00%	Percent OffSite OffSite Of Direct Cost OffSite Disposal \$728,702  7.00% \$51,009 4.00% \$29,148 6.00% \$43,722 2.00% \$14,574 6.00% \$43,722 25.00% \$182,175  \$910,877

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal		Basis of Producti	ion and Quantities fo	In-house Estimate			In-house Pricing References
		ſ	Ī								1
2.1 Inventory Verification						production rate =	two persons reg'd @	average of two drum	ns/minute/crew with a	10-min break/hour	
Laborer	44.5	hours	\$39.00	\$1,736	\$1,736	4452 drums @		44.5 hours	•	•	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$1,736	\$1,736						
Subt: Assemblies 2.1 thru 2.1)				\$1,736	\$1,736	survey and inver	ntory of maximum cap	acity of Drum Manag	gement Building		
2.2 Load Solids Drms for O/S L'Fill		1	1			production rate	= 80 drums/hour/pers	on: Eacility experienc	20		ı
aborer	82.6	hours	\$39.00	\$3,221		3305 drums @	80 drums/hr =	41.3 hours @	2 units/crew =	82.6 hours	one forklift oper + one helper; rate 2011 3rd party quote
orklift	41.3	hours	\$22.21	\$917		3305 drums @	80 drums/hr =	41.3 hours @	1 units/crew =	41.3 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
latbed Trailer (40-ton)	41.3	hours	\$6.26	\$259		3305 drums @	80 drums/hr =	41.3 hours @	1 units/crew =	41.3 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Subt - Load Drums for Onsite L'Fill	41.3	110013	70.20	\$4,397	\$4,39 <b>7</b>	5505 GIGIIIS @	30 di dili3/111 -	41.5 Hours @	I dilita/Clew -	71.5 110013	13.00 (10 p. 472 (iiile itelii 01 34 33 40 0000)
2.3 Trans Solids Drms to O/S L'Fill						accumac on cita	disposal				
Road Tractor (4 x 2, 30-ton)	20.7	hours	\$32.45	\$0		assumes on-site of 3305 drums @	80 drums/load =	41.3 loads @	0.5 hr/load =	20.7 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	20.7	hours	\$45.00	\$0		3305 drums @	80 drums/load =	41.3 loads @	0.5 hr/load =	20.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	20.7	hours	\$6.26	\$0		3305 drums @	80 drums/load =	41.3 loads @	0.5 hr/load =	20.7 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transp Drms to Onsite L'Fill	20.7	Hours	\$6.26	\$0 \$0	\$1, <b>733</b>	3303 urums @	oo urums/loau –	41.5 loaus @	0.5 III/10au -	20.7 Hours	NSW/ HC μ. 472 (line item 01 54 55 40 6600)
2.4 Unload Sol Drums at O/S L'Fill						assumes on-site of	<u>'</u>				6 106
aborer	20.7	hours	\$39.00	\$0		3305 drums @	80 drums/load =	41.3 loads @	0.5 hr/load =	20.7 hours	one forklift oper + one helper; rate 2011 3rd party quote
Forklift	20.7	hours	\$22.21	\$0		3305 drums @	80 drums/load =	41.3 loads @	0.5 hr/load =	20.7 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	20.7	hours	\$6.26	\$0		3305 drums @	80 drums/load =	41.3 loads @	0.5 hr/load =	20.7 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Drms at Onsite L'Fill			1	\$0	\$1,397						
2.5 Offsite Disp - Solids Drums						assumes off-site I	and disposal; 80 drms	/load; Fac est assume	es on-site disposal		
Offsite Transportation	15900.5	miles	\$3.50	\$55,652	\$0	3305 drums @	80 drums/ld =	41.3 loads @	385 miles/trip =	15900.5miles	Rate: transporters quote/site experience
·											HWC/ETC 2004 & CWM 2011 cost comparison industry pricing
Offsite Disposal - Landfill	3305	drums	\$100.00	\$330,500	\$0	3305 drums					based on current market conditions
Subt - Offsite Disp - Solids Drums				\$386,152	\$0						
(Subt: Assemblies 2.2 thru 2.5)				\$390,549	\$7,527	loading, off-site	transporting, and off-	site disposal of drumi	med solids		
2.6. Load Drums for O/S Agus Tet		1	1			production reta	90 drums/hours fasili	ty avnoriance			I
2.6 Load Drums for O/S Aque Trt	11.7	hours	\$39.00	\$456		469 drums @	80 drums/hour; facili 80 drums/hr =	5.9 hours @	2 units/srow -	11.7 hours	and farklift apar + and halper, rate 2011 2rd party greats
Laborer Forklift	5.9		\$39.00	\$456 \$131		469 drums @ 469 drums @	80 drums/hr = 80 drums/hr =	5.9 nours @ 5.9 hours @	2 units/crew = 1 units/crew =	5.9 hours	one forklift oper + one helper; rate 2011 3rd party quote RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	5.9	hours	\$6.26	\$131		469 drums @	80 drums/hr =	5.9 hours @ 5.9 hours @	1 units/crew =	5.9 hours	RSM/HC p. 470 (line item 01 54 33 40 2020) RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Drms for Onsite Aq/Tr	5.9	110013	<b>30.20</b>	\$37 \$624	\$37 <b>\$624</b>	405 UIUIIIS W	60 urums/m =	J.9 Hours @	T units/crew =	J.9 HOUIS	Noivi/11C μ. 472 (IIIIe Itelii 01 34 33 40 0000)
					·						
2.7 Transp to O/S Aqueous Treat			4			•	0.5 hours for onsite t				
Road Tractor (4 x 2, 30-ton)	2.9	hours	\$32.45	\$94		469 drums @	80 drum/load =	5.9 loads @ =	0.5 hours/trip =	2.9 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Oriver	2.9	hours	\$45.00	\$131		469 drums @	80 drum/load =	5.9 loads @ =	0.5 hours/trip =	2.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	2.9	hours	\$6.26	\$18		469 drums @	80 drum/load =	5.9 loads @ =	0.5 hours/trip =	2.9 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transp to Onsite Aque Treat	1	1	1	\$243	\$243						

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal		Basis of Product	ion and Quantities fo	r In-house Estimate			In-house Pricing References
2.8 Unload/Empty Drms:O/S AqTrt	l					production rate =	= 80 drm/hr; facility ex	merience			
Laborer	11.7	hours	\$39.00	\$456	\$456	•	80 drums/hr =	11.7 hours @	2 units/crew =	11.7 hours	one forklift oper + one helper; rate 2011 3rd party quote
Forklift	5.9	hours	\$22.21	\$131	\$131	469 drums @	80 drums/hr =	11.7 hours @	1 units/crew =	5.9 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	5.9	hours	\$6.26	\$37	\$37	469 drums @	80 drums/hr =	11.7 hours @	1 units/crew =	5.9 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unl/Emp Drms: O/S Aqu Trt				\$624	\$624		· · · · · · · · · · · · · · · · · · ·		,		
2.9 Onsite Aqueous Treatment											
Onsite Aqueous Treatment	25795	gal	\$0.1526	\$3,936	\$3,936	469 drums @	55 gal/drum =	25795.0 gallons			On-site treatment costs: other (gate receipts) wastewater source
Subt - Onsite Aqueous Treatment				\$3,936	\$3,936						
(Subt: Assemblies 2.6 thru 2.9)				\$5,428	\$5,428	loading, onsite t	transporting, unloadin	g, and onsite disposal	of drummed liquids		
2.10 Load Org Liq Drms for Bulking	I					production rate =	= 80 drums/hour; facil	ity experience			
Laborer	14.0	hours	\$39.00	\$546		558 drums @	80 drums/hr =	7.0 hours @	2 units/crew =	14.0 hours	one forklift oper + one helper; rate 2011 3rd party quote
Forklift	7.0	hours	\$22.21	\$155	\$155	558 drums @	80 drums/hr =	7.0 hours @	1 units/crew =	7.0 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton) not req'd	0	hours	\$6.26	\$0	\$0	0 drums @	80 drums/hr =	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Org Liq Drms - Bulking				\$701	\$701				•		
2.11 Onsite Transportation N/A Subt - Onsite Transportation	0	hours	\$0.00	\$0 \$0	\$0 <b>\$0</b>	0 drums @	erformed at Drum Mai 80 drum/load =	nagement Building by 0.0 loads @	forklift; no transporta 0.5 hours/trip =	tion costs incurred 0.0 hours	drums moved solely by forklift at Drum Mgmt Bldg
				, -							
2.12 Unload Org Liq Drms/Bulking						production rate =	= 80 drums/hour; facil	ity experience			
Laborer	14	hours	\$39.00	\$546	\$546	558 drums @	80 drums/hr =	7.0 hours @	2 units/crew =	14.0 hours	one forklift oper + one helper; rate 2011 3rd party quote
Forklift	7	hours	\$22.21	\$155		558 drums @	80 drums/hr =	7.0 hours @	1 units/crew =	7.0 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton) not req'd	0	hours	\$6.26	\$0		0 drums @	80 drums/hr =	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Org Liq Drms/Bulking				\$701	\$701						
2.13 Bulk Org Liquids into Tankers						prod'n rate = 5 m	nin/drum; employs a 2	-person crew + equip	ment		
Laborer	93	hours	\$39.00	\$3,627	\$3,627	558 drums @	12 drums/hr =	46.5 hours @	2 units/crew =	93.0 hours	two laborers; rate 2011 3rd party quote
Pumping Equipment	46.5	hours	\$71.47	\$3,323		558 drums @	12 drums/hr =	46.5 hours @	1 units/crew =	46.5 hours	RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer - 5,500 Gallons	46.5	hours	\$6.31	\$293	\$293	558 drums @	12 drums/hr =	46.5 hours @	1 units/crew =	46.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Bulk Org Liq into Tankers				\$7,244	\$7,244						·
(Subt: Assemblies 2.10 thru 2.13)				\$8,647	\$8,647	loading, onsite t	transporting, and bulk	ing drummed organic	liquids	•	
2.14 Transp Org Liquids Offsite						capacity per 5,50	0-gal tanker = one hu	ndred (100) 55-gal dru	ıms		
Transport in 5,500-gal Tankers	8562.4	miles	\$3.50	\$29,968	\$29,968	558 drums @	100 drm/tankr =	5.6 loads @	1529 miles/trip =	8562.4 miles	Rate: transporters quote/site experience
Subt - Transp Org Liquids Offsite				\$29,968	\$29,968				•		
2.15 Transp Ramp Liquids Offsite						two standing 5,5	00-gal tankers parked	at West ramp = 11,00	00 gallons		
Transport two 5,500 Gal Tankers	3058	miles	\$3.50	\$10,703	\$10,703	11000 gals @	5500 gal/tankr =	2.0 loads @	1529 miles/trip =	3058.0 miles	Rate: transporters quote/site experience

2.0 Drum Management Building		•			•						
Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal		sis of Production	on and Quantities for	In-house Estimate			In-house Pricing References
2.16 Offsite Org Liquids Disposal					off	site incineration	n of non-PCB liquids				
Disposal Cost - Liquids (558 drums)	30690	gallons	\$3.15	\$96,674	\$96,674 55	8 drums @	55 gal/drum =	30690 gallons			HWC/ETC 2004 & Current third party rate
Disposal Cost - Liquids (2 Tankers)	11000	gallons	\$3.15	\$34,650	\$34,650 2.0	0 tankr @	5500 gal/tankr =	11000 gallons			HWC/ETC 2004 & Current third party rate
Subt - Offsite Org Liq Disposal				\$131,324	\$131,324						
(Subt: Assemblies 2.14 thru 2.16)				\$171,995	\$ <b>171,995</b> 0)	ffsite T&D of liq	uids				
2.17 Load Empty Drums					pro	oduction rate =	160 drums/hour (dou	ble the rate of full dr	ums)		
Laborer	12.8	hours	\$39.00	\$499	\$499 10	)27 drums @	160 drums/hr =	6.4 hours @	2 units/crew =	12.8 hours	one forklift oper + one helper; rate 2011 3rd party quote
Forklift	6.4	hours	\$22.21	\$142	\$142 10	)27 drums @	160 drums/hr =	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	6.4	hours	\$6.26	\$40	\$40 10	)27 drums @	160 drums/hr =	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Empty Drums				\$681	<b>\$681</b> Loa	aded for on-site	shredding & offsite o	lisposal or for onsite	disposal		
2.18 Transp Drums to Onsite Shrd							0.5 hours for onsite to				
Road Tractor (4 x 2, 30-ton)	6.4		\$32.45	\$208		127 drums @	80 drum/load =	12.8 loads @	0.5 hours/trip =	6.4 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	6.4		\$45.00	\$288		127 drums @	80 drum/load =	12.8 loads @	0.5 hours/trip =	6.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	6.4	hours	\$6.26	\$40		127 drums @	80 drum/load =	12.8 loads @	0.5 hours/trip =	6.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transp to Onsite Shredder				\$536	\$0						
2.19 Unload Empty Drums					pro	oduction rate =	160 drums/hour (dou	ble the rate of full dr	rums)		
Laborer	12.8	hours	\$39.00	\$499	\$0 10	)27 drums @	160 drums/hr =	6.4 hours @	2 units/crew =	12.8 hours	one forklift oper + one helper; rate 2011 3rd party quote
Forklift	6.4	hours	\$22.21	\$142	\$0 10	)27 drums @	160 drums/hr =	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	6.4	hours	\$6.26	\$40	\$0 10	)27 drums @	160 drums/hr =	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Empty Drums				\$681	\$0						
2.20 Onsite Drum Shredding					nro	nd'n = 80 drums	s/hour; debris shredde	ed into rolloff			
Laborer	25.7	hours	\$39.00	\$1,002		027 drums @	80 drums/hr =	12.8 hours @	2 units/crew =	25.7 hours	one shredder oper + one helper; rate 2011 3rd party quote
Shredder	12.8		\$329.70	\$4,220		)27 drums @	80 drums/hr =	12.8 hours @	1 units/crew =	12.8 hours	2004 DEC Rate * Implicit Deflator
Rolloff (30-CY)	12.8		\$19.02	\$243		)27 drums @	80 drums/hr =	12.8 hours @	1 units/crew =	12.8 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Onsite Drum Shredding	12.0	Hours	<b>γ13.02</b>	\$5,466	\$0	27 di di 113 @	00 di dili3/ili -	12.0 110013 @	1 dilits/ciew -	12.0 110013	GENERAL   NOW, BC p. 42 (02223 730 0000)
				73,100	17						
2.21 Transp Drms: onsite L'fill					Tra	ansport whole d	Irums to onsite landfil	l for disposal: produ	ction rate = 0.5 hours f	for onsite travel	
Road Tractor (4 x 2, 30-ton)	6.4	hours	\$32.45	\$0		)27 drums @	80 drums/load =	12.8 loads @	0.5 hours/trip =	6.4 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	6.4		\$45.00	\$0		)27 drums @	80 drums/load =	12.8 loads @	0.5 hours/trip =	6.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	6.4		\$6.26	\$0		)27 drums @	80 drums/load =	12.8 loads @	0.5 hours/trip =	6.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transp Mat'l to Landfill				\$0		ums crushed in			, , , , , , , , , , , , , , , , , , ,		,
2.22 Unload Empty Drum									II drums @ site experie	•	
Laborer	6.4		\$39.00	\$0		)27 drums @	160 drums/hr =	6.4 hours @	1 units/crew =	6.4 hours	one loader oper + one helper; rate 2011 3rd party quote
Landor (mondium)	6.4	hours	\$14.39	\$0	\$92 10	127 drums @	160 drums/hr =	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Loader (medium)											
Flatbed Trailer (40-ton) Subt - Unload Epty Drum at Landfill	6.4	hours	\$6.26	\$0 <b>\$0</b>		27 drums @ ums crushed in	160 drums/hr =	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal		Basis of Producti	ion and Quantities for	In-house Estimate			In-house Pricing References
2.23 Offsite Disp/Shrd'd Drums	1	1				assumes off site I	and disposal of shrods	led drums; 20 tons/loa	ıd		1
Offsite Transportation	5.0	miles	\$3.25	\$16		10.3 tons @	20 tons/load =	0.5 (个1) loads @		5.0 miles	Rate: transporters quote/site experience
Offsite Disposal - Non-Haz Landfill	10.3	tons	\$35.00	\$361	· ·	10.3 tons @	20 lbs/drum =	10.3 tons @	1 tons/CY =	10.3 tons	Modern Disposal/Site Experience
Subt - Offsite Shrd'd Drums Disp'l	10.5	tons	Ş33.00	\$301	\$0 \$0	1027 druins @	20 103/ 01 0111 =	10.5 tons @	1 (0115/C1 -	10.5 (0115	Modern Disposarysite Experience
(Subt: Assemblies 2.17 thru 2.23)				\$7,741	7 -	onsite drum shre	edding and off-site nor	-haz disposal			
				, ,				·			•
2.24 Load Spec Treat for O/S T&D						production rate =	40 drums/hour; site	xperience			
Laborer	6	hours	\$39.00	\$234		120 drums @	40 drums/hr =	3.0 hours @	2 pers/crew =	6.0 hours	one forklift oper + one helper; rate 2011 3rd party quote
Forklift	3	hours	\$22.21	\$67		120 drums @	40 drums/hr =	3.0 hours @	1 units/crew =	3.0 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Dump Trailer (22 ton)	3	hours	\$5.20	\$16	·	120 drums @	40 drums/hr =	3.0 hours @	1 units/crew =	3.0 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Spec Trt for O/S T&D				\$316	\$316		,				
2.25 Transport Spec Trt Offsite	-		46	, .		Estimate based o	n a per drum basis for	special treatment was	te: max 120 drums		
Truck Transport @ 88 drums/load	0	miles	\$0.00	\$0	\$0						
Transport per drum	120	drum	\$50.00	\$6,000		Facility estimate I	based on per drum rat	е			rate = site experience
Subt - Transport Spec Trt Offsite				\$6,000	\$6,000						_
2.26 Offsite Spec Trt Disposal						disposal price of	\$500/drum				
Disposal Cost (Misc Drums)	120	drum	\$500.00	\$60,000	\$60,000	120 drums					site estimate of \$500/drum for unknown wastes
Subt - Offsite Spec Trt Disposal				\$60,000	\$60,000						
(Subt: Assemblies 2.24 thru 2.26)				\$66,316	\$66,316	offsite T&D of dr	rums requiring special	treatment			
	•		1					,			
2.27 Decon Drm Mgmt Bldg (wash)	200.0		400.00	40.44=				n crew w/ one unit eac	· ' '	200.01	
Laborer	208.9	hours	\$39.00	\$8,147		21933 SF @	105 SF/hr =	208.9 hours @	1 pers/crew =	208.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04	\$0			Wash Combo Used				RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	200.0	hours	\$3.41	\$0		not required	105 CE/b	200 0 h @	4:+-/	200.0 h	RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum-Pressure Wash Combo Subt - Decon Drm Mgt Bldg (Wash)	208.9	hours	\$22.94	\$4,792 <b>\$12,939</b>	\$4,792 <b>\$12,939</b>	21933 SF @	105 SF/hr =	208.9 hours @	1 units/crew =	208.9 hours	2001 Rate * Implicit Deflator
Sapt - Decoil Dilli Migt Blug (Wasii)	+			\$12,339	Ş12,339						
2.28 Decon Drum Mgt Bldg (Rinse)						production rate =	105 SF/hr for 1-perso	n crew w/ one unit; fac	cility experience		
Laborer	208.9	hours	\$39.00	\$8,147		21933 SF @	105 SF/hr =	208.9 hours @	2 pers/crew =	208.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04	\$0	\$0	Vacuum-Pressure	Wash Combo Used				RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41	\$0		not required					RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum-Pressure Wash Combo	208.9	hours	\$22.94	\$4,792	\$4,792	21933 SF @	105 SF/hr =	208.9 hours @	1 units/crew =	208.9 hours	2001 Rate * Implicit Deflator
Subt - Decon Drm Mgt Bldg (Rinse)				\$12,939	\$12,939						
							0=1 / ::				
2.29 Decon Water Samp/Dispose			620.00	41-0	4			two techs; DEC treatm			. 2044.2
Technician	4.0		\$38.00	\$152	·	4.0 samp @	0.5 hr/samp =	2.0 hours @	2 pers/crew =	4.0 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	4.0	samp	\$105.00	\$420		4.0 samples	0.05 1/.5/			21005	analytical price: average of three quotes
On-site Water Disposal	4386.6	gal	\$0.0313	\$137 <b>\$709</b>	\$137 <b>\$709</b>	21933 SF @	0.05 gal/sf/wa =	2193.3	3 0.05 gal/sf/rinse =	2193.3 gals	site waters waste treat price ; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose											

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal		Basis of Production	n and Quantities fo	r In-house Estimate			In-house Pricing References
2.30 PCB Wipe & Destruct Samp			ı	1		nundustion water - (	) F have /sample for	tura tacha basad una	n facility ave		
Technician	35.1	hours	\$38.00	\$1,334	¢1 224	35.1 samp @	0.5 hr/samp =	two techs based upo 17.55 hours @	2 pers/crew =	35.1 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	33.1	samp	\$446.67	\$1,334 ¢n			ples and TCLP not re		z pers/crew =	33.1 Hours	analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	35.1		\$83.33	\$2,925		21933 SF @	625 SF/samp =	35.1 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp	33.1	Samp	765.55	\$4,259	\$4,259	21933 31 @	023 31 / 3d111p =	33.1 3ample3			analytical price, average of timee quotes
(Subt: Assemblies 2.27 thru 2.30)				\$30,847		buildina decontar	nination and sampli	na			
Total Labor Hours	849.2										
2.31 PPE Usage & H&S Planning						Level C @ 75%; M	od Level C @ 25% fo	r total non-supv hrs fo	or all tasks; HASP @ 2.5	% of non-supv hrs	
PPE Usage - Mod Level C	26.6	days	\$9.00	\$239	\$239	849.2 hours @	8 hr/day =	106.2 days @	25% "Mod C" days =	26.6 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	79.6	days	\$25.00	\$1,990		849.2 hours @	8 hr/day =	106.2 days @	75% "C" days =	79.6 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	21.2	hours	\$75.00	\$1,590		849.2 hours @	2.5% hr/hr =	21.2 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$3,819	\$3,819						
2.32 Supervision						4 weeks for closure	e of Drum Managem	ent Building			
Foreman	160	hours	\$65.00	\$10,400	\$10,400	4 weeks @	40 hrs/wk =	160.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	\$0	Included in Gen'l (	Contractor G&A/Hor	ne Office indirect cost	S		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$10,400	\$10,400						
2.33 Certification						Engineer @ 1.5% a	nd Clerical @ 1.5% o	of total non-supervisor	ry hours for all tasks		
Engineer	12.74	hours	\$130.00	\$1,656	\$1,656	849.2 hours @	0.015 hr/hr =	12.74 hours			Engineer rate: 2011 3rd party quote
Clerical	12.74	hours	\$45.00	\$573	\$573	849.2 hours @	0.015 hr/hr =	12.74 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$2,230	\$2,230						

2.0 Drum Management Building			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011 Cost	
		OffSite	
	of Direct Cost	•	
Direct Costs/Basic Disposal		\$699,707	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%		note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$27,988	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$41,982	note: DEC uses 6%
Engineering During Construction	2.00%	\$13,994	note: DEC uses 2%
General Contractor Profit	6.00%	\$41,982	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$174,927	
Subtotal - Drum Storage Bldg		\$874,633	
Plus Contingency	10.00%	\$87,463	CWM and DEC 10%
Total - Drum Stor Bldg		\$962,097	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 3.0 Fuels & PCB Mgmt Area

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
3.1 Inventory Verification			I				t 0.2 h		0 h 1 0		T
Laborer	Q	hours	\$39.00	\$312	\$212	2 areas @	2 hrs/area =	each for four activity ar 4.0 hours @	2 units/crew =	8.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	•	Hours	Ç39.00	\$312	\$312	2 ai eas @	2 1113/ a1Ca =	4.0 Hours @	z umis/crew =	8.0 110013	(note: labor rate provided by local contractor)
(Subt: Assemblies 1.1 thru 1.1)				\$312	\$312						(note: labor rate provided by local contractor)
3.2 Empty Transformers		1			\$160.716	nrod'n rate - 1 6	50 gals/hr: RSM/LIP n	0-171 (33-10-0101): 11	transformers @ 386 gals	each	T
Laborer	5.1	hours	\$39.00	\$199		4246 gals @	1650 gals/hr =	2.6 hours @	2 units/crew	5.1 hours	two laborers; rate 2011 3rd party quote
Pumping Equipment	2.6		\$71.47	\$186		4246 gals @	1650 gals/hr =	2.6 hours @	1 units/crew	2.6 hours	RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer - 5,000 Gals	2.6		\$6.31	\$16		4246 gals @	1650 gals/hr =	2.6 hours @	1 units/crew	2.6 hours	T&D rate below includes tanker
Subt - Empty Transformers	3.0		73.32	\$401	\$401	. 0	O, ···		,		
3.3 Transp Transformer Liqs Offsite		-				capacity per tanl	ker = 5 000 gallons can	acity per tanker = 5,000	gallons		
Transport in 5,000 Gal Tanker	1529.0	miles	\$3.50	\$5,352	\$5.352	4246 gals @	5000 gal/tankr =		1529 miles/load	1529.0 miles	Rate: transporters quote/site experience
Subt - Transp't Transformer Liquids			70.00	\$5,352	\$5,352	12 10 800 6	2222 827 22	010 10000 (1 =10/C			
3.4 Dispose of Transformer Liquids						liquid PCB waste	<u> </u>				
Disposal Cost - PCB Liquids	4246	gallons	\$4.68	\$19,871	\$19.871	4246 gallons	<u> </u>				HWC/ETC 2004 & Current third party rate
Subt - Transformer O/S Lig Dispos'l	12.10	8	7	\$19,871	\$19,871	in to game in					The grant of the g
(Subt: Assemblies 3.2 thru 3.4)				\$25,624	\$25,624	empty transform	ners and T&D PCB liqui	ds			
			1								
3.5 Load 12-ton Transf + 2-ton Pan						prod'n rate = 3 h	ours/transformer + pa	n: 12-ton transformer +	2-ton pan (11' x 7' x .67'	@ 75#/CF)	
	66	hours	\$39.00	\$2.574	\$2.574		· ·		2-ton pan (11' x 7' x .67' 2 units/crew =		HASP reg's two: loaded labor rate 2011 3rd party quote
Laborer	66		\$39.00 \$86.31	\$2,574 \$2,848		prod'n rate = 3 h 11 tr/pan @ 11 tr/pan @	ours/transformer + pa 3 hr/tr-pan = 3 hr/tr-pan =	n: 12-ton transformer + 33.0 hours @ 33.0 hours @	2-ton pan (11' x 7' x .67' 2 units/crew = 1 units/crew =	@ 75#/CF) 66.0 hours 33.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote RSM/HC p. 474 (line item 01 54 33 60 2700)
3.5 Load 12-ton Transf + 2-ton Pan Laborer Yard Crane (25-ton) Equipment Operator (Crane)		hours			\$2,848	11 tr/pan @	3 hr/tr-pan =	33.0 hours @	2 units/crew =	66.0 hours	
Laborer Yard Crane (25-ton)	33	hours hours	\$86.31	\$2,848	\$2,848 \$1,650	11 tr/pan @ 11 tr/pan @	3 hr/tr-pan = 3 hr/tr-pan =	33.0 hours @ 33.0 hours @	2 units/crew = 1 units/crew =	66.0 hours 33.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton)	33 33	hours hours	\$86.31 \$50.00	\$2,848 \$1,650	\$2,848 \$1,650	11 tr/pan @ 11 tr/pan @ 11 tr/pan @	3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan =	33.0 hours @ 33.0 hours @ 33.0 hours @	2 units/crew = 1 units/crew = 1 units/crew =	66.0 hours 33.0 hours 33.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700) loaded labor rate 2011 3rd party quote
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F	33 33	hours hours	\$86.31 \$50.00	\$2,848 \$1,650 \$207	\$2,848 \$1,650 \$207	11 tr/pan @ 11 tr/pan @ 11 tr/pan @ 11 tr/pan @	3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan =	33.0 hours @ 33.0 hours @ 33.0 hours @ 33.0 hours @	2 units/crew = 1 units/crew = 1 units/crew =	66.0 hours 33.0 hours 33.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700) loaded labor rate 2011 3rd party quote
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F 3.6 Trans Transf/Pans to Onsite L/F	33 33	hours hours hours	\$86.31 \$50.00	\$2,848 \$1,650 \$207	\$2,848 \$1,650 \$207 <b>\$7,279</b>	11 tr/pan @ 11 tr/pan @ 11 tr/pan @ 11 tr/pan @	3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan =	33.0 hours @ 33.0 hours @ 33.0 hours @ 33.0 hours @	2 units/crew = 1 units/crew = 1 units/crew =	66.0 hours 33.0 hours 33.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700) loaded labor rate 2011 3rd party quote
Laborer Yard Crane (25-ton) Equipment Operator (Crane)	33 33 33	hours hours hours	\$86.31 \$50.00 \$6.26	\$2,848 \$1,650 \$207 <b>\$7,279</b>	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$178	11 tr/pan @ production rate =	3 hr/tr-pan =	33.0 hours @ 33.0 hours @ 33.0 hours @ 33.0 hours @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =	66.0 hours 33.0 hours 33.0 hours 33.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700) loaded labor rate 2011 3rd party quote RSM/HC p. 472 (line item 01 54 33 40 6600)
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F  3.6 Trans Transf/Pans to Onsite L/F Road Tractor (4 x 2, 30-ton) Driver	33 33 33 5.5	hours hours hours hours hours	\$86.31 \$50.00 \$6.26 \$32.45	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$0 \$0 \$0	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$178 \$248 \$34	11 tr/pan @	3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan =  3 hr/tr-pan =  1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load =	33.0 hours @ 33.0 hours @ 33.0 hours @ 33.0 hours @ 31.0 hours @ 11.0 loads @ 11.0 loads @ 11.0 loads @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 0.5 hr/load =	66.0 hours 33.0 hours 33.0 hours 33.0 hours 5.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700) loaded labor rate 2011 3rd party quote RSM/HC p. 472 (line item 01 54 33 40 6600) RSM/HC p. 472 (line item 01 54 33 40 7410)
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F  3.6 Trans Transf/Pans to Onsite L/F Road Tractor (4 x 2, 30-ton) Driver Flatbed Trailer (40-ton)	33 33 33 5.5 5.5	hours hours hours hours hours	\$86.31 \$50.00 \$6.26 \$32.45 \$45.00	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$0 \$0	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$178 \$248 \$34	11 tr/pan @	3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan = 5 0.5 hours for onsite tr 1 tr-pan/load = 1 tr-pan/load =	33.0 hours @ 33.0 hours @ 33.0 hours @ 33.0 hours @ 31.0 hours @ 11.0 loads @ 11.0 loads @ 11.0 loads @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 0.5 hr/load = 0.5 hr/load =	66.0 hours 33.0 hours 33.0 hours 33.0 hours 5.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)  loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  RSM/HC p. 472 (line item 01 54 33 40 7410)  loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F  3.6 Trans Transf/Pans to Onsite L/F Road Tractor (4 x 2, 30-ton) Driver Flatbed Trailer (40-ton) Subt - Transp Trans/Pans O/S L'Fill	33 33 33 5.5 5.5	hours hours hours hours hours	\$86.31 \$50.00 \$6.26 \$32.45 \$45.00	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$0 \$0 \$0	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$178 \$248 \$34	11 tr/pan @ onsite disposal of	3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan =  1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load =	33.0 hours @ 33.0 hours @ 33.0 hours @ 33.0 hours @ 31.0 hours @ 11.0 loads @ 11.0 loads @ 11.0 loads @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =  0.5 hr/load = 0.5 hr/load = 0.5 hr/load =	66.0 hours 33.0 hours 33.0 hours 33.0 hours 5.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)  loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  RSM/HC p. 472 (line item 01 54 33 40 7410)  loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F  3.6 Trans Transf/Pans to Onsite L/F Road Tractor (4 x 2, 30-ton) Driver Flatbed Trailer (40-ton) Subt - Transp Trans/Pans O/S L'Fill  3.7 Unload Transf/Pans at O/S L/F	33 33 33 5.5 5.5	hours hours hours hours	\$86.31 \$50.00 \$6.26 \$32.45 \$45.00	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$0 \$0 \$0	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$178 \$248 \$34 <b>\$460</b>	11 tr/pan @ onsite disposal of	3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan = 3 hr/tr-pan =  1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load =	33.0 hours @  avel 11.0 loads @ 11.0 loads @ s	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =  0.5 hr/load = 0.5 hr/load = 0.5 hr/load =	66.0 hours 33.0 hours 33.0 hours 33.0 hours 5.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)  loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  RSM/HC p. 472 (line item 01 54 33 40 7410)  loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F  3.6 Trans Transf/Pans to Onsite L/F Road Tractor (4 x 2, 30-ton) Driver Flatbed Trailer (40-ton) Subt - Transp Trans/Pans O/S L'Fill  3.7 Unload Transf/Pans at O/S L/F Laborer	33 33 33 5.5 5.5 5.5	hours hours hours hours hours hours hours	\$86.31 \$50.00 \$6.26 \$32.45 \$45.00 \$6.26	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$0 \$0 \$0 <b>\$0</b>	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$178 \$248 \$34 <b>\$460</b>	11 tr/pan @ onsite disposal of	3 hr/tr-pan =  1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = transformers and pan	33.0 hours @ 11.0 loads @ 11.0 loads @ 11.0 loads @ s 11.0 loads @ s	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =  0.5 hr/load = 0.5 hr/load = 0.5 hr/load =	66.0 hours 33.0 hours 33.0 hours 33.0 hours 5.5 hours 5.5 hours 5.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)  loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  RSM/HC p. 472 (line item 01 54 33 40 7410)  loaded labor rate: loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F  3.6 Trans Transf/Pans to Onsite L/F Road Tractor (4 x 2, 30-ton)	33 33 33 5.5 5.5 5.5	hours hours hours hours hours hours hours hours	\$86.31 \$50.00 \$6.26 \$32.45 \$45.00 \$6.26	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$0 \$0 \$0 \$0 \$0 \$0	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$178 \$248 \$34 <b>\$460</b> \$858 \$1,899	11 tr/pan @	3 hr/tr-pan =  1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load =	33.0 hours @ 11.0 loads @ 11.0 loads @ 11.0 loads @ s: 12-ton transformer + 2	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =  0.5 hr/load = 0.5 hr/load = 0.5 hr/load = 1 units/crew =	66.0 hours 33.0 hours 33.0 hours 33.0 hours 5.5 hours 5.5 hours 5.5 hours 22.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)  loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  RSM/HC p. 472 (line item 01 54 33 40 7410)  loaded labor rate: loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  HASP req's two: loaded labor rate 2011 3rd party quote
Laborer Yard Crane (25-ton) Equipment Operator (Crane) Flatbed Trailer (40-ton) Subt - Load Transf/Pans OnSite L/F  3.6 Trans Transf/Pans to Onsite L/F Road Tractor (4 x 2, 30-ton) Driver Flatbed Trailer (40-ton) Subt - Transp Trans/Pans O/S L'Fill  3.7 Unload Transf/Pans at O/S L/F Laborer Yard Crane (25-ton)	33 33 33 5.5 5.5 5.5 22 22	hours	\$86.31 \$50.00 \$6.26 \$32.45 \$45.00 \$6.26 \$39.00 \$86.31	\$2,848 \$1,650 \$207 <b>\$7,279</b> \$0 \$0 \$0 \$0	\$2,848 \$1,650 \$207 \$7,279 \$178 \$248 \$34 \$460 \$858 \$1,899 \$1,100	11 tr/pan @	3 hr/tr-pan =  1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 1 tr-pan/load = 4 transformers and pan 5 urs/transformer + pan 2 hr/tr-pan = 2 hr/tr-pan =	33.0 hours @  avel 11.0 loads @ 11.0 loads @ 11.0 loads @ 5 1: 12-ton transformer + 2 22.0 hours @ 22.0 hours @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =  0.5 hr/load = 0.5 hr/load = 0.5 hr/load =  1 units/crew = 1 units/crew =	66.0 hours 33.0 hours 33.0 hours 33.0 hours 5.5 hours 5.5 hours 5.5 hours 22.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)  loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  RSM/HC p. 472 (line item 01 54 33 40 7410)  loaded labor rate: loaded labor rate 2011 3rd party quote  RSM/HC p. 472 (line item 01 54 33 40 6600)  HASP req's two: loaded labor rate 2011 3rd party quote  RSM/HC p. 474 (line item 01 54 33 60 2700)

### 3.0 Fuels & PCB Mgmt Area

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
				,							
3.8 Offsite Disp - Transf/Pans							<u> </u>		mate assumes on-site dispo		
Offsite Transportation	4235.0	miles	\$3.50	\$14,823		11 tr/pan @	1 tr-pan/load =	11.0 loads @	385 miles/trip =	4235.0 miles	Rate: transporters quote/site experience
Offsite Disposal	2233	CF	\$12.50	\$27,913		11 units @	14 ton/unit =	154.0 ton @	2 ton/CY	77 CY	DEC 2004 Estimate accounting for inflation
Subt - Offsite Transf/Pans Disposal				\$42,735	\$0						
(Subt: Assemblies 3.5 thru 3.8)				\$50,014	\$11,734	loading, transpo	ort & off-site land dispo	sal of 11 transformer	s + pans; offsite T&D for tra	nsformer oil	
3.9 Transp T.O. Liquids Offsite						two (2) standing	6,000-gal tankers park	ed @ T.O. Bldg Unloa	iding Ramp = 12,000 gallons		T
Transport in 6,000 Gal Tanker	3058	miles	\$3.50	\$10,703	\$10,703	12000 gals @	6000 gal/tankr =	2.0 loads @	1529 miles/trip =	3058.0 miles	Rate: transporters quote/site experience
Subt - Transp T.O. Liquids Offsite				\$10,703	\$10,703	<u> </u>	<u> </u>				
3.10 Offsite T.O. Liquids Disposal						PCB liquid waste	S				
Disposal Cost - Liquids	12000	gallons	\$4.68	\$56,160	\$56.160	12000 gallons	-				HWC/ETC 2004 & Current third party rate
Subt - Offsite T.O. Liquids Disposal		0	,	\$56,160	\$56,160						
(Subt: Assemblies 3.9 thru 3.10)				\$66,863			vo (2) 6,000-gallon tan	kers			
3.11 Decon T.O. Bldg/ramp (Wash)	Ī	1	1			I	105.55/		f:!:		
Laborer Laborer	79.4	hours	\$39.00	\$3,097		8342 SF @	= 105 SF/hr for 1-persor 105 SF/hr =	79.4 hours @	1 units/crew	79.4 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	79.4	hours	\$4.04	\$3,097		not applicable	105 37/111 -	79.4 Hours @	1 umis/crew	79.4 Hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
	0		\$4.04	\$0 \$0		not applicable					RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum Sweeper	70.4	hours	•	\$1,821		8342 SF @	105 SF/hr =	70.4 haura @	1ita/ara	70.4 hours	
Vacuum-Pressure Wash Combo Subt - Decon T.O. Bldg/ramp (wash)	79.4	hours	\$22.94	\$1,821 <b>\$4,918</b>			105 3F/11 =	79.4 hours @	1 units/crew	79.4 hours	equip't price: average of three quotes
Subt - Decon 1.O. Bidg/ramp (wash)				\$4,918	\$4,918						
3.12 Decon T.O. Bldg/ramp (Rinse)						production rate =	: 105 SF/hr for 1-persor	n crew w/ one units;	facility experience		
Laborer	79.4	hours	\$39.00	\$3,097	\$3,097	8342 SF @	105 SF/hr =	79.4 hours @	2 units/crew	79.4 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	0	hours	\$4.04	\$0	\$0	not applicable					RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	0	hours	\$0.83	\$0	\$0	not applicable					RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum-Pressure Wash Combo	79.4	hours	\$22.94	\$1,821	\$1,821	8342 SF @	105 SF/hr =	79.4 hours @	1 units/crew	79.4 hours	equip't price: average of three quotes
Subt - Decon T.O. bldg/ramp (rinse)				\$4,918	\$4,918						
3.13 Decon Water Samp/Dispose						production rate =	0.5 hours/sample for	two techs; facility tre	atment unit price = \$0.0273	s/gallon	
Technician	2.2	hours	\$38.00	\$84	\$84	2.2 samp @	0.5 hr/samp =	1.1 hours @	2 units/crew	2.2 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)	2.2	samp	\$105.00	\$231	\$231	2.0 areas	1.1 samp/area =	2.2 samples			analytical price: average of three quotes
On-site Water Disposal	834.2	gal	\$0.0313	\$26	\$26	8342 SF @	0.05 gal/sf/wa =	417.1 gallons +	0.05 gal/SF/rinse =	834.2 gals	site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$341	\$341						

### 3.0 Fuels & PCB Mgmt Area

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	Extended	Basis of Producti	ion and Quantities for	In-house Estimate			In-house Pricing References
3.14 PCB Wipe & Destruct Samp						production rate =	0.5 hours/sample for t	wo techs; rate same	as facility's		
Technician	15.3	hours	\$38.00	\$581	\$581	15.3 samp @	0.5 hr/samp =	7.7 hours @	2 units/crew	15.3 hours	technician rate: rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	2	samp	\$446.67	\$893	\$893	2.0 areas @	1.0 samp/area =	2.0 samples			analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	13.3	samp	\$83.33	\$1,108	\$1,108	8342 SF @	625 SF/samp =	13.3 samples	•		analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$2,583	\$2,583		•	•	•		
(Subt: Assemblies 3.11 thru 3.14)				\$12,760	\$12,760	decontamination	n, sampling, and analys	is of T.O. Building an	d Unloading Ramp		

Total Non-Super hours 304.9

3.15 PPE Usage & H&S Planning						Level C @ 75%; N	1od Level C @ 25% fo	or total non-supv hrs fo	r all tasks; HASP @ 2.5% of r	non-supv hrs	
PPE Usage - Mod Level C	9.5	days	\$9.00	\$86	\$86	304.9 hours @	8 hr/day =	38.1 days @	25% "Mod C" days =	9.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	28.6	days	\$25.00	\$715	\$715	304.9 hours @	8 hr/day =	38.1 days @	75% "C" days =	28.6 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	7.6	hours	\$75.00	\$570	\$570	304.9 hours @	2.5% hr/hr =	7.6 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$1,371	\$1,371						
3.16 Supervision						1 week for closure	e of Fuels & PCB Mar	nagement Area			
Foreman	40	hours	\$65.00	\$2,600	\$2,600	1 week @	40 hrs/wk =	40.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	\$0	Included in Gen'l	Contractor G&A/Ho	me Office indirect cost	S		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$2,600	\$2,600						
3.17 Certification						Engineer @ 8 hrs	and Clerical @8 hrs:	site experience			
Engineer	6.7	hours	\$130.00	\$871	\$871	304.9 hours @	0.015 hr/hr =	6.7 hours	·		Engineer rate: 2011 3rd party quote
Clerical	6.7	hours	\$45.00	\$302	\$302	304.9 hours @	0.015 hr/hr =	6.7 hours	·		Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$1,173	\$1,173						
(Subt: Assemblies 3.15 thru 3.17)				\$5,143	\$5,143	supervision, hea	lth & saftey, and cert	tification	-	_	

3.0 Fuels/PCB Management Direct Cost Total Basic \$160,716 \$122,435

3.0 Fuels/PCB Management			
Total Cost Summary			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost OffSite Disposal	Cost Range
Direct Costs/Basic Disposal		\$160,716	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$11,250	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$6,429	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$9,643	note: DEC uses 6%
Engineering During Construction	2.00%	\$3,214	note: DEC uses 2%
General Contractor Profit	6.00%	\$9,643	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$40,179	
Subtotal - Fuels/PCB Mgmt Area		\$200,894	\$226,124
Plus Contingency	10.00%	\$20,089	CWM and DEC 10%
Total - Fuels/PCB Mgmt Area		\$220,984	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production	on and Quantities fo	r In-house Estimate			In-house Pricing References
	I I		1								
DCDA Callida - Charadala di a alfilla	Inventory	e d									
RCRA Solids – Shredder/Landfill		•									
RCRA Solids - Stab/Landfill RCRA Solids - Macro/Landfill											
PCB Liquids - Incineration											
PCB Liquius - Ilicilieration	3 talikeis/27	,500 gais	l								
	1		I	T		prodin rotos, 2 dr.	ms/min/srow/100 d	rums/bourly and 0 to	nkar ar rallaff/haur/s	row two porcons	<u> </u>
4.1 Inventory Verification						required;	iiiis/iiiii/crew (100 d	rums/hour); and 8 ta	liker or rolloll/flour/	trew, two persons	
Laborer	6	hours	\$39.00	\$234	¢224	300 drums @	100 drums/hr =	3.0 hours @	2 units/crew =	6.0 hours	HASP reg's two; loaded labor rate 2011 3rd party quote
Laborer	20.8	hours	\$39.00	\$811		83 rolloffs @	8 rolloffs/hr =	10.4 hours @	2 units/crew =	20.8 hours	HASP reg's two; loaded labor rate 2011 3rd party quote
Laborer	20.8	hours	\$39.00	\$98		5 tankers @	4 rolloffs/hr =	1.2 hours @	2 units/crew =	2.5 hours	HASP reg's two; loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	2.3	Hours	\$35.00	\$1,143	\$1,143		410110115/111 -	1.2 Hours @	2 units/crew =	2.5 110015	HASE Ted 5 two, loaded labor face 2011 Std party quote
(Subt: Assemblies 4.1)				\$1,143			tory of capacity of St	ahilization area			
(Subtrivisements in 1)				71,143	71,143	sarrey and mirem	iory of capacity of other	aomeann ar ca			
4.2 Transp All Rolloffs: Onsite Stab for	1		1	1							
Offsite disp						production rate =	0 E hours /rolloff for	an cita traval (all rolle	offe proviously ovisting	t at cital	
Road Tractor (4 x 2, 30-ton)	32.5	hours	\$32.45	\$1,055	ćn	65 rolloffs @	1 rolloff/load =	on-site travel (all rollo 65.0 loads @	0.5 hours/trip =	32.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	32.5	hours	\$45.00	\$1,463		65 rolloffs @	1 rolloff/load =	65.0 loads @	0.5 hours/trip =	32.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY) (existing equip't)	32.3	hours	\$45.00	\$1,463		0 rolloffs @	1 rolloff/load =	0.0 loads @	0.5 hours/trip =	0.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subtotal -Transport Rolloffs Onsite	U	Hours	\$15.02	\$2,517	\$0 \$0		1 TOHOTI/TOdu -	0.0 loads @	0.5 Hours/trip =	0.0 110013	RSW/HC p. 472 (life itell 01 34 33 40 0000)
Subtotal - Hallsport Rollolls Offsite				\$2,517	Ş0						
4.2a Transp All Rolloffs: Onsite Stab for											
Onsite disp						production rate =	0.5 hours/rolloff for	on-site travel (all rollo	offs proviously existing	tat cita)	
Road Tractor (4 x 2, 30-ton)	32.5	hours	\$32.45	\$0	\$1.055	65 rolloffs @	1 rolloff/load =	65.0 loads @	0.5 hours/trip =	32.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	32.5	hours	\$45.00	\$0		65 rolloffs @	1 rolloff/load =	65.0 loads @	0.5 hours/trip =	32.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY) (existing equip't)	0	hours	\$19.02	\$0		0 rolloffs @	1 rolloff/load =	0.0 loads @	0.5 hours/trip =	0.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subtotal -Transport Rolloffs Onsite		Hours	713.02	\$0	\$2,517	0 10110113 @	11011011/1000 =	0.0 10863 @	0.5 110dr3/trip =	0.0 110013	NSW/TIC p: 472 (IIIIC IICIII 01 34 33 40 0000)
Subtotal Transport Honoris Chisico				Ţ,	<del>+-,</del>						
4.3 Stabilization (non-Macro mat'l) for											
Offsite disp						prod'n rate = 100 t	tons/hour = 800 tons	/day (non-Macro Roc	om material): 30 CY ro	oll = 16 tons	
PROCESS TONS (incl kiln dust)	1196.0	TONS	n/a			65 rolloffs @	30 CY each @	16 tons/rolloff +	15% kiln dust =	1196.0 tons	30 CY/rolloff = 16 ton material/rolloff
Cement Kiln Dust - Mat'l&Delv Cost	156.0	tons	\$48.00	\$7,488	\$0	65 rolloffs @	30 CY each @	16 tons/rolloff +	15% kiln dust =	1196.0 tons	CWM actual 2011 costs
Stabilization Cost	1040.0	tons	\$25.00	\$26,000			rate for material & d	eliverv			CWM actual 2011 costs inc. labor & equipment
TCLP Testing - RCRA (EPA 1311)	21.7	samp	\$348.33	\$7,559		65 rolloffs @	3 ro's/samp =	21.7 samples			average of 3 third party labs; one sample per 3 rolloffs
Subt - Stabilization			,	\$41,047			stabilization rate; inc	•			a significant and a significant property of the significant and the significant property of the significant proper
						,	,	, ,			
4.3a Stabilization (non-Macro mat'l) for											
Onsite disp				1		prod'n rate = 100 t	tons/hour = 800 tons	/day (non-Macro Roc	om material): 30 CV ro	oll = 16 tons	
PROCESS TONS (incl kiln dust)	1196.0	TONS	n/a	1		65 rolloffs @	30 CY each @	16 tons/rolloff +	15% kiln dust =	1196.0 tons	30 CY/rolloff = 16 ton material/rolloff
Cement Kiln Dust - Mat'l&Delv Cost	156.0	tons	\$48.00	\$0	\$7.488	65 rolloffs @	30 CY each @	16 tons/rolloff +	15% kiln dust =	1196.0 tons	CWM actual 2011 costs
Stabilization Cost	1040.0	tons	\$25.00	\$0			rate for material & d	•	2570 Kiiii dust =	1130.0 (0113	CWM actual 2011 costs inc. labor & equipment
TCLP Testing - RCRA (EPA 1311)	21.7	samp	\$348.33	\$0		65 rolloffs @	3 ro's/samp =	21.7 samples			average of 3 third party labs; one sample per 3 rolloffs
Subt - Stabilization	21.7	Jump	\$340.33	\$0			stabilization rate; inc				2.2.2.2.0.0 cima party 1000) one outliple per 0 follollo
	1		1	٦	772,077			a equipment			

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities fo	In-house Estimate			In-house Pricing References
4.4 Load non-Macro Rolloffs	1					facility include in	stabilization cost				
Laborer	0	hours	\$39.00	\$0	\$0	Not required	Stabilization cost				loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0	hours	\$19.18	\$0	\$0	'					RSM/HC p. 467 (line item 01 54 33 20 0460)
Equipment Operator (Medium)	0	hours	\$45.00	\$0	\$0						loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY) (existing equip't)	0	hours	\$19.02	\$0	\$0						dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Load non-Macro Rolloffs				\$0	\$0						
4.5 Transp Rolloffs to Onsite L'fill						production rate	= 0.25 hours for onsite	travel			
Road Tractor (4 x 2, 30-ton)	16.2	hours	\$32.45	\$0	\$526	65 rolloffs @	1 rolloff/load =	65.0 loads @	0.25 hours/trip =	16.2 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	16.2	hours	\$45.00	\$0		65rolloffs @	1 rolloff/load =	65.0 loads @	0.25 hours/trip =	16.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Transp RO's to Onsite Landfill				\$0	\$1,255	Assembly estima	te assumes on-site dis	oosal			
4.6 Unload non-Macro Rolloffs						production rate :	= 0.25 hours for unload	l in landfill			
Laborer	16.2	hours	\$39.00	\$0	\$632	65 rolloffs @	1 rolloff/load =	65.0 loads @	0.25 hours/trip =	16.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	16.2	hours	\$19.18	\$0		65 rolloffs @	1 rolloff/load =	65.0 loads @	0.25 hours/trip =		RSM/HC p. 467 (line item 01 54 33 20 0460)
Equipment Operator (Medium)	16.2	hours	\$45.00	\$0	\$729	65 rolloffs @	1 rolloff/load =	65.0 loads @	0.25 hours/trip =	16.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY) (existing equip't)	0	hours	\$19.02	\$0	\$0		•		•		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Unload RO's at Onsite L'Fill				\$0	\$1,672	Assembly estima	te assumes on-site dis	oosal			
4.7 Offsite Landfill Disp/Solids						assumes off-site	land disposal; 42 roll-o	ffs			
Offsite Transportation - Solids	28798.0	miles	\$3.25	\$93,594	\$0	1196 tons @	16 tons/load =	74.8 loads @	385 miles/trip =	28798 miles	Rate: transporters quote/site experience
Offsite Disp - Haz Rolloff Solids	1196.0	tons	\$133.00	\$159,068		65 rolloffs @	30 CY each @	16 tons/rolloff +	15% kiln dust =	1196.0 tons	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions
Subt - Off-site Landfill/non-Macro				\$252,662	\$0						
4.0. (1-1) - (5.1							40.1/1	/	or to IV. Common of the alternation	1	
4.8 Stab n/Encap n (Macro mat'l)	440.2	TONG					= 40 tons/hour = 320 t				4.0% 4.250#/0.675 + > 0.50# 65 (
PROCESS TONS (incl kiln dust)	419.2 41.9	TONS hours	\$39.00	\$1,634	ćo	18 rolloffs @ 419.2 tons @	30 CY each @	0.675 ton/CY +	15% absorbent =	419.2 tons 41.9 hours	1 CY = 1,350# (0.675 ton) @ 50# per CF for "loose" mat'l loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer Equipment Operator (Medium)	21	hours	\$50.00	\$1,634		419.2 tons @ 419.2 tons @	40 tons/hr @ 40 tons/hr @	10.5 hours @ 10.5 hours @	4 units/crew = 2 units/crew =	21.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	10.5	hours	\$50.00	\$1,050		419.2 tons @ 419.2 tons @	40 tons/hr @	10.5 hours @	1 units/crew =	10.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader (Medium)	10.5	hours	\$19.18	\$151		419.2 tons @	40 tons/hr @	10.5 hours @	1 units/crew =	10.5 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Absorbent Additive	81	CY	\$38.70	\$3,135		18 rolloffs @	30 CY each @	15% additive =	81 CY	10.3 110013	2004 DEC Rate * Implicit Deflator
Encapsulation Container	18.0	units	\$1,000.00	\$18,000		18.0 units	30 C1 Cacil @	15/0 daditive =	31 (1		CWM actual 2011 costs
Rolloff (30-CY) (not used)	0.0	units	\$1,000.00	\$18,000		0.0 units					dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stab'n/Encap'n - Macro Mat'l	0.0	45	Ų23.0Z	\$24,171	\$0						
4.9 Transp Macro Encap'n Onsite						production rate	= 0.5 hours for onsite t	ravel			
Road Tractor (4 x 2, 30-ton)	9.0	hours	\$32.45	\$0	\$292	18 rolloffs @	1 rolloff/load =	18.0 loads @	0.5 hours/trip =	9.0 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	9.0	hours	\$45.00	\$0 \$0		18 rolloffs @	1 rolloff/load =	18.0 loads @	0.5 hours/trip =	9.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY) (existing equip't)	0	hours	\$19.02	\$0	\$0				2.3	2.5	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subtotal - Transp Macro Encap'n	<b>†</b>		725.52	\$0			te assumes on-site dis	oosal			- , F ( 15 15 15 16 16 16 16 16 16 16 16 16 16 16 16

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities	for In-house Estimat	e		In-house Pricing References
4.10 Offsite Macro Encap'n						assumes off-site land disposal; 18 m	acro-encap, conts, or	n-site disposal		
Offsite Transp'n - Encap Containers	6930.0	miles	\$3.25	\$22,523	\$0	18.0 contain @ 1 cont/load =	18.0 loads @	385 miles/trip =	6930.0 miles	Rate: transporters quote/site experience
Offsite Disposal - Encap Containers	510.0	CY	\$337.50	\$172,125		18.0 contain @ 30 CY/cont =	510.0 CY	000 111100 1111		DEC 2004 Estimate accounting for inflation
Subt - Offsite Landfill Disp/Solids				\$194,648	\$0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				, , , , , , , , , , , , , , , , , , ,
(Subt: Assemblies 4.2 thru 4.10)				\$515,044		onsite stabilization and offsite or or	nsite disposal of all M	lacro Room material		
				1						_
4.11 Shred Drums with Contents						Shredding of drums not necessary. I	Orums transported d	irect to onsite landfill or	offsite landfill	
Laborer	0	hours	\$39.00	\$0	\$0					loaded labor rate: loaded labor rate 2011 3rd party quote
Drum Shredder	0	hours	\$329.70	\$0	\$0					2004 DEC Rate * Implicit Deflator
Rolloff (30-CY)	0	hours	\$19.02	\$0	\$0					RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Drums for Offsite L'fill				\$0	\$0					
4.11a Load Full Solids Drums						production rate = 80 drums/hour/pe	erson; Facility experie	ence		
Laborer	3.8	hours	\$39.00	\$0	\$148	300 drums @ 80 drums/hr =	3.8 loads @	2 units/crew =	3.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	1.9	hours	\$22.21	\$0	\$42	300 drums @ 80 drums/hr =	3.8 loads @	1 units/crew =	1.9 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	1.9	hours	\$6.26	\$0	\$12	300 drums @ 80 drums/hr =	3.8 loads @	1 units/crew =	1.9 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load PCB Sol Drms to L'Fill				\$0	\$202					
4.12 Transp Full Drms: onsite L'fill						Assumes onsite land disposal; 0.5 hr	per load to onsite la	ndfill		
Road Tractor (4 x 2, 30-ton)	1.9	hours	\$32.45	\$0	\$62	300 drums @ 80 drums/load	= 3.8 loads @	0.5 hr/load =	1.9 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	1.9	hours	\$45.00	\$0	\$86	300 drums @ 80 drums/load	= 3.8 loads @	0.5 hr/load =	1.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	1.9	hours	\$6.26	\$0	\$12	300 drums @ 80 drums/load	= 3.8 loads @	0.5 hr/load =	1.9 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Shrd Drms to Onsite Landfill				\$0	\$159					
4.13 Unload Full Drms: onsite L'fill						assumes on-site disposal: productio	n rate = 80 drums/ho	our/nerson: Facility exne	erience	
Laborer	3.8	hours	\$39.00	\$0	\$148	300 drums @ 80 drums/hr =	3.8 loads @	2 units/crew =	3.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	1.9	hours	\$22.21	\$0		300 drums @ 80 drums/hr =	3.8 loads @	1 units/crew =	1.9 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	1.9	hours	\$6.26	\$0		300 drums @ 80 drums/hr =	3.8 loads @	1 units/crew =	1.9 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Full Drums				\$0	\$202					, , , , , , , , , , , , , , , , , , , ,
4.14 Offsite Disp Full Drums						assumes off-site land disposal; volu	me hased on 4 drums	s/CV (+ drum contents)		
Offsite Transp'n - Drum Mat'l	1463.0	miles	\$3.50	\$5,121	ŚŊ	300 drums @ 80 drums/ld =	3.8 loads @	385 miles/trip =	1463.0 miles	Rate: transporters quote/site experience
Onsite Hanspin Brain Maci	1403.0	Times	<b>\$3.30</b>	<i>γ3,121</i>	Ţ0	Soo arams (g) Soo arams/ra	3.0 10003 @	303 Hilles, trip	1405.0 1111103	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions
Offsite Disposal - Drum Mat'l	300	drums	\$100.00	\$30,000	\$0	300 drums				based on current market conditions
Subt - Offsite L/F Disp: Full Drums				\$35,121	\$0	disposal of 300 drums with contents	from drum shred are	ea		
(Subt: Assemblies 4.11 thru 4.14)				\$35,121	\$564					
4.15 Offsite T&D - Tankers						five 5,500-gal existing tankers loaded	d and parked at stabi	lization parking area		
Offsite Transp'n - 5.5K-gal Tankers	7645.0	miles	\$3.50	\$26,758	\$26,758	5 tankers @ 1529 miles/loa		F- 0- 0-	7645.0 miles	Rate: transporters quote/site experience
Off-site Disp - Incin Bulk PCB Ligs	27500.0	gallons	\$4.68	\$128,700		5 tankers @ 5500 gals/tank			27500.0 gals	HWC/ETC 2004 & Current third party rate
Subt - Offsite T&D - Tankers				\$155,458	\$155,458	<u> </u>		gallon tankers from stab		
(Subt: Assemblies 4.15)				\$155,458	\$155,458					

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Produc	tion and Quantities fo	r In-house Estimate			In-house Pricing References
4.16 Decon Equipment						prod'n rate = 52	.5 SF/hr (1/2 of RSM/L	IP n 9-167 33-17-08	13 as wash & rinse ar	e combined)	
Reagent Silo/Hopper	19.0	hours	\$121.50	\$2,309	\$2,309	2 units @	500 SF each =	1000.0 SF @	52.5 SF/hour =	19.0 hours	2004 DEC Rate * Implicit Deflator
Control Room	19.0	hours	\$121.50	\$2,309		1 units @	1000 SF each =	1000.0 SF @	52.5 SF/hour =	19.0 hours	assume 20' x 10' x 10' (L x W x H)
Air Compressor/Ancillary Equip't	1.9	hours	\$121.50	\$231		1 units @	100 SF each =	100.0 SF @	52.5 SF/hour =	1.9 hours	assume 100 SF
Hydraulic Skid/Ancillary Equip't	14.3	hours	\$121.50	\$1,737		1 units @	750 SF each =	750.0 SF @	52.5 SF/hour =	14.3 hours	assume 750 SF
Drum Shredder	0.0	hours	\$121.50	\$0		_	cleaned and removed 2				
Knuckle Boom	9.5	hours	\$121.50	\$1,154		1 units @	500 SF each =	500.0 SF @	52.5 SF/hour =	9.5 hours	assume 500 SF
Backhoe	1.9	hours	\$121.50	\$231		1 units @	100 SF each =	100.0 SF @	52.5 SF/hour =	1.9 hours	assume 100 SF
Subt - Decon Equip't (wash & rinse)			7=====	\$7,970		7 units		3450.0 SF total			
4.17 Decon Water Samp/Dispose						production rate	= 0.5 hours/sample for	two techs; facility tr	eatment unit price = \$	0.0273/gallon	
Technician	7.7	hours	\$38.00	\$293	\$293	7.7 samp @	0.5 hr/samp =	3.8 hours @	2 units/crew =	7.7 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)	7.7	samp	\$105.00	\$809	\$809	7.0 units @	1.1 samp/unit =	7.7 samples			analytical price: average of three quotes
Onsite Water Disposal	3150.0	gal	\$0.0313	\$99	\$99	3450.0 SF @	0.5 gal/sf/wa =	2100.0 gallons +	0.25 gal/sf/rinse =	1050.0 gallons	facility o/s mild waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose		Ĭ		\$1,200	\$1,200		<u> </u>				
4.18 PCB Wipe Samples							= 0.5 hours/sample for	two techs; rate same	e as facility's		
Technician	7.7	hours	\$38.00	\$293	\$293	7.7 samp @	0.5 hr/samp =	3.8 hours @	2 units/crew =	7.7 hours	technician rate: rate 2011 3rd party quote
PCB Analysis/Wipe Test (SW 8081/8082)	7.7	samp	\$83.33	\$642	\$642	7.0 units @	1.1 samp/unit =	7.7 samples			analytical price: average of three quotes
Subt - Wipe Samples				\$934	\$934						
4.19 Dismant/Load Equipment						prod'n rate = 15	O SF/hr (based upon re	moving one 20K-gal	ank in 8 hrs: 1,225 SF	div. by 8 = 153 sf)	
Laborer	46.0	hours	\$39.00	\$1,794	\$1,794	3450 SF @	150 SF/hour	23.0 hours	2 units/crew =	46.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment (300 amp towable)	23.0	hours	\$4.90	\$113		3450 SF @	150 SF/hour	23.0 hours	1 units/crew =	23.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Yard Crane (25-ton)	23.0	hours	\$86.31	\$1,985		3450 SF @	150 SF/hour	23.0 hours	1 units/crew =	23.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Equipment Operator (Crane)	23.0	hours	\$50.00	\$1,150		3450 SF @	150 SF/hour	23.0 hours	1 units/crew =	23.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Dismantle Equipment				\$5,042	\$5,042						
(Subt: Assemblies 4.16 thru 4.19)				\$15,146	\$15,146	decontaminati	ng and dismantling Equ	ipment			
4.20 Demo/Load/Trans Ducts/Bagh						prodin rates: 431	TLE/br/dustruodi\ 7	days, four days /···-:	(haghausas) = 22 d=:	total = 20 days	
Dismantle/Cut/Load Ductwork	7040.0	LF	\$2.14	\$15,066		7040 LF @	5 LF/hr (ductwork) = 7 3 SF/LF =	21120.0 SF @	0.021 CF/SF =	16.4 CY	2004 DEC Rate * Implicit Deflator
Dismantle/Cut/Load Baghouses	7040.0	each	\$7,340.17	\$15,066		8 units @	2500 SF/unit =	20000.0 SF @	0.021 CF/SF = 0.021 CF/SF =	15.6 CY	2001 Rate * Implicit Deflator
•	8.0	eacii	77,540.17	\$58,721 <b>\$73,787</b>	\$58,721 <b>\$73,787</b>	o utilis @	2500 SF/ utilt =	20000.0 SF @	U.UZI CF/3F =	13.0 CT	2001 Nate Implicit Deliator
Subt - Dismantle Ducts/Baghouses				۶/۵,/8/	۶/۵,/8/						

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities	for In-house Estimate			In-house Pricing References
4.21 Unload/Stabilize/Encapsulate						production rate = 15 tons/hour = 12	20 tons/day; includes shr	redding and filling con	tainers	
PROCESS TONS (incl kiln dust)	37.2	TONS				32.0 CY @	1.0125 ton/CY +	15% kiln dust =	37.2 tons	1 CY = 2,025# (1.0125 ton) @ 75# per CF
Laborer	5.0	hours	\$39.00	\$195	\$195	37.2 tons @ 15 tons/hr @	2.5 hours @	2 units/crew =	5.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	7.4	hours	\$45.00	\$333		37.2 tons @ 15 tons/hr @	2.5 hours @	3 units/crew =	7.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	2.5	hours	\$19.18	\$48		37.2 tons @ 15 tons/hr @	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	2.5	hours	\$14.39	\$36	\$36	37.2 tons @ 15 tons/hr @	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	2.5	hours	\$329.70	\$824		37.2 tons @ 15 tons/hr @	2.5 hours @	1 units/crew =	2.5 hours	2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	2.5	hours	\$136.29	\$341	· · · · · · · · · · · · · · · · · · ·	37.2 tons @ 15 tons/hr @	2.5 hours @	1 units/crew =	2 5 hours	2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0		•	1.0125 ton/CY @	15% kiln dust =	4.9 tons	
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0		4.9 tons @ 20 ton/load =	0.2 loads			
Cement Kiln Dust - Mat'l&Delv Cost	4.9	tons	\$48.00	\$235					<u> </u>	CWM actual 2011 costs
Encapsulation Containers	2.0	units	\$1,000.00	\$2,000	\$2,000	37.2 tons @ 18.6 ton/unit =	2.0 containers			CWM actual 2011 costs
Rolloffs (30-CY)	5.0	hours	\$19.02	\$95	\$95	37.2 tons @ 18.6 tons/unit	= 2.0 rolloffs @	2.5 hours/rolloff =	5.0 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$4,107	\$4,107					
4.22 Transp Encap Units onsite L'F						production rate = 0.5 hours for onsi				
Road Tractor (4 x 2, 30-ton)	1.0	hours	\$32.45	\$0		2 rolloffs @ 1 rolloff/load =		0.5 hours/trip =	1.0 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	1.0	hours	\$45.00	\$0		2 rolloffs @ 1 rolloff/load :	= 2.0 loads @	0.5 hours/trip =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY) (existing equip't)	0.0	hours	\$19.02	\$0						RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Shrd Drms to Onsite Landfill				\$0	\$77	Transport to onsite landfill for dispo	osal			
4.23 Offsite Disp/Bghouse-Duct						assumes off-site disposal; 2 macro-e				
Offsite Transp - Baghouse/Duct	770.0	miles	\$3.25	\$2,503		37.2 tons @ 18.6 tons/load		385 miles/trip =	770.0 miles	Rate: transporters quote/site experience
Offsite Disp'l - Baghouse/Duct Deb	36.8	CY	\$337.50	\$12,420	· ·	37.2 tons @ 1.013 tons/CY	= 36.8 CY @	27 CF/CY =	993.0 CF	DEC 2004 Estimate accounting for inflation
Subt - Offsite B'house/Duct Disp'l				\$14,923	\$0					
(Subt: Assemblies 4.20 thru 4.23)				\$92,817	\$77,972	demolition, stabilization, encapsul	ation, and off-site dispos	sal of ductwork and ba	ighouses	
4.24 Decon Stab'n Areas (wash)						production rate = 105 SF/hr for 1-pe	erson crew w/ one unit e	each: facility experienc	ce	
Laborer	628.6	hours	\$39.00	\$24,515	\$24.515	66009 SF @ 105 SF/hr =	628.6 hours @	1 units/crew =	628.6 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	396.4	hours	\$4.04	\$1,601	' '	41619 SF @ 105 SF/hr =	396.4 hours @	1 units/crew =	396.4 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	0.0	hours	\$0.83	\$0				,		RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum-Pressure Wash Combo	232.3	hours	\$22.94	\$5,329		24390 SF @ 105 SF/hr =	232.3 hours @	1 units/crew =	232.3 hours	equip't price: average of three quotes
Subt - Decon Stab'n Areas (wash)				\$31,445		Pressure wash containment areas, v				
4.25 Decon Stab'n Areas (rinse)						production rate = 105 SF/hr for 1-pe	erson crew w/ one unit e	each; facility experienc	ce	
Laborer	232.3	hours	\$39.00	\$9,060	\$9,060	24390 SF @ 105 SF/hr =	232.3 hours @	1 units/crew =	232.3 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	0.0	hours	\$4.04	\$0			2 2	,		RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	0.0	hours	\$0.83	\$0						RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum-Pressure Wash Combo	232.3	hours	\$22.94	\$5,329		24390 SF @ 105 SF/hr =	232.3 hours @	1 units/crew =	232.3 hours	equip't price: average of three quotes
Subt - Decon Stab'n Areas (rinse)			<b>V</b>	\$14,389		Rinse floor areas only	202.000.0 @	_ 0		THE TENER WINDS OF THE MARKET
	1			72.,503	72.,503					1

#### 4.0 Stabilization

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Producti	on and Quantities for	In-house Estimate			In-house Pricing References
4.26 Decon Water Samp/Dispose						production rate =	0.5 hours/sample for	two techs;			
Technician	13.2	hours	\$38.00	\$502	\$502	13.2 samp @	0.5 hr/samp =	6.6 hours @	2 units/crew	13.2 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)	13.2	samp	\$105.00	\$1,386	\$1,386	12.0 areas @	1.1 samp/area =	13.2 samples			analytical price: average of three quotes
On-site Water Disposal (wash only)	20809.5	gal	\$0.0313	\$651	\$651	41619 SF @	0.5 gal/sf/wa =	20809.5 gallons			site waters waste treat price; vol @ 0.5 gal/sf (equip lit)
On-site Water Disposal (wash-rinse)	1219.5	gal	\$0.0313	\$38	\$38	24390 SF @	0.05 gal/sf/wa =	1219.5 gallons +	0.05 gal/sf/rinse =	1219.5 gallons	site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$2,577	\$2,577						
4.27 PCB Wipe & Destruct Samp						production rate 0	.5 hours/sample for tv	vo techs; rate same a	as facility's		
Technician	75.4	hours	\$38.00	\$2,865	\$2,865	74.4 samp @	0.5 hr/samp =	37.7 hours @	2 units/crew =	75.4 hours	technician rate: rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	2.0	samp	\$446.67	\$893	\$893	2.0 areas @	1 samp/area =	2.0 samples	Uncoated concrete	areas	analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	75.4	samp	\$83.33	\$6,283	\$6,283	47129.0 SF @	625 SF/samp =	75.4 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$10,042	\$10,042						
(Subt: Assemblies 4.24 thru 4.27)				\$58,452	\$58,452	decontamination	& sampling of floors, s	umps, and pits			

Total Non-Super hours 1263.6

4.28 PPE Usage & H&S Planning						Level C @ 75%; Mo	od Level C @ 25% fo	or tot non-supv hrs fo	or all tasks; HASP @ 2.	5% of non-supv hrs	
PPE Usage - Mod Level C	39.5	days	\$9.00	\$356	\$356	1263.6 hours @	8 hr/day =	158.0 days @	25% "Mod C" day	s = 39.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	118.5	days	\$25.00	\$2,963	\$2,963	1263.6 hours @	8 hr/day =	158.0 days @	75% "C" days =	118.5 days	75% of non-supv hrs in Level C (price: \$25/day)
Health & Safety Officer	31.6	hours	\$75.00	\$2,370	\$2,370	1263.6 hours @	2.5% hr/hr =	31.6 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$5,688	\$5,688						
4.29 Supervision						4 weeks for closure	e of Stabilization				
Foreman	160	hours	\$65.00	\$10,400	\$10,400	4 weeks @	40 hrs/wk =	160.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	\$0	Included in Gen'l (	Contractor G&A/Ho	me Office indirect co	sts		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$10,400	\$10,400						
4.30 Certification						Engineer @ 1.5% a	and Clerical @ 1.5%	of total non-supervis	ory labor hours for all	tasks	
Engineer	19	hours	\$130.00	\$2,470	\$2,470	1263.6 hours @	0.015 hr/hr =	19.0 hours			Engineer rate: 2011 3rd party quote
Clerical	19	hours	\$45.00	\$855	\$855	1263.6 hours @	0.015 hr/hr =	19.0 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification		•		\$3,325	\$3,325	•		•			
(Subt: Assemblies 4.28 thru 4.30)		·		\$19,413	\$19,413	supervision, healt	th & safety, and cert	ification			

4.0 Stabilization Activity Direct Cost | Total | Basic | \$892,593 | \$375,334

Proposed	Proposed	Cost Range
2031	Disposai	
	\$892,593	
7.000/	¢C2 402	DEC use 70/
		note: DEC uses 7%
		note: DEC uses 4%
		note: DEC uses 6%
2.00%	\$17,852	note: DEC uses 2%
6.00%	\$53,556	Note DEC adds 6%
25.00%	\$223,148	
	\$1,115,741	
10.00%	\$111,574	CWM and DEC 10%
	Ć4 227 246	
	\$1,227,316	
	Percent of Direct Cost 7.00% 4.00% 6.00% 2.00% 6.00% 25.00%	Percent of Direct OffSite Disposal  7.00% \$892,593  7.00% \$62,482  4.00% \$35,704  6.00% \$53,556  2.00% \$17,852  6.00% \$53,556  25.00% \$223,148  \$1,115,741

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.01 AWTS/CSAs 24/25/26

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
5.01.1 Inventory Verification					prod'n rates: 10	0 drums/hr: 15 min/tar	nker or rolloff: 30 m	in/tank; two persons re	equired	
Laborer	2.6	hours	\$39.00	\$101	128 drums @	100 drums/hr =	1.3 hours @	2 units/crew =	2.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer	1.0	hours	\$39.00		2 tankers @	0.25 hr/tanker =	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer	0.5	hours	\$39.00		1 rolloffs @	0.25 hr/rolloff =	0.3 hours @	2 units/crew =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification			700.00	\$160						(note: labor rate is a composite of "common bldg laborer"
(Subt: Assemb 5.01.1 - 5.01.1)					conducting inve	ntory of CSAs 24/25/26				, and the same of
			1							
5.01.2 Empty 2 Tankers								arked at CSA 25 = 12,00		
Laborer	0.0	hours	\$39.00		12000 gals @	1650 gals/hr =	7.3 hours @	2 units/crew	14.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00		12000 gals @	1650 gals/hr =	7.3 hours @	1 units/crew	7.3 hours	RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (2 @ 6K-gals)	0.0	hours	\$6.31		12000 gals @	1650 gals/hr =	7.3 hours @	1 units/crew	7.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty 2 Tankers' Contents				\$0						
5.01.3 O/S Aqueous Treat:Tankers					Aqueous gate rec	eipts cost to treat not	including labor and	maintenance		
Onsite Aqu Treat - Tankers	12000.0	gallons	\$0.1526		12000 gallons					AWTS Treatments costs "Other" = Gate receipts
Subt - O/S Aqu Trt - Tankers				\$1,831	onsite treatmen	t of liquid wastes from	two tankers			
5.01.4 Empty 128 Drums					included in opera	tion of AWT Assembly	13.0; two tankers p	arked at CSA 25 = 12,00	00 gals	
Laborer	0.0	hours	\$39.00	\$0	128 drums @	12 drums/hr =	10.7 hours @	2 units/crew	21.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$71.47	\$0	128 drums @	12 drums/hr =	10.7 hours @	1 units/crew	10.7 hours	RSM/UP p. 9-171 (line item 33-19-0108)
Decon Drums	0.0	drum	\$0.00	\$0	128 drums @	55 gals/drum =	7040.0 gals			
Subt - Empty 128 Drums' Contents				\$0						
5.01.5 O/S Aqueous Treat: Drums					Aqueous gate rec	eipts cost to treat not	ncluding labor and	maintenance		
Onsite Aqu Treat - Tankers/Drums	7040.0	gallons	\$0.1526	\$1,074	7040 gallons					AWTS Treatments costs "Other" = Gate receipts
Subt - O/S Aqu Trt - Tankers/Drums				\$1,074						
(Subt: Assemb 5.01.2 - 5.01.5)				\$2,906	onsite treatmen	t of liquid wastes from	128 drums			
5.01.6 Offsite T&D/FiltPressSolids					32,000 Lbs (16 t	ons) of Filter Press Soli	ds contained in 30-0	CY Rolloff parked at CSA	. 26	
Transportation	1529.0	hours	\$3.25	\$4,969	16.0 tons @	16 tons/load =	1.0 loads @	1529 miles/trip	1529.0 miles	Rate: transporters quote/site experience
Disposal	32000.0	Lb	\$0.64	\$20,480	32000.0 Lbs			•		Current CWM 2011 third party rate
Subt - O/S T&D/Filter Press Solids				\$25,449						·
(Subt: Assemb 5.01.6 - 5.01.6)					offsite transport	ation and disposal of 3	2,000 Lbs of filter p	ress solids		
5.01.7 Load Empty Aqueos Drums					production rate =	80 drums/hour (doub	e the rate of full dr	ums @ RSM/UP p. 9-17	1,	
Laborer	1.6	hours	\$39.00	\$62	128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	1.6	hours	\$22.21		128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	1.6	hours	\$6.26		128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Empty Drums				\$108		·	<del>-</del>	·		,

### 5.01 AWTS/CSAs 24/25/26

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
5.01.8 Transp Drms to Onsite Shrd					production rate	= 0.5 hours for onsite	travel			
Road Tractor (4 x 2, 30-ton)	0.8	hours	\$32.45	\$26	128 drums @	80 drum/load =	1.6 loads @	0.5 hours/trip =	0.8 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0.8	hours	\$45.00	\$36	128 drums @	80 drum/load =	1.6 loads @	0.5 hours/trip =	0.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	0.8	hours	\$6.26	\$5	128 drums @	80 drum/load =	1.6 loads @	0.5 hours/trip =	0.8 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transp to Onsite Shredder				\$67						
5.01.9 Unload Empty Drums					production rate :	= 80 drums/hour				
Laborer	1.6	hours	\$39.00		128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	1.6	hours	\$22.21	\$36	128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	1.6	hours	\$6.26	\$10	128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Empty Drums				\$108						
5.01.10 Onsite Drum Shredding					prod'n = 80 dru	ms/hour				
Laborer	3.2	hours	\$39.00	\$125	128 drums @	80 drums/hr =	1.6 hours @	2 units/crew =	3.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Shredder	1.6	hours	\$328.75	\$526	128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	2004 DEC Rate * Implicit Deflator
Rolloff (30-CY)	1.6	hours	\$19.02		128 drums @	80 drums/hr =	1.6 hours @	1 units/crew =	1.6 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Onsite Drum Shredding				\$681						
5.01.11 Trans Shrd Drms: onsite L'fll					Not Applicable:	assumes off-site land d	lisposal			
Road Tractor (4 x 2, 30-ton)	0.0	hours	\$32.45	\$0						RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0.0	hours	\$45.00	\$0						loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30-CY)	0.0	hours	\$19.02	\$0						dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Transp Shrd mat'l to Landfill				\$0						
5.01.12 Unload Shred. Drum Debris					Not Applicable:	assumes off-site land d	lisposal			
Laborer	0.0	hours	\$39.00	\$0						loaded labor rate: loaded labor rate 2011 3rd party quote
Loader (small)	0.0	hours	\$2.12	\$0						RSM/HC p. 468 (line item 01 54 33 20 3860)
Rolloff (30-CY)	0.0	hours	\$19.02	\$0						dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Unload Shrd'd Mat'l at Landfill				\$0						
5.01.13 Offsite Disp/Shrd'd Drums					assumes off-site	land disposal of shred	ded drums; 20 tons,	/load		
Offsite Transportation	5.0	miles	\$3.25	\$16	1.3 tons @	20 tons/load =	0.1 loads @	5 miles/trip =	5 miles	Rate: transporters quote/site experience
Offsite Disposal - Landfill	1.3	tons	\$35.00	\$46	128 drums @	20 lbs/drum =	1.3 tons @	1 tons/CY =	1.3 CY	Modern Disposal/Site Experience
Subt - Offsite Shrd'd Drums Disp'l				\$62						
(Subt: Assems. 5.01.7 thru 5.01.13)				\$1,026	onsite drum shr	edding and off-site disp	posal			
5.01.14 Decon CSA Areas (wash)					production rate	= 105 SF/hr for 1-perso	on crew w/ one unit	s; facility experience		1
Laborer	40.0	hours	\$39.00	\$1,560	4200 SF @	105 SF/hr =	40.0 hours @	1 unit/crew =	40.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	40.0	hours	\$4.04		4200 SF @	105 SF/hr =	40.0 hours @	1 unit/crew =	40.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
	40.0	hours	\$0.83		4200 SF @	105 SF/hr =	40.0 hours @	1 unit/crew =	40.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum Sweeper	40.0	110013								

### 5.01 AWTS/CSAs 24/25/26

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	ction and Quantities for	In-house Estimate			In-house Pricing References
5.04.45 Danie (60.0 America)			1			105 55 /6 - 5 - 1				ı
5.01.15 Decon CSA Areas (rinse)	40.0	haura	\$39.00	¢1 FC0	•	e = 105 SF/hr for 1-perso	•	<u> </u>	40.0 h a	looded labou votes looded labou vote 2011 2nd wants queta
Laborer		hours			4200 SF @	105 SF/hr =	40.0 hours @	1 unit/crew =	40.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	40.0	hours	\$4.04		4200 SF @	105 SF/hr =	40.0 hours @	1 unit/crew =	40.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	40.0	hours	\$0.83	\$33	4200 SF @	105 SF/hr =	40.0 hours @	1 unit/crew =	40.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon CSA Areas (rinse)				\$1,755						
5.01.16 Decon Water Samp/Disp					production rat	e = 0.5 hours/sample for	r two techs;			
Technician	3.3	hours	\$38.00	\$125	3.3 samp @	0.5 hr/samp =	1.7 hours @	2 pers/crew =	3.3 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)	3.3	samp	\$105.00	\$347	3.0 areas @	1.1 samp/area =	3.3 samples			analytical price: average of three quotes
On-site Water Disposal	2000.0	gal	\$0.0313	\$63	4000 SF @	0.5 gal/sf/wa =	2000.0 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$535						
5.01.17 PCB Wipe Samples					TCLP analyses n	ot necessary according t	to site-wide closure	plan		
Technician	9.8	hours	\$38.00	\$372	9.7 samp @	0.5 hr/samp =	4.9 hours @	2 pers/crew =	9.8 hours	technician rate: rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0	3.0 areas @	1.1 samp/area =	3.3 samples			analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	6.4	samp	\$83.33	\$533	4000 SF @	625 SF/samp =	6.4 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$906		·				
(Subt: Assemb 5.01.14 - 5.01.17)				\$4,950	decontaminati	on & sampling of CSA 24	1/25/26			

Total Non-Super Labor Hours

104.4

	1									
5.01.18 PPE Usage/H&S Planning					Level C @ 75%	; Mod Level C @ 25% fo	r tot non-supv hrs fo	or all tasks; HASP @ 2.5%	of non-supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0	104.4 hours @	8 hr/day =	13.1 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	3.3	days	\$9.00	\$30	104.4 hours @	8 hr/day =	13.1 days @	25% "Mod C" days =	3.3 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	9.8	days	\$25.00	\$245	104.4 hours @	8 hr/day =	13.1 days @	75% "C" days =	9.8 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	2.6	hours	\$75.00	\$195	104.4 hours @	2.5% hr/hr =	2.6 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$470						
5.01.19 Supervision					1 day for closur	e of AWTS CSA 24/25/20	5			
Foreman	8.0	hours	\$65.00	\$520	1 day @	8 hrs/day =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	Included in Ger	n'l Contractor G&A/Hom	e Office indirect cos	sts		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.01.20 Certification					Engineer @ 1.	5% and Clerical @ 1.5%	of total non-supervi	sory hours for all tasks		
Engineer	1.6	hours	\$130.00	\$208	104.4 hours @	0.015 hr/hr =	1.6 hours			Engineer rate: 2011 3rd party quote
Clerical	1.6	hours	\$45.00	\$72	104.4 hours @	0.015 hr/hr =	1.6 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$280	•	•	•			
(Subt: Assemb 5.01.18 - 5.01.20)				\$1,270	<u> </u>	·	<u> </u>			

5.01 AWTS/CSAs 24/25/26 | Direct Cost | Total | Basic | \$35,760

E 04 AVAITS / 00 A . 04 / 05 / 06			
5.01 AWTS/CSAs 24/25/26			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Cost/Basic Disposal		\$35,760	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$2,503	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$1,430	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$2,146	note: DEC uses 6%
Engineering During Construction	2.00%	\$715	note: DEC uses 2%
General Contractor Profit	6.00%	\$2,146	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$8,940	
Subtotal - AWTS/CSAs 24/25/26		\$44,700	
		•	
Plus Contingency	10.00%	\$4,470	CWM and DEC 10%
Total - AWTS/CSAs 24/25/26		\$49,170	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.02 CSA 30 (T-130 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities for	In-house Estimate	In-house Pricing References			
5.02.1 Inventory Verification					prod'n rate: 15 m	in/tanker; two persons	s required				
Laborer	0.5	hours	\$39.00	\$20	1 tankers @	0.25 hr/tanker =	0.25 hours @	2 units/crew =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Subtotal - Inventory Verification				\$20							
(Subt: Assemb 5.02.1 - 5.02.1)				\$20	conducting inve	ntory of CSA 30 (1 Tank	er) SLF 1-6 leachate	9			
5.02.2 Transport Tanker Onsite					included in opera	tion of AWT Assembly	13.0				
Road Tractor (4 x 2, 30-ton)	0.0	hours	\$32.45	\$0	1.0 tanker @	1 tankr/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)	
Driver	0.0	hours	\$45.00	\$0	1.0 CY @	1 CY/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Tank Trailer (5,500 gals)	0.0	hours	\$6.31	\$0	1.0 CY @	1 CY/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)	
Subt - Transport Tanker Onsite				\$0				·			
5.02.3 Empty One (1) Tanker					included in opera	tion of AWT Assembly	13.0; one tanker par	rked at CSA 30 = 5,500 g	gals		
Laborer	0.0	hours	\$39.00		5500 gals @	1650 gals/hr =	3.3 hours @	2 units/crew	6.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Pumping Equipment	0.0	hours	\$0.00		included in tank	ystem				RSM/UP p. 9-171 (line item 33-19-0108)	
Tank Trailer (5,500 gals)	0.0	hours	\$6.31	\$0	5500 gals @	1650 gals/hr =	3.3 hours @	1 units/crew	3.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)	
Subt - Empty 1 Tankers' Contents				\$0							
5.02.4 Onsite Aqu Trt: Tankers					SLF 1-6 liquid was	ste					
Onsite Aqu Treat - Tankers	5500	gallons	\$1.8244	\$10,034	5500 gallons					AWTS treatment costs @ \$1.7836	
Subt - Onsite Aqu Trt - Tankers				\$10,034							
(Subt: Assemb 5.02.2 - 5.02.4)				\$10,034	onsite treatmen	t of liquid wastes from	one (1) tanker				
5.02.5 Decon CSA 30 Area (wash)					production rate =	105 SF/hr for 1-persor	n crew w/ one units;	; facility experience			
Laborer	6.8	hours	\$39.00	\$265	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Pressure Washer	6.8	hours	\$4.04		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)	
Vacuum Sweeper	6.8	hours	\$0.83	\$6	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)	
Subt - Decon CSA 30 Area (wash)				\$298							
5.02.6 Decon CSA 30 Area (rinse)					production rate =	: 105 SF/hr for 1-persor	n crew w/ one units;	; facility experience			
Laborer	6.8	hours	\$39.00	\$265	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Pressure Washer	6.8	hours	\$4.04		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)	
Vacuum Sweeper	6.8	hours	\$0.83		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)	
Subt - Decon CSA 30 Area (rinse)				\$298							
5.02.7 Decon Water Samp/Disp					prod'n rate = 0.5	hours/sample for two	techs; one sample a	rea;			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	technician rate: rate 2011 3rd party quote	
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes	
0 '1 111   1	357.5	gal	\$0.0313	\$11	715 SF @	0.5 gal/sf/wa =	357.5 gallons			site waters waste treat price; vol @ 0.5 gal/sf (equip lit)	
On-site Water Disposal	337.3	gai	JU.UJ1J	\$168		0.5 gai/31/ wa -	337.3 gailons			site waters waste treat price, vor & 0.5 garysi (equip in)	

### 5.02 CSA 30 (T-130 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price		tion and Quantities for	r In-house Estimate	In-house Pricing References		
F co o pop wing Complex	1		1		N- TCI D			-1		1
5.02.8 PCB Wipe Samples					· · · · · · · · · · · · · · · · · · ·	es necessary according t	to site-wide closure p	olan		
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.55 hours @	2 pers/crew =	1.1 hours	technician rate: rate 2011 3rd party quote
TCLP VOC & Metals Analysis		samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8080)	1.1	samp	\$83.33	\$92	715 SF @	625 SF/samp =	1.1 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$133						
(Subt: Assemb 5.02.5 - 5.02.8)				\$899	decontaminati	on & sampling of CSA 3	0			

Total Non-Super Labor Hours

16.3

					Level C @ 75%;	Mod Level C @ 25%;	Level D @ 0% for tot	t non-supv hrs for all task	ks; HASP @ 2.5% of	fnon
5.02.9 PPE Usage/H&S Planning					supv hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	16.3 hours @	8 hr/day =	2.0 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.5	days	\$9.00	\$5	16.3 hours @	8 hr/day =	2.0 days @	25% "D" days =	0.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.5	days	\$25.00	\$38	16.3 hours @	8 hr/day =	2.0 days @	75% "C" days =	1.5 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.4	hours	\$75.00	\$30	16.3 hours @	2.5% hr/hr =	0.4 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$72						
5.02.10 Supervision			+ +		0.5 day for closu	re of CSA 30				
Foreman	4	hours	\$65.00	\$260	1 day @	4 hrs/day =	4.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	Included in Gen	'l Contractor G&A/Ho	me Office indirect co	osts		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260						
5.02.11 Certification			+ +		Engineer @ 1.5%	and Clerical @ 1.5%	of total non-supervi	isory hours for all tasks		
Engineer	0.3	hours	\$130.00	\$39	16.3 hours @	0.015 hr/hr =	0.3 hours			Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	16.3 hours @	0.015 hr/hr =	0.3 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$53						
(Subt: Assemb 5.02.9 - 5.02.11)				\$385						

5	.02 CSA 30	(T-130 Un	load Area	)	Direct Cost	Total	Basic	\$11,337

5.02 CSA 30 (T-130 Unload Area)			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost	-	
Direct Costs/Basic Disposal		\$11,337	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$794	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$453	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$680	note: DEC uses 6%
Engineering During Construction	2.00%	\$227	note: DEC uses 2%
General Contractor Profit	6.00%	\$680	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$2,834	
Subtotal - CSA 30 (T-130 Unload)		\$14,171	
Plus Contingency	10.00%	\$1,417	CWM and DEC 10%
Total - CSA 30 (T-130 Unload)		\$15,588	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

#### 5.03 CSA 31 (T-108 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Unit of Quantity Measure Unit Price Extended Basis of Production and Quantities for In-house Estimate					In-house Pricing References				
	1 .			Price						
5.03.1 Inventory Verification	1				nrod'n rate: 15 m	in/tanker; two persons	required			
Laborer	0.5	hours	\$39.00	\$20	1 tankers @	0.25 hr/tanker =	0.25 hours @	2 units/crew =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification			700.00	\$20		,	0.200 0			
(Subt: Assemb 5.03.1 - 5.03.1)						ntory of CSA 31 (1 Tank	er) SLF-7 and SLF-11	leachate		
5.03.2 Transport Tanker Onsite					included in opera	tion of AWT Assembly 1	.3.0			
Road Tractor (4 x 2, 30-ton)	0	hours	\$32.45		1.0 tanker @	1 tankr/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0	hours	\$45.00		1.0 CY @	1 CY/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)	0	hours	\$6.31	\$0	1.0 CY @	1 CY/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transport Tanker Onsite				\$0						
5.03.3 Empty One (1) Tanker					included in onera	tion of AWT Assembly 1	3 0: one tanker nark	red at CSA 31 = 5 500	σals	
Laborer	0	hours	\$39.00	ŚŊ	5500 gals @	1650 gals/hr =	3.3 hours @	2 units/crew	6.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment		hours	\$0.00		included in tank s		5.5 HOULS @	z anicaj ci ew	0.7 HOUIS	RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)		hours	\$6.31		5500 gals @	1650 gals/hr =	3.3 hours @	1 units/crew	3.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty 1 Tankers' Contents	0	nours	70.31	\$0 \$0		1030 gai3/111 -	J.J Hours @	1 units/crew	3.3 110013	NSM/TIC p. 472 (little itelli 01 34 33 40 0300)
Subt - Empty 1 fankers Contents				γo						
5.03.4 Onsite Aqu Trt: Tankers					mildly-contamina					
Onsite Aqu Treat - Tankers (SLF-7 leachate)	1375	gallons	\$0.2195	\$302	5500 gallons @ 2	25% from SLF-7 = 1375		AWTS treatment costs @ \$0.2201		
Onsite Aqu Treat - Tankers (SLF-11 leachate)	4125	gallons	\$0.3532	\$1,457	5500 gallons @ 3	75% from SLF-11 = 4125		AWTS treatment costs @ \$0.3539		
Subt - Onsite Aqu Trt - Tankers				\$1,759						
(Subt: Assemb 5.03.2 - 5.03.4)				\$1,759	onsite treatment	t of liquid wastes from o	ne (1) tanker			
5 03 5 Daniel CCA 34 Array (week)		1	Ī	Ī		405 C5 /b = f = = 4 = = = = =		ta attia.		1
5.03.5 Decon CSA 31 Area (wash)	6.0		¢20.00	<b>\$265</b>	,	105 SF/hr for 1-person 105 SF/hr =			6.01	
Laborer		hours	\$39.00		715 SF @		6.8 hours @	1 unit/crew =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	6.8	hours	\$0.83		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon CSA 31 Area (wash)	-			\$298						
5.03.6 Decon CSA 31 Area (rinse)					production rate =	105 SF/hr for 1-person	crew w/ one units; f	acility experience		
Laborer	6.8	hours	\$39.00	\$265	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	6.8	hours	\$4.04		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	6.8	hours	\$0.83		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon CSA 31 Area (rinse)				\$298		·	_			
E 02 7 Docon Water Same /Disc					prod'n rata - 0 F	hours/sample for two to	ochs: one sample are	22.		<u> </u>
5.03.7 Decon Water Samp/Disp Technician	1 1	hours	\$38.00	ĊAO	1.1 samp @				1 1 hours	technician rate: rate 2011 2rd party quete
VOC Analysis (EPA 624)			\$38.00		1.1 samp @ 1.0 areas @	0.5 hr/samp = 1.1 samp/area =	0.6 hours @	2 pers/crew =	1.1 hours	technician rate: rate 2011 3rd party quote analytical price: average of three quotes
		samp			,		1.1 samples			, , ,
On-site Water Disposal	357.5	gai	\$0.0313		715 SF @	0.5 gal/sf/wa =	357.5 gallons			site waters waste treat price ; vol @ 0.5 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$168						

### 5.03 CSA 31 (T-108 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	asis of Production and Quantities for In-house Estimate				In-house Pricing References
										_
5.03.8 PCB Wipe Samples						s necessary according t				
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.55 hours @	2 pers/crew =	1.1 hours	technician rate: rate 2011 3rd party quote
TCLP VOC & Metals Analysis		samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8080)	1.1	samp	\$83.33		715 SF @	625 SF/samp =	1.1 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$133						
(Subt: Assemb 5.03.5 - 5.03.8)				\$899	decontaminatio	n & sampling of CSA 3.	1			
F 02 0 DDF Harma /H0 C Dlamaina					L L C @ 75% L	ID @ 25% ftt	h f11 A		b	
5.03.9 PPE Usage/H&S Planning	0.0		60.00	40		_	<u>'</u>	asks; HASP @ 2.5% of		C. I IW I Club C' E
PPE Usage - Level D	0.0	days	\$0.00		16.3 hours @	8 hr/day =	2.0 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.5	days	\$9.00		16.3 hours @	8 hr/day =	2.0 days @	25% "D" days =	0.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.5	days	\$25.00		16.3 hours @	8 hr/day =	2.0 days @	75% "C" days =	1.5 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.4	hours	\$75.00		16.3 hours @	2.5% hr/hr =	0.4 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$72						
5.03.10 Supervision					0.5 day for closu	re of CSA 31				
Foreman	4	hours	\$65.00	\$260	1 day @	4 hrs/day =	4.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	Included in Gen'	l Contractor G&A/Hom	e Office indirect co	sts		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260						
5.03.11 Certification					Engineer @ 1.5%	and Clerical @ 1.5% o	f total non-supervis	ory hours for all tasks		
Engineer	0.3	hours	\$130.00	\$39	16.3 hours @	0.015 hr/hr =	0.3 hours			Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	16.3 hours @	0.015 hr/hr =	0.3 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$53						
(Subt: Assemb 5.03.9 - 5.03.11)				\$385						

F 02 CCA 21 /T 100 Unload Area\			
5.03 CSA 31 (T-108 Unload Area)			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$3,061	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$214	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$122	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$184	note: DEC uses 6%
Engineering During Construction	2.00%		note: DEC uses 2%
General Contractor Profit	6.00%	\$184	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$765	
Subtotal - CSA 31 (T-108 Unload)		\$3,827	
		4	
Plus Contingency	10.00%	\$383	CWM and DEC 10%
Total - CSA 31 (T-108 Unload)		\$4,209	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

#### 5.04 CSA 32 (T-109 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Productio	n and Quantities for In-h	ouse Estimate	In-house Pricing References		
5.04.1 Inventory Verification					prod'n rate: 15 mir	/tanker; two persons req	uired			
Laborer	0.5	hours	\$39.00	\$20	1 tankers @	0.25 hr/tanker =	0.25 hours @	2 units/crew =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$20						
Subt: Assemb 5.04.1 - 5.04.1)				\$20	conducting invent	ory of CSA 32 (1 Tanker) S	SLF-10			
5.04.2 Transport Tanker Onsite					production rate = 0	0.5 hours for on-site trave	; one 5,500-gal tanke	r		
Road Tractor (4 x 2, 30-ton)	0	hours	\$32.45	\$0	1.0 tanker @	1 tankr/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0	hours	\$45.00	\$0	1.0 CY @	1 CY/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)	0	hours	\$6.31		1.0 CY @	1 CY/load =	1.0 loads @	0.5 hours/trip =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transport Tanker Onsite			·	\$0		,		, ,		,
.04.3 Empty One (1) Tanker					included in operati	on of AWT Assembly 13.0	: one tanker parked at (	CSA 32 = 5.500 gals		
aborer	0	hours	\$39.00		5500 gals @	1650 gals/hr =	3.3 hours @	2 units/crew	6.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
umping Equipment		hours	\$0.00		included in tank sy	• •				RSM/UP p. 9-171 (line item 33-19-0108)
Fank Trailer (5,500 gals)		hours	\$6.31		5500 gals @	1650 gals/hr =	3.3 hours @	1 units/crew	3.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty 1 Tankers' Contents	0		Ç0.51	\$0	• •	1000 800/111 -	5.5 Hours @	2 31110/ 010**	5.5 110415	1.5.17.10 p. 1.2 (mic term 01 54 55 40 6566)
5.04.4 Onsite Aqu Trt: Tankers					mildly-contaminate	ad liquid waste				
Onsite Aqu Treat - Tankers	EEOO	gallons	\$0.2201		5500 gallons	a nquiu waste				AWTS treatment costs @ \$0.2201
Subt - Onsite Agu Trt - Tankers	3300	galions	\$0.2201	\$1,211	3300 gailons					AW13 treatment costs @ \$0.2201
(Subt: Assemb 5.04.2 - 5.04.4)				. ,	onsite treatment o	of liquid wastes from one	(1) tanker			
5.04.5 Decon CSA 32 Area (wash)						.05 SF/hr for 1-person cre		•		
Laborer	6.8	hours	\$39.00	\$265	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
		hours	\$4.04		715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours hours	\$4.04 \$0.83	\$6	715 SF @ 715 SF @	105 SF/hr = 105 SF/hr =	6.8 hours @ 6.8 hours @	1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)
/acuum Sweeper								•		
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)	6.8	hours	\$0.83	\$6 <b>\$298</b>	715 SF @ production rate = 1	105 SF/hr = .05 SF/hr for 1-person cre	6.8 hours @ w w/ one units; facility	1 unit/crew =		RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum Sweeper Subt - Decon CSA 32 Area (wash) 5.04.6 Decon CSA 32 Area (rinse)	6.8			\$6 <b>\$298</b>	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =		
Vacuum Sweeper Subt - Decon CSA 32 Area (wash) 5.04.6 Decon CSA 32 Area (rinse) Laborer	6.8	hours	\$0.83	\$6 <b>\$298</b> \$265	715 SF @ production rate = 1	105 SF/hr = .05 SF/hr for 1-person cre	6.8 hours @ w w/ one units; facility	1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum Sweeper Subt - Decon CSA 32 Area (wash) 5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer	6.8 6.8 6.8	hours	\$0.83	\$6 <b>\$298</b> \$265 \$27	715 SF @ production rate = 1 715 SF @	105 SF/hr = .05 SF/hr for 1-person cre 105 SF/hr =	6.8 hours @ w w/ one units; facility 6.8 hours @	1 unit/crew =  experience 1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote
Jacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Jacuum Sweeper	6.8 6.8 6.8	hours hours	\$0.83 \$39.00 \$4.04	\$6 <b>\$298</b> \$265 \$27	715 SF @ production rate = 1 715 SF @ 715 SF @	105 SF/hr =  .05 SF/hr for 1-person cre	6.8 hours @ w w/ one units; facility 6.8 hours @ 6.8 hours @	1 unit/crew =  experience 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)	6.8 6.8 6.8	hours hours	\$0.83 \$39.00 \$4.04	\$6 \$298 \$265 \$27 \$6 \$298	715 SF @ production rate = 1 715 SF @ 715 SF @ 715 SF @	105 SF/hr =  .05 SF/hr for 1-person cre	w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @	1 unit/crew =  experience 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp	6.8 6.8 6.8	hours hours	\$0.83 \$39.00 \$4.04	\$6 \$298 \$265 \$27 \$6 \$298	715 SF @ production rate = 1 715 SF @ 715 SF @ 715 SF @	105 SF/hr =  .05 SF/hr for 1-person cre     105 SF/hr =     105 SF/hr =     105 SF/hr =	w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 7800)  RSM/HC p. 473 (line item 01 54 33 40 7800)
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp Technician	6.8 6.8 6.8 1.1	hours hours hours hours	\$0.83 \$39.00 \$4.04 \$0.83	\$6 \$298 \$265 \$27 \$6 \$298	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @ prod'n rate = 0.5 he	105 SF/hr =  .05 SF/hr for 1-person cre	w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @ 6.8 hours @	1 unit/crew =  experience 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse)  aborer  Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp Fechnician VOC Analysis (EPA 624)	6.8 6.8 6.8 1.1	hours hours hours hours samp	\$0.83 \$39.00 \$4.04 \$0.83 \$38.00	\$6 \$298 \$265 \$27 \$6 \$298 \$42 \$116	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @ prod'n rate = 0.5 h 1.1 samp @	105 SF/hr =  .05 SF/hr for 1-person cre	w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @ 6.8 hours @ 5; one sample area; 0.6 hours @	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)  technician rate: rate 2011 3rd party quote
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse)  aborer  Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp Fechnician VOC Analysis (EPA 624) Dn-site Water Disposal	6.8 6.8 6.8 1.1	hours hours hours hours samp	\$0.83 \$39.00 \$4.04 \$0.83 \$38.00 \$105.00	\$6 \$298 \$265 \$27 \$6 \$298 \$42 \$116	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @ 715 SF @  prod'n rate = 0.5 h 1.1 samp @ 1.0 areas @	105 SF/hr =  .05 SF/hr for 1-person cre	6.8 hours @  w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @  5; one sample area; 0.6 hours @  1.1 samples	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)  technician rate: rate 2011 3rd party quote analytical price: average of three quotes
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp Technician VOC Analysis (EPA 624) On-site Water Disposal Subt - Decon Water Samp/Dispose	6.8 6.8 6.8 1.1	hours hours hours hours samp	\$0.83 \$39.00 \$4.04 \$0.83 \$38.00 \$105.00	\$6 \$298 \$265 \$27 \$6 \$298 \$42 \$116 \$11 \$168	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @  prod'n rate = 0.5 h 1.1 samp @ 1.0 areas @ 715 SF @	105 SF/hr =  .05 SF/hr for 1-person cree	6.8 hours @  w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @  5; one sample area; 0.6 hours @ 1.1 samples 357.5 gallons	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)  technician rate: rate 2011 3rd party quote analytical price: average of three quotes
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse)  aborer  Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp  Technician VOC Analysis (EPA 624)  Dn-site Water Disposal  Subt - Decon Water Samp/Dispose  5.04.8 PCB Wipe Samples	6.8 6.8 6.8 1.1 1.1 357.5	hours hours hours hours gal	\$39.00 \$4.04 \$0.83 \$38.00 \$105.00 \$0.0313	\$6 \$298 \$265 \$27 \$6 \$298 \$42 \$116 \$11 \$168	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @  prod'n rate = 0.5 h 1.1 samp @ 1.0 areas @ 715 SF @	105 SF/hr =  05 SF/hr for 1-person cree  105 SF/hr =  105 SF/hr =  105 SF/hr =  0.5 SF/hr =  0.5 hr/samp =  1.1 samp/area =  0.5 gal/sf/wa =  ecessary according to site	6.8 hours @  w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @  5; one sample area; 0.6 hours @ 1.1 samples 357.5 gallons	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours 1.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)  technician rate: rate 2011 3rd party quote analytical price: average of three quotes site waters waste treat price; vol @ 0.5 gal/sf (equip lit)
Vacuum Sweeper Subt - Decon CSA 32 Area (wash) 5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse) 5.04.7 Decon Water Samp/Disp Fechnician VOC Analysis (EPA 624) On-site Water Disposal Subt - Decon Water Samp/Dispose 5.04.8 PCB Wipe Samples Fechnician	6.8 6.8 6.8 1.1	hours hours hours hours hours hours hours hours	\$39.00 \$4.04 \$0.83 \$38.00 \$105.00 \$0.0313	\$6 \$298 \$265 \$27 \$6 \$298 \$116 \$11 \$168	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @  prod'n rate = 0.5 h 1.1 samp @ 1.0 areas @ 715 SF @	105 SF/hr =  .05 SF/hr for 1-person cree	6.8 hours @  w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @  5; one sample area; 0.6 hours @ 1.1 samples 357.5 gallons	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)  technician rate: rate 2011 3rd party quote analytical price: average of three quotes site waters waste treat price; vol @ 0.5 gal/sf (equip lit)  technician rate: rate 2011 3rd party quote
Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp Technician VOC Analysis (EPA 624) On-site Water Disposal Subt - Decon Water Samp/Dispose  5.04.8 PCB Wipe Samples Technician TCLP (Metals/VOCs/Semi-VOCs) PCR Analysis (SW 8081/8082)	6.8 6.8 6.8 1.1 1.1 357.5	hours hours hours hours hours hours samp gal	\$39.00 \$4.04 \$0.83 \$38.00 \$105.00 \$0.0313 \$38.00 \$446.67	\$6 \$298 \$265 \$27 \$6 \$298 \$116 \$111 \$168	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @  prod'n rate = 0.5 hr 1.1 samp @ 1.0 areas @ 715 SF @  No TCLP analyses ri 1.1 samp @	105 SF/hr =  105 SF/hr for 1-person cree 105 SF/hr = 105 SF/hr = 105 SF/hr =  105 SF/hr =  105 SF/hr =  0.5 hr/samp = 1.1 samp/area = 0.5 gal/sf/wa =  eccessary according to site 0.5 hr/samp =	6.8 hours @  w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @ 6.8 hours @ 1.1 samples 357.5 gallons  e-wide closure plan 0.55 hours @	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours 1.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)  technician rate: rate 2011 3rd party quote analytical price: average of three quotes site waters waste treat price; vol @ 0.5 gal/sf (equip lit)  technician rate: rate 2011 3rd party quote analytical price: average of three quotes
Vacuum Sweeper Subt - Decon CSA 32 Area (wash)  5.04.6 Decon CSA 32 Area (rinse) Laborer Pressure Washer Vacuum Sweeper Subt - Decon CSA 32 Area (rinse)  5.04.7 Decon Water Samp/Disp Technician VOC Analysis (EPA 624) On-site Water Disposal Subt - Decon Water Samp/Dispose  5.04.8 PCB Wipe Samples Technician	6.8 6.8 6.8 1.1 1.1 357.5	hours hours hours hours hours hours samp gal	\$39.00 \$4.04 \$0.83 \$38.00 \$105.00 \$0.0313	\$6 \$298 \$265 \$27 \$6 \$298 \$116 \$111 \$168	715 SF @  production rate = 1 715 SF @ 715 SF @ 715 SF @  prod'n rate = 0.5 h 1.1 samp @ 1.0 areas @ 715 SF @	105 SF/hr =  05 SF/hr for 1-person cree  105 SF/hr =  105 SF/hr =  105 SF/hr =  0.5 SF/hr =  0.5 hr/samp =  1.1 samp/area =  0.5 gal/sf/wa =  ecessary according to site	6.8 hours @  w w/ one units; facility 6.8 hours @ 6.8 hours @ 6.8 hours @  5; one sample area; 0.6 hours @ 1.1 samples 357.5 gallons	1 unit/crew =  experience 1 unit/crew = 1 unit/crew = 1 unit/crew =	6.8 hours 6.8 hours 6.8 hours 6.8 hours 1.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)  loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 471 (line item 01 54 33 40 5450) RSM/HC p. 473 (line item 01 54 33 40 7800)  technician rate: rate 2011 3rd party quote analytical price: average of three quotes site waters waste treat price; vol @ 0.5 gal/sf (equip lit)  technician rate: rate 2011 3rd party quote

#### 5.04 CSA 32 (T-109 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Producti	on and Quantities for In	-house Estimate	In-house Pricing References		
5.04.9 PPE Usage/H&S Planning										
PPE Usage - Level D	0.0	days	\$0.00	Śn	16.3 hours @	8 hr/day =	2.0 days @	HASP @ 2.5% of non-sup 0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.5	,	\$9.00		16.3 hours @	8 hr/day =	2.0 days @	25% "D" days =	0.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.5	,	\$25.00		16.3 hours @	8 hr/day =	2.0 days @	75% "C" days =	1.5 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.4		\$75.00		16.3 hours @	2.5% hr/hr =	0.4 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$72						
5.04.10 Supervision					0.5 day for closure	e of CSA 31				
Foreman	4	hours	\$65.00	\$260	1 day @	4 hrs/day =	4.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	Included in Gen'l	Contractor G&A/Home	Office indirect costs			Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260						
5.04.11 Certification					Engineer @ 1.5%	and Clerical @ 1.5% of to	otal non-supervisory ho	ours for all tasks		
Engineer	0.3	hours	\$130.00	\$39	16.3 hours @	0.015 hr/hr =	0.3 hours			Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	16.3 hours @	0.015 hr/hr =	0.3 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$53						
(Subt: Assemb 5.04.9 - 5.04.11)				\$385						

5.04 CSA 32 (T-109 Unload Area)			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$2,513	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$176	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$101	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$151	note: DEC uses 6%
Engineering During Construction	2.00%	\$50	note: DEC uses 2%
General Contractor Profit	6.00%	\$151	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$628	
Subtotal - CSA 32 (T-109 Unload)		\$3,141	
Plus Contingency	10.00%	\$314	CWM and DEC 10%
Total - CSA 32 (T-109 Unload)		\$3,456	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.05 CSA 33 (T-158 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Producti	on and Quantities for In-ho	In-house Pricing References			
5.05.1 Inventory Verification					prod'n rate: 15 m	in/tanker; two persons requ	uired			
Laborer	0.5	hours	\$39.00	\$20	1 tankers @	0.25 hr/tanker =		2 units/crew =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	0.0	110415	ψ33.00	\$20		oizo in cariner	0.25005 @	2 amos orem	0.5	round insertation round insertation and party quote
(Subt: Assemb 5.05.1 - 5.05.1)						ntory of CSA 33 (1 Tanker) C	Dil/water separator			
(0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	L	I.	<u> </u>	7		, (=, .	,			
5.05.2 Transp T.O. Liquids Offsite					one tanker conta	ning 5,500 gallons				
Transport in 5,500-gal tanker	1529	miles	\$3.50	\$5.352	5500 gals @	5500 gals/tankr =	0.9 loads @	1529 miles/trip =	1529 miles	Rate: transporters quote/site experience
Subt - Transport Tanker Offsite				\$5,352	•					
				, , , , , ,						
5.05.3 Offsite T.O. Liq's Disposal										
Disposal Cost - Liquids	5500	gallons	\$4.68	\$25,740	5500 gallons					HWC/ETC 2004 & Current third party rate
Subt - Offsite T.O. Liquids Disposal				\$25,740	Ŭ					
(Subt: Assemb 5.05.2 - 5.05.3)				\$31,092	offsite T&D of or	ne (1) tanker				
	•	•	•							
5.05.4 Decon CSA 33 Area (wash)					production rate =	105 SF/hr for 1-person cres	w w/ one units; facility e	xperience		
Laborer	6.8	hours	\$39.00	\$265	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	6.8	hours	\$4.04	\$27	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	6.8	hours	\$0.83	\$6	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon CSA 33 Area (wash)				\$298						
5.05.5 Decon CSA 33 Area (rinse)					production rate =	105 SF/hr for 1-person crev	w w/ one units; facility e	xperience		
Laborer	6.8	hours	\$39.00	\$265	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	6.8	hours	\$4.04	\$27	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	6.8	hours	\$0.83	\$6	715 SF @	105 SF/hr =	6.8 hours @	1 unit/crew =	6.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon CSA 33 Area (rinse)				\$298						
5.05.6 Decon Water Samp/Disp						hours/sample for two techs	; one sample area;			
Technician		hours	\$38.00		1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)		. samp	\$105.00		1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	357.5	gal	\$0.0313		715 SF @	0.5 gal/sf/wa =	357.5 gallons			site waters waste treat price; vol @ 0.5 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$168						
5.05.7 PCB Wipe Samples					No TCLP analyses	necessary according to site	-wide closure plan			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.55 hours @	2 pers/crew =	1.1 hours	technician rate: rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)		samp	\$446.67	\$0		, ,		· ·		analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	1.1	samp	\$83.33		715 SF @	625 SF/samp =	1.1 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$133		· · ·				
(Subt: Assemb 5.05.4 - 5.05.7)				\$899	decontamination	n & sampling of CSA 33				

### 5.05 CSA 33 (T-158 Unload Area)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	on and Quantities for In-	house Estimate		In-house Pricing References	
5.05.8 PPE Usage/H&S Planning						vel D @ 25% for tot non-	supv hrs for all tasks; H			
PPE Usage - Level D	0.0	days	\$0.00	\$0	16.3 hours @	8 hr/day =	2.0 days @	Standard Work Clothes - Site Experience		
PPE Usage - Mod Level C	0.5	days	\$9.00	\$5	16.3 hours @	8 hr/day =	2.0 days @	25% "D" days =	0.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.5	days	\$25.00	\$38	16.3 hours @	8 hr/day =	2.0 days @	75% "C" days =	1.5 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.4	hours	\$75.00	\$30	16.3 hours @	2.5% hr/hr =	0.4 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$72						
5.05.9 Supervision					0.5 day for closure	e of CSA 31				
Foreman	4	hours	\$65.00	\$260	1 day @	4 hrs/day =	4.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	Included in Gen'l	Contractor G&A/Home O	ffice indirect costs			Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260						
5.05.10 Certification					Engineer @ 1.5%	and Clerical @ 1.5% of to	tal non-supervisory hοι	urs for all tasks		
Engineer	0.3	hours	\$130.00	\$39	16.3 hours @	0.015 hr/hr =	0.3 hours			Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	16.3 hours @	0.015 hr/hr =	0.3 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$53		·		·	<u> </u>	
(Subt: Assemb 5.05.8 - 5.05.10)				\$385		•	•	•	•	

5.05 CSA 33 (T-158 Unload Area)	) Direct Cost	Total	Basic	\$32,394

5.05 CSA 33 (T-158 Unload Area)			
Total Cost Summary			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost	Cost Range
Direct Costs/Basic Disposal	Cost	\$32,394	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$2,268	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$1,296	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$1,944	note: DEC uses 6%
Engineering During Construction	2.00%	\$648	note: DEC uses 2%
General Contractor Profit	6.00%	\$1,944	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$8,099	
Subtotal - CSA 33 (T-158 Unload)		\$40,493	
Plus Contingency	10.00%	\$4,049	CWM and DEC 10%
		4	
Total - CSA 33 (T-158 Unload)		\$44,542	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended	Basis of Production	and Quantities for In-hor	use Estimate			In-house Pricing References
				Price						
5.06.1 Inventory Verification				1	nrod'n rates: 100 o	rums/hr; 15 min/tanker o	r rolloff: 30 min/tank: tw	vo nersons required		
Laborer	10	hours	\$39.00	\$390	10 tanks @	0.5 hour/tank =	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	10	110013	\$33.00	\$390		0.5 Hour/tank =	3.0 Hours @	Z dilits/cicw =	10.0 110013	loaded labor rate: loaded labor rate 2011 Srd party quote
(Subt: Assemb 5.06.1 - 5.06.1)						), T-820, T-850, T-910, T-10	010 T-1020 T-1111 T11	112 and T-1310		
,545t. 765cmb 5.00.1 5.00.1)				<b>\$550</b>	tariks. 1 710, 1 010	,, 1 020, 1 030, 1 310, 1 10	710, 1 1020, 1 1111, 111	112, 4114 1 1310		
5.06.2 Onsite Aqueous Treatment					mildly-contaminate	d aqueous wastes; assume	pumped directly from t	tanks into AWTS		
Onsite Aqueous Treatment - Tanks	52176	gals	\$0.0453	\$2,364	52176 gals	, , , , , , , , , , , , , , , , , , , ,		AWTS average cost for all wastewater		
Subt - Onsite Aqueous Treatment		Ü	i i		Average cost per ga	llon 2010				
(Subt: Assemb 5.06.2 - 5.06.2)				\$2,364		f tanks' waste liquids				
		!								
5.06.3 Steel Tank Demolition						/hr (rsm/up 16-01-0142/0				
No. of Tanks/Capacity/Area/Weight	3				26000 gallons:	1700 SF Tanks:	47 CF @	490 Lb/CF =	23139 Lbs	Steel Tanks only; estimate 490#/CF
aborer		hours	\$39.00		1700 SF @	200 SF/hour	8.5 hours @	3 units/crew =	25.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		1700 SF @	200 SF/hour	8.5 hours @	2 units/crew =	17.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		1700 SF @	200 SF/hour	8.5 hours @	1 units/crew =	8.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	8.5	hours	\$34.40		1700 SF @	200 SF/hour	8.5 hours @	1 units/crew =	8.5 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	8.5	hours	\$2.47		1700 SF @	200 SF/hour	8.5 hours @	1 units/crew =	8.5 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	8.5	hours	\$30.03		1700 SF @	200 SF/hour	8.5 hours @	1 units/crew =	8.5 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane (80-ton)	8.5	hours	\$86.31	\$734	1700 SF @	200 SF/hour	8.5 hours @	1 units/crew =	8.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	8.5	hours	\$5.41	\$46	1700 SF @	200 SF/hour	8.5 hours @	1 units/crew =	8.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$3,823	tank areas based u	pon actual tank dimensior	ns, or upon OSWER 9476	5.00-6, Vol 3, p. 5-5		
5.06.4 FRP Tank Demolition					production rate = 2	00 SF/hour (same as steel	tank demolition rate): 1	CE debris per 36 SE tank	area	
No. of Tanks/Capacity/Area/Weight	7				26176 gallons:	2005 SF Tanks:	56 CF @	245 Lb/CF =	13645 Lbs	FRP Tanks only; estimate 245#/CF
Laborer	20.1	hours	\$39.00	¢1 17 <i>1</i>	2005 SF @	2003 SF/hour	10.0 hours @	3 units/crew =	30.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		2005 SF @	200 SF/hour	10.0 hours @	2 units/crew =	20.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator  Excavator		hours	\$84.09		2005 SF @	200 SF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		2005 SF @	200 SF/hour	10.0 hours @	1 units/crew =	10.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	_	hours	\$34.40		2005 SF @	200 SF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		2005 SF @	200 SF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		2005 SF @	200 SF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		2005 SF @	200 SF/hour	10.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition	0	110013	75.41			pon actual tank dimension			0.0 110013	
705C THE TURK DEMORITION				Ş-,431	tarik areas basea a	pon actual turns uniferision	15, 5. apon 05 WEN 3470	o, voi s, p. s s		
5.06.5 Tank Piping Demolition					avg prod'n rate = 20	LF/hr, rsm/up p. 3-10 (16	-01-0621/0622) for 2"/4	" metal pipe @ 4#/LF		
Estimated Piping Length	1000	LF			10 tanks @	100 LF/tank =	1000 LF @	4 Lb/LF =	4000 Lbs	combined Steel and FRP Tanks' Piping
Laborers	100	hours	\$39.00	\$3,900	1000 LF @	20 LF/hour	50.0 hours @	2 units/crew =	100.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	50	hours	\$5.41	\$271	1000 LF @	20 LF/hour	50.0 hours @	1 units/crew =	50.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition	1				4,171 in the absence of facility data, piping assumed to average 100 LF/tank					

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Productio	n and Quantities for In-	house Estimate			In-house Pricing References
	•	•		•						·
5.06.6 Tank Pump Demolition					prod'n rate = 1 pur	np/hr (see RSM/UP p. 3-	11, 16-01-0634 and 16-01-	0636) assume 0.5 pump	os/tank	
Laborers	10	hours	\$39.00	\$390	5.0 pumps @	1 pump/hr	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5	hours	\$5.41		5.0 pumps @	1 pump/hr	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$417	pump weight = 25	0# each; in the absense	of facility data, one pump	per two tanks is estimat	ed	
5.06.7 Load Tank Demo Debris					production rate = 1	L5 CY/hour; RSM/BC p. 4	2 (line item 02225-730-308	80)		
Laborer	0.6	hours	\$39.00	\$23	8.6 CY @	15 CY/hr =	0.6 hours @	1 units/crew	0.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.6	hours	\$45.00	\$27	8.6 CY @	15 CY/hr =	0.6 hours @	1 units/crew =	0.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.6	hours	\$30.03		8.6 CY @	15 CY/hr =	0.6 hours @	1 units/crew =	0.6 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.6	hours	\$5.20		8.6 CY @	15 CY/hr =	0.6 hours @	1 units/crew	0.6 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$72	1 CY tank demo d	ebris = to 972 SF @ 1/3rd	d" thick; and/or 432 LF of 3	" diam pipe; and/or 2 p	umps	
5.06.8 Unl'd Stabilize/Encapsulate					production rate = 1	L5 tons/hour = 120 tons/	day; includes unloading, sl	nredding, and filling con	tainers	
PROCESS TONS (incl kiln dust)	22.3	TONS	n/a		8.6 CY debr + 15%	kiln dust = 9.92 CY total	total tonnage = 22.3 tons			total tons derived from foregoing assemblies + kiln dust
Laborer	3	hours	\$39.00	\$117	22.3 tons @ 15 to	ns/hr @ 1.5 hours @ 2 u	nits/crew = 3.0 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	4.5	hours	\$45.00			ns/hr @ 1.5 hours @ 3 u			loaded labor rate: loaded labor rate 2011 3rd party quote	
Backhoe (1 CY)	1.5	hours	\$19.18			ns/hr @ 1.5 hours @ 1 u		RSM/HC p. 467 (line item 01 54 33 20 0460)		
Loader, Wheel (1 CY)	1.5	hours	\$14.39	\$22	22.3 tons @ 15 to	ns/hr @ 1.5 hours @ 1 u	nits/crew = 1.5 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)		
Shredder	1.5	hours	\$329.70			ns/hr @ 1.5 hours @ 1 u		2004 DEC Rate * Implicit Deflator		
Mixing Pit/Screening/Silo		hours	\$136.29			ns/hr @ 1.5 hours @ 1 u				2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	·		1.3 tons	, -	•			·
Cement Kiln Dust - Delivery Cost		loads		\$0	1.3 tons @ 20 ton,	/load = 0.1 loads				
Cement Kiln Dust - Mat'l&Delv Cost	1.3	tons	\$48.00	\$62						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.3	units	\$1,000.00	\$300	9.9 CYs @ 30 CY/u	nit = 0.3 containers				CWM actual 2011 costs
Rolloffs (30-CY)		hours	\$19.02			nit = 0.3 rolloffs @ 1.5 h	ours/rolloff = 0.5 hours			dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate							d" thick; and/or 432 LF of 3	" diam pipe; and/or 2 p	umps	
5.06.9 Offsite T&D - Tank Demo					offsite disposal is d	letermined to be the onl	y disposal option			
Offsite Transportation - Debris	385.0	miles	\$3.25	\$1,251	9.9 CY @	30 CY/load =	0.3 loads (个1.0) @	385 miles/trip =	385.0 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	9.9	CY	\$337.50	\$3,341	9.9 CY @	27 CF/CY =	267.9 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$4,593						
(Subt: Assemb 5.06.3 - 5.06.9)				\$18,966	tank/piping/pump	demolition, and offsite	transportation & disposal			
5.06.10 Decon Filter Presses (wa)					prod'n rate = 105 S	F/hr for 2-person crew				
Laborer	20.1	hours	\$39.00	\$784	1055.0 SF @	105 SF/hr =	10.0 hours @	2 pers/crew =	20.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	20	hours	\$4.04	\$81	1055.0 SF @	105 SF/hr =	10.0 hours @	1 unit/crew =	10.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	10	hours	\$3.38	\$34	1055.0 SF @	105 SF/hr =	10.0 hours @	1 unit/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Onsite Water Disposal	7500.0		\$0.0313	\$235		•	7500.0 gallons			facility o/s mild waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Filter Presses (wash)					area based upon j	facility est. of 7.18 tons &	& 1 CF = 490#; material thic	ckness assumed to be 1/	'3-inch	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	n and Quantities for In-h	In-house Pricing References				
5.06.11 Decon Filter Presses (rin)					prod'n rate = 105 9	F/hr for 2-person crew;				_	
Laborer	20.1	hours	\$39.00	\$784	1055.0 SF @	105 SF/hr =	10.0 hours @	2 pers/crew =	20.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Pressure Washer		hours	\$4.04		1055.0 SF @	105 SF/hr =	10.0 hours @	1 unit/crew =	10.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)	
Vacuum Sweeper	_	hours	\$3.38		1055.0 SF @	105 SF/hr =	10.0 hours @	1 unit/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)	
Onsite Water Disposal	5500.0		\$0.0313		1055.0 SF @	1.6 gal/sf =	5500.0 gallons	1 dility ci c w -	10.0 110013	facility o/s mild waste treat price; vol @ 0.05 gal/sf (equip lit)	
Subt - Decon Filter Presses (rinse)	3300.0	Bui	Ç0.0313			• •	1 CF = 490#; material thick	kness assumed to he 1/3-	inch	lucinty o/3 mile weste treat price , voi & 0.03 gai/31 (equip iit)	
Subt Decontrice (116363 (11136)				71,071	area basea apon j	demity est. of 7.10 tons &	1 Cr = 450#, material tille	thess assumed to be 175	men		
5.06.11a PCB Wipe Samples					production rate = 0	0.5 hours/sample for two	techs; rate same as facility	r's			
Technician	1.7	hours	\$38.00	\$65	1.7 samp @	0.5 hr/samp =	0.9 hours @	2 units/crew =	1.7 hours	technician rate: rate 2011 3rd party quote	
PCB Analysis/Wipe Test (SW 8081/8082)	1.7	samp	\$83.33	\$142	1055.0 SF @	625 SF/samp =	1.7 samples			analytical price: average of three quotes	
Subt - Wipe Samples				\$206							
0.00						CE/L 4 CE L L : 45					
5.06.12 Filter Press Demolition	+					SF/hr; 1 CF debris per 45		1420011-		hus filter masses 14 200 lb total (facility actions)	
No. of Presses/Area/Weight		ea @	¢20.00	6220	1055.0 SF FPs:	29.3 CF @	490 Lb/CF =	14360 Lbs	0.4 haves	two filter presses: 14,360 Lbs total (facility estimate)	
Laborer		hours	\$39.00		1055.0 SF @	250 SF/hour	4.2 hours @	2 units/crew =	8.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Equipment Operator (Medium)		hours	\$45.00		1055.0 SF @	250 SF/hour	4.2 hours @	2 units/crew =	8.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Excavator	_	hours	\$84.09		1055.0 SF @	250 SF/hour	4.2 hours @	1 units/crew =	4.2 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)	
Metal Shears Attachment		hours	\$34.40		1055.0 SF @	250 SF/hour	4.2 hours @	1 units/crew =	4.2 hours	2004 DEC Rate * Implicit Deflator	
Claw Attachment	_	hours	\$2.47		1055.0 SF @	250 SF/hour	4.2 hours @	1 units/crew =	4.2 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)	
Loader	_	hours	\$14.39		1055.0 SF @	250 SF/hour	4.2 hours @	1 units/crew =	4.2 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)	
Yard Crane	_	hours	\$86.31		1055.0 SF @	250 SF/hour	4.2 hours @	1 units/crew =	4.2 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)	
Welding Equipment	4.2	hours	\$5.41		1055.0 SF @	250 SF/hour	4.2 hours @	1 units/crew =	4.2 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)	
Subt - Filter Press Demolition				\$1,659	debris area based	upon facility estimate of	7.18 tons; 1 CF = 490#; and	d material thickness = 1/3	3-inch		
5.06.13 Load FP Demolition Debris					production rate = 1	5 CY/hour					
Laborer	0.1	hours	\$39.00	\$4	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Equipment Operator (Medium)		hours	\$45.00		1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Loader	_	hours	\$14.39		1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)	
Dump Trailer (20 CY)	_	hours	\$5.20		1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)	
Subt - Load FP Demo Debris	0.1	1.00.5	φσ. <u>2</u> σ				as expressed in cubic feet i			16.11/110 pt. 103 (IIIIe telli 013 133 20 3 100)	
				·		•		•			
F OC 14 United Stabilities / Francisco					production rate = 1	E tons/hour = 120 tons/s	lave includes unloading sh	rodding and filling conta	inore		
5.06.14 Unl'd Stabilize/Encapsulate PROCESS TONS (incl kiln dust)	7.7	TONS	n/a		1.1 CY debr +	15% kiln dust =	lay; includes unloading, sh			total tons derived from Assembly E 00 13 plus kills divet	
Laborer	7.3	hours	\$39.00	620	7.3 tons @	15% kiin dust =	1.25 CY total 0.5 hours @	total tonnage = 2 units/crew =	7.34 tons 1.0 hours	total tons derived from Assembly 5.08.12, plus kiln dust loaded labor rate: loaded labor rate 2011 3rd party quote	
	1					, ,				1 / 1	
Equipment Operator (Medium)		hours	\$45.00		7.3 tons @	15 tons/hr @	0.5 hours @	3 units/crew =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote	
Backhoe (1 CY)		hours	\$19.18		7.3 tons @	15 tons/hr @	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)	
Loader, Wheel (1 CY)	0.5		\$14.39		7.3 tons @	15 tons/hr @	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)	
Shredder	_	hours	\$329.70		7.3 tons @	15 tons/hr @	0.5 hours @	1 units/crew =	0.5 hours	2004 DEC Rate * Implicit Deflator	
Mixing Pit/Screening/Silo	0.5	hours	\$135.90		7.3 tons @	15 tons/hr @	0.5 hours @	1 units/crew =	0.5 hours	2004 DEC Rate * Implicit Deflator	
Cement Kiln Dust - Mat'l Cost		tons			0.2 tons	20: " '	0.01				
Cement Kiln Dust - Delivery Cost		loads			0.2 tons @	20 ton/load =	0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost	0.2	tons	\$48.00	\$10						CWM actual 2011 costs	
Encapsulation Containers (30-CY)	0.042		\$1,000.00		1.2 CY @	30 CY/unit =	0.0416 containers			CWM actual 2011 costs	
Rolloffs (30-CY)	_	hours	\$19.02		1.2 CY @	30 CY/unit =	0.0416 rolloffs @	0.5 hours/rolloff =	0.0 hours	dumpster RSM/BC p. 42 (02225-730-0800)	
Subt - Stabilize/Encapsulate		tons		\$408							

#### 5.06 AWTS (inside) - 10 tanks

Basic Closure Activities: Direct Costs	Estimated	Unit of	Unit Price	2011 CWM Extended	Basis of Product	ion and Quantities for In-ho	ouse Estimate			
	Quantity	Measure		Price			In-house Pricing References			
					•					
5.06.15 Offsite T&D Filter Press						determined to be the only				
Offsite Transportation	63.6	miles	\$3.25		1.2 CY @	30 CY/load =	0.04 loads @	1529 miles/trip =	63.6 miles	Rate: transporters quote/site experience
Offsite Disposal	1.2	CY	\$336.18		1.2 CY @	27 CF/CY =	33.7 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Filter Press				\$610						
(Subt: Assemb 5.06.10 - 5.06.15)				\$5,098	filter press deco	ntamination, demolition, an	d onsite debris disposa	l (p. 30 in 2001 facility estii	nate)	
5.06.16 Decon SCA (wash)		ſ	1		In un desption unto	105 C5 /hu fau 1 mauran ana	/ ana	ilitus assauri an an		
, ,	F1.1	I	620.00			= 105 SF/hr for 1-person cre		, · · · ·	E4.4 h	
Laborer	51.1		\$39.00		5369 SF @	105 SF/hr =	51.1 hours @	1 pers/crew =	51.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	51.1		\$4.04		5369 SF @	105 SF/hr =	51.1 hours @	1 unit/crew =	51.1 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum (55-gal wet/dry)	51.1	hours	\$3.41		5369 SF @	105 SF/hr =	51.1 hours @	1 unit/crew =	51.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$2,374	•					
5.06.17 Decon SCA (rinse)					production rate =	= 105 SF/hr for 1-person cre	w w/ one unit each; fac	ility experience		
Laborer	51.1	hours	\$39.00	\$1,993	5369 SF @	105 SF/hr =	51.1 hours @	1 pers/crew =	51.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	51.1	hours	\$4.04	\$206	5369 SF @	105 SF/hr =	51.1 hours @	1 unit/crew =	51.1 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum (55-gal wet/dry)	51.1	hours	\$3.41	\$174	5369 SF @	105 SF/hr =	51.1 hours @	1 unit/crew =	51.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$2,374						
5.06.18 Decon Water Samp/Disp						0. F. b. a	a alaa. fa ailitu uusit uuisa	- ¢0.0272/ccl		
Technician	2.2	hours	\$38.00		3.3 samp @	= 0.5 hours/sample for two t 0.5 hr/samp =	1.65 hours @	= \$0.0273/gai 2 pers/crew =	3.3 hours	technician rate: rate 2011 3rd party quote
								2 pers/crew =	3.3 Hours	1 7 1
VOC Analysis (EPA 624)		samp	\$105.00		3.0 areas @	1.1 samp/area =	3.3 samples			analytical price: average of three quotes
On-site Water Disposal	2684.5	gai	\$0.0313		5369 SF @	5.5 gal/sf/wa =	2684.5 gallons			facility o/s mild waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$556	1					
5.06.19 PCB Wipe Samples					No TCLP analyses	necessary according to site	-wide closure plan			
Technician	8.6	hours	\$38.00	\$327	8.6 samp @	0.5 hr/samp =	4.3 hours @	2 pers/crew =	8.6 hours	technician rate: rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)		samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	8.6	samp	\$83.33	\$717	5369 SF @	625 SF/samp =	8.6 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$1,043						
(Subt: Assemb 5.06.16 - 5.06.19)				\$6,347	decontaminatio	n & sampling of SCA				

Total Non-Super Labor Hours

396.3

5.06.20 PPE Usage/H&S Planning					Level C @ 75%; Mod Level C @ 25% for tot non-supv hrs for all tasks; HASP @ 2.5% of non-supv hrs	
PPE Usage - Level D	0	days	\$0.00	\$(	396.3 hours @ 8 hr/day = 49.5 days @ 0% "D" days = 0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	12.3	days	\$9.00	\$113	1 396.3 hours @ 8 hr/day = 49.5 days @ 25% "D" days = 12.3 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	37.2	days	\$25.00	\$930	396.3 hours @ 8 hr/day = 49.5 days @ 75% "C" days = 37.2 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	9.9	hours	\$75.00	\$743	3 396.3 hours @ 2.5% hr/hr = 9.9 hours	Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$1,783	3	
5.06.21 Supervision					1 week for closure of 10 tanks	
oreman	40	hours	\$65.00	\$2,600	1 week @ 40 hrs/wk = 40.0 hours	Outside foreman rate: 2011 3rd party quote
ite Project manager	0	hours	\$75.00	\$(	Included in Gen'l Contractor G&A/Home Office indirect costs	Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$2,600	0	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production a	and Quantities for In-h	ouse Estimate	In-house Pricing References
		ı			5 : 0.150/	161 : 10450/ 5:		
5.06.22 Certification					Engineer @ 1.5% an	d Clerical @ 1.5% of to	tal non-supervisory hours for all tasks	
Engineer	5.9	hours	\$130.00	\$767	396.3 hours @	0.015 hr/hr =	5.9 hours	Engineer rate: 2011 3rd party quote
Clerical	5.9	hours	\$45.00	\$266	396.3 hours @	0.015 hr/hr =	5.9 hours	Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$1,033				
(Subt: Assemb 5.06.20 - 5.06.22)				\$5,416				
5.06 AWTS (inside) - 10 tanks	Direct Cost	Total	Basic	\$38,580				

5.06 AWTS (inside) - 10 Tanks			
Total Cost Summary			
, , , , , , , , , , , , , , , , , , , ,			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$38,580	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$2,701	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$1,543	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$2,315	note: DEC uses 6%
Engineering During Construction	2.00%	\$772	note: DEC uses 2%
General Contractor Profit	6.00%	\$2,315	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$9,645	
Subtotal: AWTS (inside)/10 Tanks		\$48,225	
Plus Contingency	10.00%	\$4,823	CWM and DEC 10%
		4	
Total: AWTS (inside)/10 Tanks		\$53,048	
	1		

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.07 AWTS (inside SolSep) 2 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities I	or In-house Estima	ate		In-house Pricing References
5.07.1 Inventory Verification					prod'n rates: 100	drums/hr; 15 min/t	anker or rolloff; 30	min/tank; two persor	ns required	
Laborer	2	hours	\$39.00	\$78	2 tanks @	0.5 hour/tank =	·	2 units/crew =	2.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$78		•		•		
(Subt: Assemb 5.07.1 - 5.07.1)				\$78	tanks: T-3011 ar	nd T-3012				
5.07.2 Onsite Aqueous Treatment					average cost per	gal aqueous wastes;	assume pumped o	directly from tanks into	o AWTS	
Onsite Aqueous Treatment - Tanks	750	gals	\$0.0453	\$34	750 gals					AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment				\$34						
(Subt: Assemb 5.07.2 - 5.07.2)				\$34	onsite treatmen	t of tanks' waste liqu	ıids			
					prod'n rate = 200	SF/hr (rsm/up 16-0	1-0142/0216/0308	s, pp. 3-2/3-3,3-5); 1 C	F debris per 36 sf	
5.07.3 Steel Tank Demolition					tank area				·	
No. of Tanks/Capacity/Area/Weight	0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	490 Lb/CF =	0 Lbs	Steel Tanks only; estimate 490#/CF
aborer		hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
excavator		hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0	hours	\$34.40		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0	hours	\$2.47	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0	hours	\$30.03	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0	hours	\$5.41	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition	0	SF @		\$0	tank areas base	d upon actual tank d	limensions, or upor	n OSWER 9476.00-6, V	'ol 3, p. 5-5	
5.07.4 FRP Tank Demolition					production rate = area	200 SF/hour (same	as steel tank demo	olition rate); 1 CF debr	is per 36 SF tank	
No. of Tanks/Capacity/Area/Weight	2	tnks @			750 gallons:	155 SF Tanks:	4 CF @	245 Lb/CF =	1055 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	2.3	hours	\$39.00	\$90	155 SF @	200 SF/hour	0.8 hours @	3 units/crew =	2.3 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	1.6	hours	\$45.00	\$72	155 SF @	200 SF/hour	0.8 hours @	2 units/crew =	1.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.8	hours	\$84.09		155 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		155 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		155 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		155 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
ard Crane	0.8	hours	\$86.31		155 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0	hours	\$5.41		155 SF @	200 SF/hour	0.8 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$352	tank areas base	d upon actual tank o	limensions, or upor	n OSWER 9476.00-6, V	ol 3, p. 5-5	
5.07.5 Tank Piping Demolition					avg prod'n rate =	20 LF/hr, rsm/up p.	3-10 (16-01-0621/	0622) for 2"/4" metal	pipe @ 4#/LF	
Estimated Piping Length	200	LF			2 tanks @	100 LF/tank =	200 LF @	4 Lb/LF =	800 Lbs	combined Steel and FRP Tanks' Piping
Laborers	20	hours	\$39.00	\$780	200 LF @	20 LF/hour	10.0 hours @	2 units/crew =	20.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	10	hours	\$5.41	\$54	200 LF @	20 LF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
			1	\$834	in the absence o					

### 5.07 AWTS (inside SolSep) 2 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produ	ction and Quantities	for In-house Estim	ate		In-house Pricing References
					prod'n rate = 1	pump/hr (see RSM/l	UP p. 3-11, 16-01-06			
5.07.6 Tank Pump Demolition					pumps/tank					
Laborers	2	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1	hours	\$5.41		1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$83	pump weight	= 250# each; in the a	bsense of facility da	ta, one pump per two	tanks is estimated	
5.07.7 Load Tank Demo Debris					production rate	e = 15 CY/hour; RSM/	/BC p. 42 (line item	02225-730-3080)		
Laborer	0.1	hours	\$39.00	\$4	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.1	hours	\$45.00	\$5	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
-oader	0.1	hours	\$30.03	\$3	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.1	hours	\$5.20	\$1	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$12	1 CY tank dem	no debris = to 972 SF	@ 1/3rd" thick; and	or 432 LF of 3" diam	pipe; and/or 2 pumps	
5.07.8 Unl'd Stabilize/Encapsulate					production rate containers	e = 15 tons/hour = 12	20 tons/day; include	s unloading, shreddin	g, and filling	
PROCESS TONS (incl kiln dust)	1.2	TONS			1.1 CY debr + 1	15% kiln dust = 1.29 (	CY total total tonnag	ge = 1.2 tons		total tons derived from foregoing assemblies + kiln dust
Laborer		hours	\$39.00	\$8		tons/hr @ 0.1 hours				loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.2	hours	\$45.00	\$9	1.2 tons @ 15	tons/hr @ 0.1 hours	@ 3 units/crew = 0.	2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.1	hours	\$19.18	\$2	1.2 tons @ 15	tons/hr @ 0.1 hours	@ 1 units/crew = 0.	1 hours		RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.1	hours	\$14.39			tons/hr @ 0.1 hours				RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder		hours	\$329.70			tons/hr @ 0.1 hours				2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo		hours	\$136.29			tons/hr @ 0.1 hours				2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		0.2 tons		<u>C                                    </u>			,
Cement Kiln Dust - Delivery Cost		loads	\$0.00			ton/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost		tons	\$48.00	\$10		,				CWM actual 2011 costs
Encapsulation Containers (30-CY)	0	units	\$1,000.00	\$0	1.3 CYs @ 30 C	CY/unit = 0.0 containe	ers			CWM actual 2011 costs
Rolloffs (30-CY)	0	hours	\$19.02			CY/unit = 0.0 rolloffs (		= 0.0 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$76	1 CY tank dem	no debris = to 972 SF	@ 1/3rd" thick; and,	or 432 LF of 3" diam	pipe; and/or 2 pumps	
5.07.9 Offsite T&D - Tank Demo					offsite disposa	al is determined to be	e the only disposal o	option		
Offsite Transportation - Debris	385.0	miles	\$3.25	\$1,251	1.3 CY @	30 CY/load =	0.3 loads (个1.	0) :385 miles/trip =	385 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	1.3	CY	\$337.50	\$439	1.3 CY @	27 CF/CY =	34.9 CF	•		DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$1,690						
(Subt: Assemb 5.07.3 - 5.07.9)				\$3,047	tank/piping/p	ump demolition, and	offsite transportati	on & disposal		
5.07.10 Decon SCA (wash)					production rate	e = 105 SF/hr for 1-pe	erson crew w/ one u	unit each; facility expe	rience	I
Laborer	6.0	hours	\$39.00	\$234	629 SF @	105 SF/hr =	6.0 hours @	1 pers/crew =	6.0 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		629 SF @	105 SF/hr =	6.0 hours @	1 unit/crew =	6.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		629 SF @	105 SF/hr =	6.0 hours @	1 unit/crew =	6.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)	0.0		Ç3.11	\$279		200 0. 7	0.00 6	_ a, a. a	2.0	
	+	<del> </del>		72,3						

### 5.07 AWTS (inside SolSep) 2 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produ	ction and Quantities f	or In-house Estima	ate		In-house Pricing References
5.07.11 Decon SCA (rinse)	1		1		production rate	e = 105 SF/hr for 1-per	son crow w/ one u	nit oach: facility ovn	orionco	
Laborer	6.0	hours	\$39.00		629 SF @	105 SF/hr =	6.0 hours @	1 pers/crew =	6.0 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		629 SF @	105 SF/hr =	6.0 hours @	1 unit/crew =	6.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		629 SF @	105 SF/hr =	6.0 hours @	1 unit/crew =	6.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)	0		ψ51.12	\$279	_	100 0.7	010 110010 @	I amy or ex	010 110 010	North, the printer factor of the record
5.07.12 Decon Water Samp/Disp					production rate	e = 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples	·		analytical price: average of three quotes
On-site Water Disposal	315.5		\$0.0313	\$10	629 SF @	0.5 gal/sf/wa =	315.5 gallons			site waters waste treat price; vol @ 0.5 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$167						
5.07.13 PCB Wipe Samples					No TCLP analys	es necessary according	g to site-wide closu	ıre plan		
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.55 hours @	2 pers/crew =	1.1 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)		samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	1.1	samp	\$83.33	\$92	629 SF @	625 SF/samp =	1.1 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$133		·				·
(Subt: Assemb 5.07.10 - 5.07.13)				\$858	decontaminat	ion & sampling of SCA				

Total Non-Super Labor Hours

42.7

					Level C @ 75%: Mo	nd Level C @ 25%	for tot non-suny h	rs for all tasks; HASP @ 3	2 5% of non-sun	V
5.07.14 PPE Usage/H&S Planning					hrs	ou 20001 C @ 2570	Tor tot horr supt in	115 TOT UII (USKS, 117 ST @ 1	2.370 OF HOTE Sup	
PPE Usage - Level D	0	days	\$0.00	\$0	42.7 hours @	8 hr/day =	5.3 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	1.3	days	\$9.00	\$12	42.7 hours @	8 hr/day =	5.3 days @	25% "Mod C" days =	1.3 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	4	days	\$25.00	\$100	42.7 hours @	8 hr/day =	5.3 days @	75% "C" days =	4.0 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.1	hours	\$75.00	\$83	42.7 hours @	2.5% hr/hr =	1.1 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$194						
5.07.15 Supervision					1.0 day for closure	of 2 tanks				
Foreman	8	hours	\$65.00	\$520	1 day @	8 hrs/day =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0	hours	\$75.00	\$0	Included in Gen'l	Contractor G&A/Ho	ome Office indirec	t costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.07.16 Certification					Engineer @ 1.5% a	and Clerical @ 1.5%	6 of total non-supe	ervisory hours for all task	:S	+
Engineer	0.6	hours	\$130.00	\$78	42.7 hours @	0.015 hr/hr =	0.6 hours			Engineer rate: 2011 3rd party quote
Clerical	0.6	hours	\$45.00	\$27	42.7 hours @	0.015 hr/hr =	0.6 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$105				•		
(Subt: Assemb 5.07.14 - 5.07.16)				\$819						

5.07 AWTS (inside SolSep) 2 tnks	Direct Cost	Total	Basic	\$4,837
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5.07 AWTS (inside SolSep) 2 tnks			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
		Cost	
	of Direct Cost		
Direct Costs/Basic Disposal		\$4,837	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%		note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%		note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$290	note: DEC uses 6%
Engineering During Construction	2.00%		note: DEC uses 2%
General Contractor Profit	6.00%	\$290	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$1,209	
Subtotal: AWTS (i/s SolSep) 2 tks		\$6,046	
Plus Contingency	10.00%	\$605	CWM and DEC 10%
Total: AWTS (i/s SolSep) 2 tanks		\$6,650	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.08 AWTS (o/s north AWT) 3 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate  In-house Pricing References
5.08.1 Inventory Verification					prod'n rates: 100 drums/hr; 15 min/tanker or rolloff; 30 min/tank; two persons required
Laborer	3.0	hours	\$39.00	\$117	7 3 tanks @ 0.5 hour/tank = 1.5 hours @ 2 units/crew = 3.0 hours   loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification			700.00	\$117	
(Subt: Assemb 5.08.1 - 5.08.1)					tanks: T-100, T-125, and T-8008
5 00 2 5 mm to Tomb T 0000					4 CFO cole/location (100 cole/location) 0 474 (20 40 0404) con FOO colege
5.08.2 Empty Tank T-8008	0.6	haus	¢20.00	¢24	prod'n rate = 1,650 gals/hr; rsm/up p. 9-171 (33-19-0101); one 500-gal tank  500 gals @ 1650 gals/hr = 0.30 hours @ 2 units/crew 0.61 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer Dumping Fauligness	0.0	hours	\$39.00 \$0.00		
Pumping Equipment	0.2	hours			Existing equipment part of tank system  RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.3	hours	\$6.31		500 gals @ 1650 gals/hr = 0.30 hours @ 1 units/crew 0.30 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty T-8008 into Tanker				\$26	
5.08.3 Transport Tanker Onsite					production rate = 0.5 hours for on-site travel.
Road Tractor (4 x 2, 30-ton)	0.05	hours	\$32.45	\$2	2 500 gals @ 5500 gals/load = 0.09 loads @ 0.5 hours/trip = 0.05 hours RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0.05	hours	\$45.00		500 gals @ 5500 gals/load = 0.09 loads @ 0.5 hours/trip = 0.05 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)	0.05	hours	\$6.31	\$0	500 gals @ 5500 gals/load = 0.09 loads @ 0.5 hours/trip = 0.05 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transport Tanker Onsite				\$4	
5.08.4 Empty One (1) Tanker					prod'n rate = 1,650 gals/hr; rsm/up p. 9-171 (33-19-0101).
Laborer	0.61	hours	\$39.00	\$24	500 gals @ 1650 gals/hr = 0.30 hours @ 2 units/crew 0.61 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.01	hours	\$0.00		Existing equipment part of tank system  RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.3	hours	\$6.31		2 500 gals @ 1650 gals/hr = 0.30 hours @ 1 units/crew 0.30 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty 1 Tankers' Contents	0.5	nours	70.51	\$26	
(Subt: Assemb 5.08.2 - 5.08.4)					empty T-8008 into tanker and transport onsite to AWTS
	<u> </u>		T		
5.08.5 Onsite Aqueous Treatment	500.0		44.0244	6040	100 H
Onsite Aqu Treat - T-8008		gallons	\$1.8244		2 500 gallons AWTS treatment costs @ \$1.8244
Onsite Aqu Treat - T-100	160545.0	gallons	\$0.0453		160545 gallons AWTS average cost for all wastewater
Subt - Onsite Aqu Trt - Tankers				\$8,185	
(Subt: Assemb 5.08.5 - 5.08.5)				\$8,185	onsite treatment of tanks' waste liquids
					prod'n rate = 60,000 gals/hr = 1,000 gals/min (based upon facility estimate to pump from FAC
5.08.6 Tnk T-125 Liqs to FAC pond					ponds)
Laborer		hours	\$39.00	\$0	Included in third party operation of AWTS loaded labor rate: loaded labor rate 2011 3rd party quote
Technician	1.0	samp	\$38.00		1.0 samp @ 0.5 hr/samp = 0.5 hours @ 2 pers/crew = 1.0 hours technician rate: rate 2011 3rd party quote
VOCs	1.0	samp	\$105.00	\$105	1 sample analytical price: average of three quotes
Semi-VOCs	1.0	samp	\$208.33	\$208	1 sample analytical price: average of three quotes
PCBs/Pesticides	1.0	samp	\$133.33	\$133	1 sample analytical price: average of three quotes
Metals	1.0	hours	\$188.00	\$188	1 sample analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)	0.0	hours	\$0.00	\$0	Existing equipment part of tank system RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam)	0.0	LF	\$0.00	\$0	Existing equipment part of tank system RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Tank T-125 to FAC Pond				\$673	
(Subt: Assemb 5.08.6 - 5.08.6)	İ			\$673	transfer contents of T-125 to FAC Ponds

### 5.08 AWTS (o/s north AWT) 3 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Producti	on and Quantities fo	r In-house Estima	te		In-house Pricing References
5.08.7 Steel Tank Demolition					tank area	51/111 (13111/up 10 01	0142/0210/0300,	pp. 3-2/3-3,3-5); 1 CF	debits per 50 si	
No. of Tanks/Capacity/Area/Weight	2.0	tnks @			554816 gallons:	17522 SF Tanks:	487 CF @	490 Lb/CF =	238494 Lbs	Steel Tanks only; estimate 490#/CF
Laborer	262.8		\$39.00	\$10.249	17522 SF @	200 SF/hour	87.6 hours @	3 units/crew =	262.8 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	175.2	hours	\$45.00		17522 SF @	200 SF/hour	87.6 hours @	2 units/crew =	175.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		17522 SF @	200 SF/hour	87.6 hours @	1 units/crew =	87.6 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	87.6	hours	\$34.40		17522 SF @	200 SF/hour	87.6 hours @	1 units/crew =	87.6 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	87.6	hours	\$2.47		17522 SF @	200 SF/hour	87.6 hours @	1 units/crew =	87.6 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	87.6	hours	\$30.03		17522 SF @	200 SF/hour	87.6 hours @	1 units/crew =	87.6 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	87.6	hours	\$86.31		17522 SF @	200 SF/hour	87.6 hours @	1 units/crew =	87.6 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		17522 SF @	200 SF/hour	87.6 hours @	1 units/crew =	87.6 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition			·			•		OSWER 9476.00-6, V		
				• •		,				
					production rate =	200 SF/hour (same a	is steel tank demo	lition rate); 1 CF debr	is per 36 SF tank	
5.08.8 FRP Tank Demolition					area					
No. of Tanks/Capacity/Area/Weight	1.0	tnks @			500 gallons:	114 SF Tanks:	3 CF @	245 Lb/CF =	776 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	1.7	hours	\$39.00	\$66	114 SF @	200 SF/hour	0.6 hours @	3 units/crew =	1.7 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	1.1	hours	\$45.00	\$50	114 SF @	200 SF/hour	0.6 hours @	2 units/crew =	1.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.6	hours	\$84.09	\$50	114 SF @	200 SF/hour	0.6 hours @	1 units/crew =	0.6 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.6	hours	\$34.40	\$21	114 SF @	200 SF/hour	0.6 hours @	1 units/crew =	0.6 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.6	hours	\$2.47	\$1	114 SF @	200 SF/hour	0.6 hours @	1 units/crew =	0.6 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.6	hours	\$30.03	\$18	114 SF @	200 SF/hour	0.6 hours @	1 units/crew =	0.6 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.6	hours	\$86.31	\$52	114 SF @	200 SF/hour	0.6 hours @	1 units/crew =	0.6 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	114 SF @	200 SF/hour	0.6 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$258	tank areas based	l upon actual tank dii	mensions, or upon	OSWER 9476.00-6, V	ol 3, p. 5-5	
5.08.9 Tank Piping Demolition					avg prod'n rate =	20 LF/hr, rsm/up p. 3	s-10 (16-01-0621/0	0622) for 2"/4" metal	pipe @ 4#/LF	
Estimated Piping Length	300.0	LF			3 tanks @	100 LF/tank =	300 LF @	4 Lb/LF =	1200 Lbs	combined Steel and FRP Tanks' Piping
Laborers			\$39.00	\$1,170	300 LF @	20 LF/hour	15.0 hours @	2 units/crew =	30.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41		300 LF @	20 LF/hour	15.0 hours @	1 units/crew =	15.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$1,251	in the absence of	f facility data, piping				
5.08.10 Tank Pump Demolition					prod'n rate = 1 pu pumps/tank	imp/hr (see RSM/UP	p. 3-11, 16-01-063	34 and 16-01-0636) as	sume 0.5	
Laborers	3.0	hours	\$39.00	\$117	1.5 pumps @	1 pump/hr	1.5 hours @	2 units/crew =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41		1.5 pumps @	1 pump/hr	1.5 hours @	1 units/crew =	1.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$125	pump weight = 2	50# each; in the abse	ense of facility dat	a, one pump per two	tanks is estimated	
5.08.11 Load Tank Demo Debris					production rate =	15 CY/hour; RSM/BC	p. 42 (line item 0	2225-730-3080)		
Laborer	1.3	hours	\$39.00	\$51	19.6 CY @	15 CY/hr =	1.3 hours @	1 units/crew	1.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		19.6 CY @	15 CY/hr =	1.3 hours @	1 units/crew =	1.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
oader		hours	\$30.03		19.6 CY @	15 CY/hr =	1.3 hours @	1 units/crew =	1.3 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)		hours	\$5.20	-	19.6 CY @	15 CY/hr =	1.3 hours @	1 units/crew	1.3 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris						debris = to 972 SF @ .	1/3rd" thick; and/	or 432 LF of 3" diam p	ipe; and/or 2 pumps	

#### 5.08 AWTS (o/s north AWT) 3 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	f Production and Quantities for In-house Estimate		In-house Pricing References		
					production rate	= 15 tons/hour = 120	tons/day; includes	unloading, shredding	, and filling	
5.08.12 Unl'd Stabilize/Encapsulate					containers					
PROCESS TONS (incl kiln dust)	123.4	TONS			19.6 CY debr +	15% kiln dust = 22.53 (	CY total total tonna	ge = 123.4 tons		total tons derived from foregoing assemblies + kiln dust
Laborer	16.4	hours	\$39.00	\$640	123.4 tons @ 1	5 tons/hr @ 8.2 hours	@ 2 units/crew = 1	.6.4 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00	\$1,112	123.4 tons @ 1	5 tons/hr @ 8.2 hours	@ 3 units/crew = 2	4.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	8.2	hours	\$19.18			5 tons/hr @ 8.2 hours				RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	8.2	hours	\$14.39	\$118	123.4 tons @ 1	5 tons/hr @ 8.2 hours	@ 1 units/crew = 8	3.2 hours		RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	8.2	hours	\$329.70			5 tons/hr @ 8.2 hours				2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	8.2	hours	\$136.29	\$1,118	123.4 tons @ 1	5 tons/hr @ 8.2 hours	@ 1 units/crew = 8	3.2 hours		2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0	2.9 tons					
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	2.9 tons @ 20 t	on/load = 0.1 loads				
Cement Kiln Dust - Mat'l&Delv Cost	2.9	tons	\$48.00	\$139						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.8	units	\$1,000.00	\$800	22.5 CYs @ 30	CY/unit = 0.8 containe	rs			CWM actual 2011 costs
Rolloffs (30-CY)	6.2	hours	\$19.02			CY/unit = 0.8 rolloffs @		6.2 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate						o debris = to 972 SF @			ipe; and/or 2 pumps	
5.08.13 Offsite T&D - Tank Demo						is determined to be th				
Offsite Transportation - Debris		miles	\$3.25		22.5 CY @	30 CY/load =		) (385 miles/trip =	385.0 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	22.5	CY	\$337.50		22.5 CY @	27 CF/CY =	608.2 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$8,845						
(Subt: Assemb 5.08.7 - 5.08.13)				\$56,934	tank/piping/pu	ımp demolition, and o	ffsite transportatior	n & disposal		
5.08.14 Decon SCA (wash)					production rate	= 105 SF/hr for 1-pers	son crew w/ one un	it each: facility exper	ience	
Laborer	151.2	hours	\$39.00		15875 SF @	105 SF/hr =	151.2 hours @		151.2 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		15875 SF @	105 SF/hr =	151.2 hours @		151.2 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		15875 SF @	105 SF/hr =	151.2 hours @	· · · · · · · · · · · · · · · · · · ·	151.2 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)	101.12		ψ3111 <u></u>	\$7,023	1300	100 0.7	13112 110013 6	2 4.11.6/ 61.6.10	13112 110413	The Hy Tro (mile item 013 133 10 7330)
5.08.15 Decon SCA (rinse)					production rate	= 105 SF/hr for 1-pers	con crew w/ one un	it each: facility exper	ience	
Laborer	151 2	hours	\$39.00		15875 SF @	105 SF/hr =	151.2 hours @		151.2 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		15875 SF @	105 SF/hr =	151.2 hours @		151.2 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		15875 SF @	105 SF/hr =	151.2 hours @		151.2 hours	RSM/HC p. 473 (line item 01 54 33 40 3430)
Subt - Decon SCA (rinse)	131.2	110013	75.41	\$7,023	1507551 @	103 31 / 111 -	131.2 110013 @	1 dinyciew -	131.2 110013	11311/116 p. 473 (iiile itelii 01 34 33 40 7000)
5.08.16 Decon Water Samp/Disp					production rate	= 0.5 hours/sample fo	or two tachs			
Technician	1 1	hours	\$38.00		1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)		samp	\$105.00		1.1 samp @ 1.0 areas @	1.1 samp/area =	1.1 samples	2 pers/crew =	1.1 110015	analytical price: average of three quotes
, , ,										, , ,
On-site Water Disposal	7937.5	gai	\$0.0313		15875 SF @	0.5 gal/sf/wa =	7937.5 gallons			site waters waste treat price ; vol @ 0.5 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$406						

### 5.08 AWTS (o/s north AWT) 3 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price		ion and Quantities fo	r In-house Estimat	te		In-house Pricing References
5.08.17 PCB Wipe Samples						necessary according		e plan		
Technician	25.4	hours	\$38.00	\$965	25.4 samp @	0.5 hr/samp =	12.7 hours @	2 pers/crew =	25.4 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	25.4	samp	\$83.33	\$2,117	15875 SF @	625 SF/samp =	25.4 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp		_		\$3,082		•	•			
(Subt: Assemb 5.08.14 - 5.08.17)				\$17,534	decontamination	n & sampling of SCA				

Total Non-Super Labor Hours

851.7

					Level C @ 75%; N	1od Level C @ 25% f	for tot non-supv hrs	for all tasks; HASP @ 2	.5% of non-supv	
5.08.18 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	851.7 hours @	8 hr/day =	106.5 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	26.6	days	\$9.00	\$239	851.7 hours @	8 hr/day =	106.5 days @	25% "Mod C" days =	26.6 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	79.9	days	\$25.00	\$1,998	851.7 hours @	8 hr/day =	106.5 days @	75% "C" days =	79.9 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	21.3	hours	\$75.00	\$1,598	851.7 hours @	2.5% hr/hr =	21.3 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$3,834						
5.08.19 Supervision					3 weeks for closu	re of 3 tanks				
Foreman	120.0	hours	\$65.00	\$7,800	3 weeks @	40 hrs/wk =	120.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen'l	Contractor G&A/H	ome Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$7,800						
5.08.20 Certification					Engineer @ 1.5%	and Clerical @ 1.5%	6 of total non-super	visory hours for all task	s	
Engineer	12.8	hours	\$130.00	\$1,664	851.7 hours @	0.015 hr/hr =	12.8 hours	•	•	Engineer rate: 2011 3rd party quote
Clerical	12.8	hours	\$45.00	\$576	851.7 hours @	0.015 hr/hr =	12.8 hours	•	•	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$2,240						
(Subt: Assemb 5.08.18 - 5.08.20)				\$13,874						

5.08 AWTS (o/s north AWT) 3 tnks	Direct Cost	Total	Basic	\$97,372
, ,				70.70.

5.08 AWTS (o/s north AWT) 3 tn	ks		
Total Cost Summary			
•			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
		Cost	
	of Direct Cost		
Direct Costs/Basic Disposal		\$97,372	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$6,816	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$3,895	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$5,842	note: DEC uses 6%
Engineering During Construction	2.00%	\$1,947	note: DEC uses 2%
General Contractor Profit	6.00%	\$5,842	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$24,343	
Subt: AWTS (o/s nor AWT) 3 Tnks		\$121,715	
Plus Contingency	10.00%	\$12,172	CWM and DEC 10%
-			
Tot: AWTS (o/s nor AWT) 3 Tnks		\$133,887	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

#### 5.09 AWTS (o/s west AWT) 1 tank

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate In-house Pricing References
		I	1		1
5.09.1 Inventory Verification					prod'n rates: 100 drums/hr; 15 min/tanker or rolloff; 30 min/tank; two persons required
Laborer	1	hours	\$39.00	\$39	1 tanks @ 0.5 hour/tank = 0.5 hours @ 2 units/crew = 1.0 hours HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification			ψ55.00	\$39	
(Subt: Assemb 5.09.1 - 5.09.1)					tank: T-58
(10000000000000000000000000000000000000				700	
					prod'n rate = 60,000 gals/hr = 1,000 gals/min (based upon facility experience to pump from FAC
5.09.2 T-58 Liquids to FAC pond					ponds)
Laborer		hours	\$39.00	\$0	Included in third party operation of AWTS HASP reg's two: loaded labor rate 2011 3rd party quote
VOCs	1	samp	\$38.00		1 sample analytical price: average of three quotes
Semi-VOCs	1	samp	\$105.00	\$105	1 sample analytical price: average of three quotes
PCBs/Pesticides	1	samp	\$208.33	\$208	1 sample analytical price: average of three quotes
Metals	1	samp	\$133.33	\$133	1 sample analytical price: average of three quotes
Discharge Pump	0	hours	\$188.00	\$0	Existing equipment part of tank system RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam)	0	LF	\$0.00	\$0	Existing equipment part of tank system RSM/HC p. 475 (line item 01 54 33 70 0300)
SubtT-58 Liqs to FAC pond			\$0.00	\$485	transfer contents of Tank T-58 to FAC ponds
(Subt: Assemb 5.09.2 - 5.09.2)				\$485	transfer contents of Tank T-58 to FAC ponds
					prod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf
5.09.3 Steel Tank Demolition					tank area
No. of Tanks/Capacity/Area/Weight	1	tnks @			488529 gallons: 13869 SF Tanks: 385 CF @ 490 Lb/CF = 188773 Lbs Steel Tanks only; estimate 490#/CF
Laborer	208	hours	\$39.00	\$8,112	2 13869 SF @ 200 SF/hour 69.3 hours @ 3 units/crew = 208.0 hours HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	138.7	hours	\$45.00	\$6,242	2 13869 SF @ 200 SF/hour 69.3 hours @ 2 units/crew = 138.7 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	69.3	hours	\$84.09	\$5,827	7 13869 SF @ 200 SF/hour 69.3 hours @ 1 units/crew = 69.3 hours RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	69.3	hours	\$34.40	\$2,384	1 13869 SF @ 200 SF/hour 69.3 hours @ 1 units/crew = 69.3 hours 2004 DEC Rate * Implicit Deflator
Claw Attachment	69.3	hours	\$2.47	\$171	1 3869 SF @ 200 SF/hour 69.3 hours @ 1 units/crew = 69.3 hours RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	69.3	hours	\$30.03	\$2,081	1 13869 SF @ 200 SF/hour 69.3 hours @ 1 units/crew = 69.3 hours RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	69.3	hours	\$86.31	\$5,981	13869 SF @ 200 SF/hour 69.3 hours @ 1 units/crew = 69.3 hours RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	69.3	hours	\$5.41	\$375	13869 SF @ 200 SF/hour 69.3 hours @ 1 units/crew = 69.3 hours RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition	13869	SF @		\$31,173	tank areas based upon actual tank dimensions, or upon OSWER 9476.00-6, Vol 3, p. 5-5
					production rate = 200 SF/hour (same as steel tank demolition rate); 1 CF debris per 36 SF tank
5.09.4 FRP Tank Demolition					area
No. of Tanks/Capacity/Area/Weight	0	tnks @			0 gallons: 0 SF Tanks: 0 CF @ 245 Lb/CF = 0 Lbs FRP Tanks only; facility estimates 245#/CF
Laborer		hours	\$39.00	Śn	0 O SF @ 200 SF/hour 0.0 hours @ 3 units/crew = 0.0 hours HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		O SF @ 200 SF/hour 0.0 hours @ 2 units/crew = 0.0 hours   loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		0.0 SF @ 200 SF/hour 0.0 hours @ 1 units/crew = 0.0 hours RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		0 O SF @ 200 SF/hour 0.0 hours @ 1 units/crew = 0.0 hours 2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		0.0 SF @ 200 SF/hour 0.0 hours @ 1 units/crew = 0.0 hours RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		0.0 SF @ 200 SF/hour 0.0 hours @ 1 units/crew = 0.0 hours RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0	hours	\$86.31		0.0 SF @ 200 SF/hour 0.0 hours @ 1 units/crew = 0.0 hours RSM/HC p. 475 (line item 01 54 33 60 2700)
Welding Equipment	0	hours	\$5.41		0.0 SF @ 200 SF/hour 0.0 hours @ 0 units/crew = 0.0 hours RSM/HC p. 474 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition		5415	<b>γ3.41</b>		tank areas based upon actual tank dimensions, or upon OSWER 9476.00-6, Vol 3, p. 5-5
Just 1111 funk Demontion				٥ڔ	turn areas basea apon actual turn annensions, or apon 0500EN 547 0.00 0, vor 3, p. 5 5

### 5.09 AWTS (o/s west AWT) 1 tank

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	and Quantities	for In-house Estim	ate		In-house Pricing References
										1
5.09.5 Tank Piping Demolition					ava prod'n rate – 20	IIE/br rem/un r	3-10/16-01-0621	/0622) for 2"/4" meta	ol nine @ 4#/LE	
Estimated Piping Length	100	1 E			1 tanks @ 100 LF/to			/0022/101 2 /4 THER	п ріре ш 4#/ п	combined Steel and FRP Tanks' Piping
Laborers		hours	\$39.00	\$390	100 LF @ 20 LF/hou			urs		loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5	hours	\$5.41		100 LF @ 20 LF/hou		· · · · · · · · · · · · · · · · · · ·			RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition		nours	Ų3.41		in the absence of fo					1011/110 p. 473 (iiic tein 01 34 33 40 7000)
				7		,, μ.μ	- g	-90,		
					prod'n rate = 1 pum	p/hr (see RSM/l	UP p. 3-11. 16-01-06	634 and 16-01-0636)	assume 0.5	
5.09.6 Tank Pump Demolition					pumps/tank	,,,,,,	. p. c ==, == c-			
Laborers	1	hours	\$39.00	\$39		1 pump/hr	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41			1 pump/hr	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
			, ,			1. 1.		,		- / - p (
Subt - All Tanks' Pump Demolition				\$42	pump weight = 250	O# each; in the a	bsense of facility da	ita, one pump per two	tanks is estimated	
·				·	, , ,	•	,, ,			
5.09.7 Load Tank Demo Debris					production rate = 15	CY/hour; RSM/	BC p. 42 (line item	02225-730-3080)		
Laborer	1	hours	\$39.00	\$39	14.8 CY @	15 CY/hr =	1.0 hours @	1 units/crew	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	1	hours	\$45.00	\$45	14.8 CY @	15 CY/hr =	1.0 hours @	1 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	1	hours	\$30.03			15 CY/hr =	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	1	hours	\$5.20			15 CY/hr =	1.0 hours @	1 units/crew	1.0 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
· · · · ·						bris = to 972 SF	@ 1/3rd" thick; and	/or 432 LF of 3" diam	pipe; and/or 2	
Subt - Load Tank Demo Debris				\$119	pumps					
					•					
					production rate = 15	5 tons/hour = 12	0 tons/day; include	es unloading, shreddir	ng, and filling	
5.09.8 Unl'd Stabilize/Encapsulate					containers					
PROCESS TONS (incl kiln dust)	96.9	TONS			14.8 CY debr + 15%	kiln dust = 16.9	6 CY total total tonr	nage = 96.9 tons		total tons derived from foregoing assemblies + kiln dust
Laborer	12.9	hours	\$39.00	\$503	96.9 tons @ 15 tons	s/hr @ 6.5 hour	s @ 2 units/crew = :	12.9 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	19.4	hours	\$45.00	\$873	96.9 tons @ 15 tons	s/hr @ 6.5 hour	s @ 3 units/crew = :	19.4 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	6.5	hours	\$19.18	\$125	96.9 tons @ 15 tons	s/hr @ 6.5 hour	s @ 1 units/crew =	6.5 hours		RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	6.5	hours	\$14.39	\$94	96.9 tons @ 15 tons	s/hr @ 6.5 hour	s @ 1 units/crew =	6.5 hours		RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	6.5	hours	\$329.70	\$2,143	96.9 tons @ 15 tons	s/hr @ 6.5 hour	s @ 1 units/crew = 0	6.5 hours		2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	6.5	hours	\$136.29	\$886	96.9 tons @ 15 ton:	s/hr @ 6.5 hour	s @ 1 units/crew =	6.5 hours		2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons			2.2 tons					
Cement Kiln Dust - Delivery Cost		loads		\$0	2.2 tons @ 20 ton/l	oad = 0.1 loads				
Cement Kiln Dust - Mat'l&Delv Cost		tons	\$48.00	\$106			·			CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.6	units	\$1,000.00	\$600	17.0 CYs @ 30 CY/u	ınit = 0.6 contair	ners			CWM actual 2011 costs
Rolloffs (30-CY)	3.7	hours	\$19.02	\$70	17.0 CYs @ 30 CY/u					dumpster RSM/BC p. 42 (02225-730-0800)
					1 CY tank demo de	bris = to 972 SF	@ 1/3rd" thick; and	l/or 432 LF of 3" diam	pipe; and/or 2	
Subt - Stabilize/Encapsulate				\$5,399	pumps					
					offsite disposal is de	etermined to be	the only disposal or	ption offsite disposal	is determined to be	
5.09.9 Offsite T&D -Tank Demo					the only disposal op	tion				
Offsite Transportation - Debris	385.0	miles	\$3.25	\$1,251	17.0 CY @	30 CY/load =	0.6 loads(个1.0	0) ( 385 miles/trip =	385.0 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	17.0	CY	\$337.50	\$5,738	17.0 CY @	27 CF/CY =	458.0 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$6,989			<u> </u>			
(Subt: Assemb 5.09.3 - 5.09.9)				\$44,139	tank/piping/pump	demolition, and	offsite transportati	ion & disposal		

### 5.09 AWTS (o/s west AWT) 1 tank

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
		1				
5.09.10 Decon SCA (wash)					not applicable - no secondary containment for this tank	
Laborer		hours	\$39.00	\$0		two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	0	hours	\$4.04	\$0		RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	0	hours	\$3.41	\$0		RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$0		
5.09.11 Decon SCA (rinse)					not applicable - no secondary containment for this tank	
Laborer	0	hours	\$39.00	\$0		two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	0	hours	\$4.04	\$0		RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	0	hours	\$3.41	\$0		RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$0		
5.09.12 Decon Water Samp/Disp					not applicable - no secondary containment for this tank	
Technician	0	hours	\$38.00	\$0		rate 2011 3rd party quote
VOC Analysis (EPA 624)	0	samp	\$105.00	\$0		analytical price: average of three quotes
On-site Water Disposal			\$0.0313	\$0		site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$0		
5.09.13 PCB Wipe Samples					not applicable - no secondary containment for this tank	
Technician	0	hours	\$38.00	\$0		technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0	samp	\$446.67	\$0		analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	0	samp	\$83.33	\$0		analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$0		
(Subt: Assemb 5.09.10 - 5.09.13)				\$0	decontamination & sampling of SCA	

Total Non-Super Labor Hours

393

					Level C @ 75%; N	Mod Level C @ 25%	for tot non-supv hrs	s for all tasks; HASP @ 2	.5% of non-supv	
5.09.14 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0	days	\$0.00	\$0	393.0 hours @	8 hr/day =	49.1 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	12.3	days	\$9.00	\$111	393.0 hours @	8 hr/day =	49.1 days @	25% "Mod C" days =	12.3 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	36.8	days	\$25.00	\$920	393.0 hours @	8 hr/day =	49.1 days @	75% "C" days =	36.8 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	9.8	hours	\$75.00	\$735	393.0 hours @	2.5% hr/hr =	9.8 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$1,766						
5.09.15 Supervision					1 week for closu	re of 1 tank				
Foreman	40	hours	\$65.00	\$2,600	1 week @	40 hrs/wk =	40.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0	hours	\$75.00	\$0	Included in Gen'	I Contractor G&A/H	ome Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$2,600						

### 5.09 AWTS (o/s west AWT) 1 tank

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.09.16 Certification					Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	5.9	hours	\$130.00	\$767	393.0 hours @ 0.015 hr/hr = 5.9 hours	Engineer rate: 2011 3rd party quote
Clerical	5.9	hours	\$45.00	\$266	393.0 hours @ 0.015 hr/hr = 5.9 hours	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$1,033		
(Subt: Assemb 5.09.14 - 5.09.16)				\$5,398		
5.09 AWTS (o/s west AWT) 1 tank	Direct Cost	Total	Basic	\$50,061		

5.09 AWTS (o/s west AWT) 1 tank			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$50,061	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$3,504	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$2,002	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$3,004	note: DEC uses 6%
Engineering During Construction	2.00%	\$1,001	note: DEC uses 2%
General Contractor Profit	6.00%	\$3,004	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$12,515	
Subt: AWTS (o/s west AWT) 1 tnk		\$62,576	
,		, ,	
Plus Contingency	10.00%	\$6,258	CWM and DEC 10%
Tot: AWTS (o/s west AWT) 1 tank		\$68,834	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition(rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.10.1 Inventory Verification					orod'n rates: 100 drums/hr; 15 min/tanker or rolloff; 30 min/tank; two persons required	
Laborer	5	hours	\$39.00	\$195	5 tanks @ 0.5 hour/tank = 2.5 hours @ 2 units/crew = 5.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	-		, , , , ,	\$195		
(Subt: Assemb 5.10.1 - 5.10.1)				\$195	tanks: T-210, T-220, T-230, T-310, and T-320	
5.10.2 Onsite Aqueous Treatment		1			nighly-contaminated liquid wastes to be pumped directly from tanks into AWTS	
Onsite Aqueous Treatment - Tanks	150914	gals	\$0.0453	\$6.836	150914 gals	AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment		J	7212 100	\$6,836	··· Uv ·	0
(Subt: Assemb 5.10.2 - 5.10.2)					onsite treatment of tanks' waste liquids	
5.10.3 Steel Tank Demolition			ļ		prod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf tank are	
No. of Tanks/Capacity/Area/Weight		tnks @	4		60000 gallons: 2450 SF Tanks: 68 CF @ 490 Lb/CF = 33347 Lbs	Steel Tanks only; facility estimates 490#/CF
aborer		hours	\$39.00		2450 SF @ 200 SF/hour 12.3 hours @ 3 units/crew = 36.8 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		2450 SF @ 200 SF/hour 12.3 hours @ 2 units/crew = 24.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		2450 SF @ 200 SF/hour 12.3 hours @ 1 units/crew = 12.3 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		2450 SF @ 200 SF/hour 12.3 hours @ 1 units/crew = 12.3 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		2450 SF @ 200 SF/hour 12.3 hours @ 1 units/crew = 12.3 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		2450 SF @ 200 SF/hour 12.3 hours @ 1 units/crew = 12.3 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	12.3		\$86.31		2450 SF @ 200 SF/hour 12.3 hours @ 1 units/crew = 12.3 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	12.3	hours	\$5.41		2450 SF @ 200 SF/hour 12.3 hours @ 1 units/crew = 12.3 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$5,523	tank areas based upon actual tank dimensions, or upon OSWER 9476.00-6, Vol 3, p. 5-5	
5.10.4 FRP Tank Demolition					production rate = 200 SF/hour (same as steel tank demolition rate); 1 CF debris per 36 SF tank area	
No. of Tanks/Capacity/Area/Weight	3	tnks @	<u> </u>		90914 gallons: 4380 SF Tanks: 122 CF @ 245 Lb/CF = 29808 Lbs	FRP Tanks only; facility estimates 245#/CF
Plastic Bio-media in tanks	226	_	n/a		60914 gallons = 8122 tank CF @ 75% equals 6091 biomedia CF = 226 CY	plastic bio-media projected to occupy 75% of tank volume
Lab'r/EO/loader to handle bio-media		hours	131.79	\$1,186	226 CY @ 25 CY/hr = 9.0 hours; 50 Lb/CY = 11280 Lbs	handling @ 25 CY/hr; bio-media weight est @ 50#/CY
Laborer		hours	\$39.00		4380 SF @ 200 SF/hour 21.9 hours @ 3 units/crew = 65.7 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		4380 SF @ 200 SF/hour 21.9 hours @ 2 units/crew = 43.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	21.9	hours	\$84.09		4380 SF @ 200 SF/hour 21.9 hours @ 1 units/crew = 21.9 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		4380 SF @ 200 SF/hour 21.9 hours @ 1 units/crew = 21.9 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		4380 SF @ 200 SF/hour 21.9 hours @ 1 units/crew = 21.9 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		4380 SF @ 200 SF/hour 21.9 hours @ 1 units/crew = 21.9 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		4380 SF @ 200 SF/hour 21.9 hours @ 1 units/crew = 21.9 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		4380 SF @ 200 SF/hour 21.9 hours @ 0 units/crew = 0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
<u> </u>		1			tank areas based upon actual tank dimensions, or upon OSWER 9476.00-6, Vol 3, p. 5-5	· · · · · · · · · · · · · · · · · · ·

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate  In-house Pricing References	
5.10.5 Tank Piping Demolition					avg prod'n rate = 20 LF/hr, rsm/up p. 3-10 (16-01-0621/0622) for 2"/4" metal pipe @ 4#/LF	
Estimated Piping Length	500	LF			5 tanks @ 100 LF/tank = 500 LF @ 4 Lb/LF = 2000 Lbs combined Steel and FRP Tanks' Piping	
Laborers	50	hours	\$39.00	\$1,950	0 500 LF @ 20 LF/hour 25.0 hours @ 2 units/crew = 50.0 hours loaded labor rate: loaded labor rate 2011 3rd party quot	:e
Welding Equipment	25	hours	\$5.41	\$135	5 500 LF @ 20 LF/hour 25.0 hours @ 1 units/crew = 25.0 hours RSM/HC p. 473 (line item 01 54 33 40 7800)	
Subt - All Tanks' Piping Demolition				\$2,085	5 in the absence of facility data, piping assumed to average 100 LF/tank	
5.10.6 Tank Pump Demolition					prod'n rate = 1 pump/hr; assume 0.5 pumps/tank	
Laborers	5	hours	\$39.00		5 2.5 pumps @ 1 pump/hr 2.5 hours @ 2 units/crew = 5.0 hours loaded labor rate: loaded labor rate 2011 3rd party quot	:e
Welding Equipment	2.5	hours	\$5.41	\$14	4 2.5 pumps @ 1 pump/hr 2.5 hours @ 1 units/crew = 2.5 hours RSM/HC p. 473 (line item 01 54 33 40 7800)	
Subt - All Tanks' Pump Demolition				\$209	9 pump weight = 250# each; one pump per two tanks is estimated	
5.10.7 Load Tank Demo Debris					production rate = 15 CY/hour; RSM/BC p. 42 (line item 02225-730-3080)	
Laborer	15.7	hours	\$39.00		2 235.0 CY @ 15 CY/hr = 15.7 hours @ 1 units/crew 15.7 hours loaded labor rate: loaded labor rate 2011 3rd party quot	:e
Equipment Operator (Medium)	15.7	hours	\$45.00	\$707	7 235.0 CY @ 15 CY/hr = 15.7 hours @ 1 units/crew = 15.7 hours loaded labor rate: loaded labor rate 2011 3rd party quot	.e
Loader	15.7	hours	\$30.03	\$471	1 235.0 CY @ 15 CY/hr = 15.7 hours @ 1 units/crew = 15.7 hours RSM/HC p. 469 (line item 01 54 33 20 4730)	
Dump Trailer (20 CY)	15.7	hours	\$5.20	\$82	2 235.0 CY @ 15 CY/hr = 15.7 hours @ 1 units/crew 15.7 hours RSM/HC p. 469 (line item 01 54 33 20 5400)	
Subt - Load Tank Demo Debris				\$1,872	2 1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	
5.10.8 Unl'd Stabilize/Encapsulate					production rate = 15 tons/hour = 120 tons/day; includes unloading, shredding, and filling containers	
PROCESS TONS (incl kiln dust)	73.8	TONS			235.0 CY debr + 15% kiln dust = 270.30 CY total total tonnage = 73.8 tons total tons derived from foregoing assemblies + kiln dust	t
Laborer		hours	\$39.00		2 73.8 tons @ 15 tons/hr @ 4.9 hours @ 2 units/crew = 9.8 hours loaded labor rate: loaded labor rate 2011 3rd party quot	
Equipment Operator (Medium)		hours	\$45.00		6 73.8 tons @ 15 tons/hr @ 4.9 hours @ 3 units/crew = 14.8 hours loaded labor rate: loaded labor rate 2011 3rd party quot	:e
Backhoe (1 CY)		hours	\$19.18		4 73.8 tons @ 15 tons/hr @ 4.9 hours @ 1 units/crew = 4.9 hours RSM/HC p. 467 (line item 01 54 33 20 0460)	
Loader, Wheel (1 CY)		hours	\$14.39		1 73.8 tons @ 15 tons/hr @ 4.9 hours @ 1 units/crew = 4.9 hours RSM/HC p. 468 (line item 01 54 33 20 4610)	
Shredder		hours	\$329.70		6 73.8 tons @ 15 tons/hr @ 4.9 hours @ 1 units/crew = 4.9 hours 2004 DEC Rate * Implicit Deflator	
Mixing Pit/Screening/Silo	4.9	hours	\$136.29		8 73.8 tons @ 15 tons/hr @ 4.9 hours @ 1 units/crew = 4.9 hours 2004 DEC Rate * Implicit Deflator	
Cement Kiln Dust - Mat'l Cost	0	tons	\$0.00		0 not applicable	
Cement Kiln Dust - Delivery Cost		loads	\$0.00		0 not applicable	
Cement Kiln Dust - Mat'l&Delv Cost	35.3	tons	\$48.00	. ,	4 35.3 tons CWM actual 2011 costs	
Encapsulation Containers (30-CY)	9	units	\$1,000.00		0 270.3 CYs @ 30 CY/unit = 9.0 containers CWM actual 2011 costs	
Rolloffs (30-CY)	44.3	hours	\$19.02		3 270.3 CYs @ 30 CY/unit = 9.0 rolloffs @ 4.9 hours/rolloff = 44.3 hours dumpster RSM/BC p. 42 (02225-730-0800)	
Subt - Stabilize/Encapsulate				\$15,033	1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	
5.10.9 Offsite T&D - Tank Demo					offsite disposal is determined to be the only disposal option	
Offsite Transportation - Debris	3465.0		\$3.25		1 270.3 CY @ 30 CY/load = 9.0 loads @ 385 miles/trip = 3465.0miles Rate: transporters quote/site experience	
Offsite Disposal - Tank Debris	270.3	CY	\$337.50		6 270.3 CY @ 27 CF/CY = 7298.0 CF DEC 2004 Estimate accounting for inflation	
Subt - Offsite T&D - Tank Demo				\$102,488		
(Subt: Assemb 5.10.3 - 5.10.9)				\$138,126	6 tank/piping/pump demolition, and offsite transportation & disposal	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	tion and Quantities fo	or In-house Estima	In-house Pricing References		
5.10.10 Decon SCA (wash)					production rate	= 105 SF/hr for 1-pers	on crew w/ one ur	it each; facility experie	ence	
Laborer	33.4	hours	\$39.00		3510 SF @	105 SF/hr =	33.4 hours @	1 pers/crew =	33.4 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	33.4	hours	\$4.04		3510 SF @	105 SF/hr =	33.4 hours @	1 unit/crew =	33.4 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	33.4	hours	\$3.41		3510 SF @	105 SF/hr =	33.4 hours @	1 unit/crew =	33.4 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$1,551						
5.10.11 Decon SCA (rinse)							on crew w/ one ur	it each; facility experie		
Laborer		hours	\$39.00		3510 SF @	105 SF/hr =	33.4 hours @	1 pers/crew =	33.4 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	33.4		\$4.04		3510 SF @	105 SF/hr =	33.4 hours @	1 unit/crew =	33.4 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	33.4	hours	\$3.41		3510 SF @	105 SF/hr =	33.4 hours @	1 unit/crew =	33.4 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$1,551						
5.10.12 Decon Water Samp/Disp					production rate	= 0.5 hours/sample fo	r two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	1705.0	gal	\$0.0313	\$53	3510 SF @	0.5 gal/sf/wa =	1705.0 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$211						
5.10.13 PCB Wipe Samples						s necessary according	to site-wide closu	e plan		
Technician	5.6	hours	\$38.00	\$213	5.6 samp @	0.5 hr/samp =	2.8 hours @	2 pers/crew =	5.6 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	5.6	samp	\$83.33	\$467	3510 SF @	625 SF/samp =	5.6 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$679						
(Subt: Assemb 5.10.10 - 5.10.13)				\$3,993	decontaminatio	on & sampling of SCA				
5.10.14 Offsite T&D - PCB Solids					3,800 Lbs of PCB	Solids from T-310 and	d T-320			
Transportation	193.7	miles	\$3.25	\$630	1.9 tons @	15.0 tons/load =	0.1 loads @	1529 miles/load =	193.7 miles	Rate: transporters quote/site experience
Disposal	3800	Lbs	\$0.64	\$2,432	3800.0 Lbs				_	Current CWM 2011 third party rate
Subt - Offsite T&D - PCB Solids				\$3,062						
(Subt: Assemb 5.10.14 - 5.10.14)				\$3,062	offsite T&D of 3	8,800 Lbs of PCB solids				
Fotal Non-Super Labor Hours	369.3	i								
5.10.15 PPE Usage/H&S Planning					Level C @ 75%; N	Mod Level C @ 25% fo	or tot non-supv hrs	for all tasks; HASP @ 2	5% of non-supv hrs	
PPE Usage - Level D		days	\$0.00	\$0	369.3 hours @	8 hr/day =	46.2 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
	11.5	days	\$9.00		369.3 hours @	8 hr/day =	46.2 days @	25% "D" days =	11.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Mod Level C					369.3 hours @	8 hr/day =	46.2 days @	75% "C" days =	34.7 days	75% of non-supv hrs in Level C (price: \$25/day)
PPE Usage - Mod Level C PPE Usage - Level C	34.7	days	\$25.00	808¢	JUJ.J HUUH J (W	o III/ uay –	40.2 uays @	13/0 C uays -	JT./ uuys	73/8 OF HOTE-Supvill's III Level C (price, \$23/uay)
PPE Usage - Mod Level C PPE Usage - Level C Safety Engineer	34.7 9.2	hours	\$25.00		369.3 hours @	2.5% hr/hr =	9.2 hours	7570 C days =	54.7 day3	Safety Eng Rate: rate 2011 3rd party quote

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.10.16 Supervision					1 week for closure of 5 tanks	
Foreman	40	hours	\$65.00	\$2,600	1 week @ 40 hrs/wk = 40.0 hours	Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen'l Contractor G&A/Home Office indirect costs	Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$2,600		
5.10.17 Certification					Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	5.5	hours	\$130.00	\$715	369.3 hours @ 0.015 hr/hr = 5.5 hours	Engineer rate: 2011 3rd party quote
Clerical	5.5	hours	\$45.00	\$248	369.3 hours @ 0.015 hr/hr = 5.5 hours	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$963		
(Subt: Assemb 5.10.15 - 5.10.17)				\$5,224		

5.10 AWTS (o/s east AWT) 5 tnks			
Total Cost Summary			
•			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$157,435	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$11,020	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$6,297	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$9,446	note: DEC uses 6%
Engineering During Construction	2.00%	\$3,149	note: DEC uses 2%
General Contractor Profit	6.00%	\$9,446	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$39,359	
Subt: AWTS (o/s eas AWT) 5 Tnks		\$196,794	
Plus Contingency	10.00%	\$19,679	CWM and DEC 10%
Tot: AWTS (o/s eas AWT) 5 Tnks		\$216,473	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

#### 5.11 AWTS (i/s ww trt bldg) 4 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	tion and Quantities fo	r In-house Estima	te		In-house Pricing References
5.11.1 Inventory Verification					prod'n rates: 100	0 drums/hr; 15 min/ta	nker or rolloff; 30	min/tank; two persor	ns required	
Laborer	4	hours	\$39.00	\$156	•	0.5 hour/tank =	2.0 hours @	2 units/crew =	4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$156		·		•		
(Subt: Assemb 5.11.1 - 5.11.1)				\$156	tanks: T-3004 &	T-3005 (sand filters); a	nd T-3007 & T-300	08		
5.11.2 Onsite Aqueous Treatment					highly-contamina	ated wastes; assume p	umped directly fro	om tanks into AWTS		
Onsite Aqueous Treatment - Tanks	17150	gals	\$0.0453	\$777	17150 gals					AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment				\$777						
(Subt: Assemb 5.11.2 - 5.11.2)				\$777	onsite treatmer	nt of tanks' waste liqui	ds			
										T
5.11.3 Steel Tank Demolition					•				F debris per 36 sf tank are	
No. of Tanks/Capacity/Area/Weight		tnks @			17150 gallons:	1274 SF Tanks:	35 CF @	490 Lb/CF =	17341 Lbs	Steel Tanks only; estimate 490#/CF
Laborer	19.1	hours	\$39.00		1274 SF @	200 SF/hour	6.4 hours @	3 units/crew =	19.1 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		1274 SF @	200 SF/hour	6.4 hours @	2 units/crew =	12.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	6.4	hours	\$84.09		1274 SF @	200 SF/hour	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	6.4	hours	\$34.40		1274 SF @	200 SF/hour	6.4 hours @	1 units/crew =	6.4 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	6.4	hours	\$2.47	\$16	1274 SF @	200 SF/hour	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	6.4	hours	\$30.03		1274 SF @	200 SF/hour	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	6.4	hours	\$86.31	\$552	1274 SF @	200 SF/hour	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	6.4	hours	\$5.41	\$35	1274 SF @	200 SF/hour	6.4 hours @	1 units/crew =	6.4 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$2,870	tank areas base	ed upon actual tank dir	mensions, or upon	OSWER 9476.00-6, V	ol 3, p. 5-5	
5.11.4 FRP Tank Demolition					production rate = 200 SF/hour (same as steel tank demolition rate); 1 CF debris per 36 SF tank area					
No. of Tanks/Capacity/Area/Weight	0	tnks @	1		0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	0	hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0	hours	\$45.00	\$0	0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0	hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0	hours	\$34.40	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0	hours	\$2.47		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0	hours	\$30.03	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0	hours	\$86.31		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0	hours	\$5.41	\$0	0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$0	tank areas base	ed upon actual tank dir	mensions, or upon	OSWER 9476.00-6, V	′ol 3, p. 5-5	
5.11.5 Tank Piping Demolition					avg prod'n rate =	= 20 LF/hr, rsm/up p. 3	-10 (16-01-0621/0	622) for 2"/4" metal	pipe @ 4#/LF	
Estimated Piping Length	400	LF	1		4 tanks @	100 LF/tank =	400 LF @	4 Lb/LF =	1600 Lbs	combined Steel and FRP Tanks' Piping
Laborers	40	hours	\$39.00	\$1,560	400 LF @	20 LF/hour	20.0 hours @	2 units/crew =	40.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41	\$108	_	20 LF/hour	20.0 hours @	1 units/crew =	20.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition			,			of facility data, piping				, , , , , , , , , , , , , , , , , , , ,
Subt. All fulls 1 lping Demontion				71,000	in the absence of	of facility data, piping	ussumed to averag	ge 100 Er / tarik		

### 5.11 AWTS (i/s ww trt bldg) 4 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities	for In-house Estima	te		In-house Pricing References
5.11.6 Tank Pump Demolition					prod'n rate = 1 p	ump/hr (see RSM/L	JP p. 3-11, 16-01-063	4 and 16-01-0636) a	ssume 0.5 pumps/tank	
aborers	4	hours	\$39.00	\$156	2.0 pumps @	1 pump/hr	2.0 hours @	2 units/crew =	4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	2	hours	\$5.41	\$11	2.0 pumps @	1 pump/hr	2.0 hours @	1 units/crew =	2.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
ubt - All Tanks' Pump Demolition				\$167	pump weight =	250# each; in the al	bsense of facility dat	a, one pump per two	tanks is estimated	
5.11.7 Load Tank Demo Debris					production rate :	= 15 CY/hour; RSM/	BC p. 42 (line item 0	2225-730-3080)		
Laborer	0.2	hours	\$39.00		3.2 CY @	15 CY/hr =	0.2 hours @	1 units/crew	0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.2	hours	\$45.00	\$9	3.2 CY @	15 CY/hr =	0.2 hours @	1 units/crew =	0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
oader	0.2	hours	\$30.03	\$6	3.2 CY @	15 CY/hr =	0.2 hours @	1 units/crew =	0.2 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.2	hours	\$5.20	\$1	3.2 CY @	15 CY/hr =	0.2 hours @	1 units/crew	0.2 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$24	1 CY tank demo	debris = to 972 SF (	@ 1/3rd" thick; and/	or 432 LF of 3" diam <sub>l</sub>	pipe; and/or 2 pumps	
5.11.8 Unl'd Stabilize/Encapsulate					production rate :	= 15 tons/hour = 12	0 tons/day: includes	unloading, shredding	g, and filling containers	
PROCESS TONS (incl kiln dust)	10.2	TONS					Y total total tonnage		<i>y</i> , <i>y</i> ,	total tons derived from foregoing assemblies + kiln dust
aborer		hours	\$39.00	\$55			6 @ 2 units/crew = 1.			loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00				@ 3 units/crew = 2.			loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)		hours	\$19.18				@ 1 units/crew = 0.			RSM/HC p. 467 (line item 01 54 33 20 0460)
oader, Wheel (1 CY)		hours	\$14.39				@ 1 units/crew = 0.			RSM/HC p. 468 (line item 01 54 33 20 4610)
hredder		hours	\$329.70				@ 1 units/crew = 0.			2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo		hours	\$136.29				@ 1 units/crew = 0.			2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		0.5 tons	, &	<u> </u>			
Cement Kiln Dust - Delivery Cost		loads	\$0.00			on/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost		tons	\$48.00	\$24		.,,				CWM actual 2011 costs
Encapsulation Containers (30-CY)		units	\$1,000.00	•		/unit = 0.1 containe	rs			CWM actual 2011 costs
Rolloffs (30-CY)		hours	\$19.02				0.7 hours/rolloff =	0.1 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate			7-0:0-						pipe; and/or 2 pumps	
5.11.9 Offsite T&D - Tank Demo					offsite disposal is	determined to be	the only disposal opt			
Offsite Transportation - Debris	385	miles	\$3.25	\$1,251	3.7 CY @	30 CY/load =	0.1 loads (个1.0	) (385 miles/trip =	385.0 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	3.7	CY	\$337.50	\$1,249	3.7 CY @	27 CF/CY =	100.5 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$2,500		<u> </u>				
(Subt: Assemb 5.11.3 - 5.11.9)				\$7,849	tank/piping/pui	mp demolition, and	offsite transportatio	n & disposal		
5.11.10 Decon SCA (wash)					•		•	it each; facility expe		
aborer		hours	\$39.00		1454 SF @	105 SF/hr =	13.8 hours @	1 pers/crew =	13.8 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		1454 SF @	105 SF/hr =	13.8 hours @	1 unit/crew =	13.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
/acuum Sweeper	13.8	hours	\$3.41	•	1454 SF @	105 SF/hr =	13.8 hours @	1 unit/crew =	13.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$641						
5.11.11 Decon SCA (rinse)	40.0	h	¢22.22	Anco				it each; facility exper		the laborated and the sale and court of
Laborer		hours	\$39.00		1454 SF @	105 SF/hr =	13.8 hours @	1 pers/crew =	13.8 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	13.8		\$4.04		1454 SF @	105 SF/hr =	13.8 hours @	1 unit/crew =	13.8 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	13.8	hours	\$3.41		1454 SF @	105 SF/hr =	13.8 hours @	1 unit/crew =	13.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$641						

#### 5.11 AWTS (i/s ww trt bldg) 4 tnks

5.11.17 Supervision

Site Project Manager

Subtotal - Supervision

Foreman

Basic Closure Activities: Direct Costs		Unit of Measure Unit Pri	2011 CWM Extended Price	Basis of Produc	tion and Quantities fo	or In-house Estima	te		In-house Pricing References
5.11.12 Decon Water Samp/Disp				production rate	= 0.5 hours/sample fo	r two techs			
Technician	1.1 ho	ours \$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1 sa	mp \$105.0	\$116	1.0 areas @	1.1 samp/area =	1.1 samples	'		analytical price: average of three quotes
On-site Water Disposal	727 ga	llons \$0.031	3 \$23	1454 SF @	0.5 gal/sf/wa =	727 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose			\$180						
5.11.13 PCB Wipe Samples				No TCLP analyse	es necessary according	to site-wide closu	re plan		
Technician	2.3 ho	ours \$38.00	\$87	2.3 samp @	0.5 hr/samp =	1.15 hours @	2 pers/crew =	2.3 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0 sa	mp \$446.6	7 \$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	2.3 sa	mp \$83.33	\$192	1454 SF @	625 SF/samp =	2.3 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp			\$279						
(Subt: Assemb 5.11.10 - 5.11.13)			\$1,741	decontaminati	on & sampling of SCA				
5.11.14 Offsite T&D - PCB Solids Transportation	1529.0 m			6 tons @	CB Solids from T-3004 a 15 tons/load =		ers) )@ 1529 miles/load =	1529.0 miles	Rate: transporters quote/site experience
Disposal via incineration	12000 Lb	\$0.64		12000 Lbs					Current CWM 2011 third party rate
Subt - Offsite T&D - PCB Solids			\$12,649		"				
(Subt: Assemb 5.11.14 - 5.11.14)			\$12,649	offsite T&D of	PCB solids				
5.11.15 Offsite tran/regen - Carbon				26666.6 Lbs of s	pent carbon from T-30	007 & T-3008			
Offsite Transportation - Carbon	0 m	iles \$3.50	\$0	20 tons @	15 tons/load =	1.3 loads @	232.0 miles/load =	0.0 miles	Included in regeneration cost
Offsite Regeneration - Carbon	26666.6 Lb	\$0.37	\$9,867	26666.6 Lbs					Current third party rate (Seimans)
Subt - Offsite Tran/Regen - Carbon			\$9,867						
(Subt: Assemb 5.11.15 - 5.11.15)			\$9,867	offsite regener	ation of spent carbon				
Total Non-Super Labor Hours	114.6								
5.11.16 PPE Usage/H&S Planning							for all tasks; HASP @ 2.	•	
PPE Usage - Level D	0 da	•		114.6 hours @	8 hr/day =	14.3 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	3.6 da	•		114.6 hours @	8 hr/day =	14.3 days @	25% "Mod C" days =		25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	10.7 da	•		114.6 hours @	8 hr/day =	14.3 days @	75% "C" days =	10.7 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	2.9 ho	ours \$75.00		114.6 hours @	2.5% hr/hr =	2.9 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning			\$517						

0.5 week for closure of 4 tanks

40 hrs/wk =

\$0 Included in Gen'l Contractor G&A/Home Office indirect costs

20.0 hours

\$1,300 0.5 week @

\$1,300

20 hours

0 hours

\$65.00

\$75.00

Outside foreman rate: 2011 3rd party quote

Site Manager Rate: 2011 3rd party quote

#### 5.11 AWTS (i/s ww trt bldg) 4 tnks

5.11 AWTS (i/s ww trt bldg) 4 tnks

Direct Cost | Total

Basic

\$35,154

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.11.18 Certification					Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	1.7	hours	\$130.00	\$221	114.6 hours @ 0.015 hr/hr = 1.7 hours	Engineer rate: 2011 3rd party quote
Clerical	1.7	hours	\$45.00	\$77	114.6 hours @ 0.015 hr/hr = 1.7 hours	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$298		
(Subt: Assemb 5.11.16 - 5.11.18)				\$2,115		

5.11 AWTS (i/s ww trt bldg) 4 tnks			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
		Cost	
	of Direct Cost		
Direct Costs/Basic Disposal	or Direct cost	\$35,154	
Direct Costs/ basic Disposal	1	\$35,154	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$2,461	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$1,406	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$2,109	note: DEC uses 6%
Engineering During Construction	2.00%	\$703	note: DEC uses 2%
General Contractor Profit	6.00%	\$2,109	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$8,788	
Subt: AWTS (i/s ww trt bl) 4 Tnks		\$43,942	
Plus Contingency	10.00%	\$4,394	CWM and DEC 10%
Tot: AWTS (i/s ww trt bld) 4 Tnks		\$48,336	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

#### 5.12 AWTS (o/s sou wwtrt bl) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	ction and Quantities fo	r In-house Estima	te		In-house Pricing References
5.12.1 Inventory Verification					prod'n rates: 10	00 drums/hr; 15 min/ta	nker or rolloff; 30	min/tank; two persons	s required	
Laborer	1	hours	\$39.00		1 tanks @	0.5 hour/tank =	0.5 hours @	2 units/crew =	1.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$39						
(Subt: Assemb 5.12.1 - 5.12.1)				\$39	tank: T-52					
5.12.2 Offsite tran/regen - Carbon				[-	13 333 3 I hs of	spent carbon stored in	T-52			T
Offsite Transportation - Carbon	0	miles	\$3.50		10 tons @	15 tons/load =	0.67 loads @	0 miles/load =	0 miles	Included in regeneration cost
Offsite Regeneration - Carbon	13333.3		\$0.37		13333.3 Lbs	13 tolls/load =	0.07 loads @	0 IIIIles/Ioau =	0 IIIIles	Current third party rate (Seimans)
Subt - Offsite Tran/Regen - Carbon	13333.3	LD	Ş0.57	\$4,933	13333.3 L03					Current tillia party rate (Seillans)
(Subt: Assemb 5.12.2 - 5.12.2)					offsite regener	ration of spent carbon				
Subt. Assemb 3.12.2 3.12.2)				34,333	ojjsite regener	ation of spent earbon				
				li	prod'n rate = 20	00 SF/hr (rsm/up 16-01-	-0142/0216/0308,	pp. 3-2/3-3,3-5); 1 CF	debris per 36 sf	
5.12.3 Steel Tank Demolition				Įt	tank area					
No. of Tanks/Capacity/Area/Weight	1	tnks @			7600 gallons:	503 SF Tanks:	14 CF @	490 Lb/CF =	6846 Lbs	Steel Tanks only; estimate 490#/CF
Laborer	7.5	hours	\$39.00	\$293	503 SF @	200 SF/hour	2.5 hours @	3 units/crew =	7.5 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	5	hours	\$45.00	\$225	503 SF @	200 SF/hour	2.5 hours @	2 units/crew =	5.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	2.5	hours	\$84.09		503 SF @	200 SF/hour	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		503 SF @	200 SF/hour	2.5 hours @	1 units/crew =	2.5 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		503 SF @	200 SF/hour	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		503 SF @	200 SF/hour	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		503 SF @	200 SF/hour	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		503 SF @	200 SF/hour	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition			, -			ed upon actual tank dii				
				ı	production rate	= 200 SF/hour (same a	is steel tank demo	lition rate); 1 CF debris	per 36 SF tank	
5.12.4 FRP Tank Demolition				á	area					
No. of Tanks/Capacity/Area/Weight	0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	0	hours	\$39.00		0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0	hours	\$2.47		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0	hours	\$30.03		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0	hours	\$86.31		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0	hours	\$5.41		0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$0	tank areas bas	ed upon actual tank dir	mensions, or upon	OSWER 9476.00-6, Vo	l 3, p. 5-5	
5.12.5 Tank Piping Demolition					avg prod'n rate	= 20 LF/hr, rsm/up p. 3	3-10 (16-01-0 <u>6</u> 21/0	0622) for 2"/4" metal p	nipe @ 4#/LF	
Estimated Piping Length	100	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	combined Steel and FRP Tanks' Piping
Laborers	10	hours	\$39.00		100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$417	in the absence	of facility data, piping	assumed to avera	ae 100 l F/tank		

#### 5.12 AWTS (o/s sou wwtrt bl) 1 tk

Quantity	Measure	Unit Price	Extended Price	Basis of Produc	tion and Quantities	for In-house Estima	ite		In-house Pricing References
		1							
					oump/hr (see RSM/U	JP p. 3-11, 16-01-06	34 and 16-01-0636) a	ssume 0.5	
									loaded labor rate: loaded labor rate 2011 3rd party quote
0.5	hours	\$5.41							RSM/HC p. 473 (line item 01 54 33 40 7800)
			\$42	pump weight =	250# each; in the ab	sense of facility dat	ta, one pump per two	tanks is estimated	
				production rate	= 15 CY/hour; RSM/	BC p. 42 (line item 0	2225-730-3080)		
0.1	hours	\$39.00			15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
0.1	hours	\$45.00	\$5	1.0 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
0.1	hours	\$30.03	\$3	1.0 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
0.1	hours	\$5.20			15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
			\$12	1 CY tank demo	debris = to 972 SF (	2 1/3rd" thick; and/	or 432 LF of 3" diam	pipe; and/or 2 pumps	
				production rate	= 15 tons/hour = 120	0 tons/day; includes	unloading, shredding	g, and filling	
				containers					
3.8	TONS			1.0 CY debr + 15	5% kiln dust = 1.15 C	Y total total tonnage	e = 3.8 tons		total tons derived from foregoing assemblies + kiln dust
0.5	hours	\$39.00	\$20	3.8 tons @ 15 to	ons/hr @ 0.3 hours (	@ 2 units/crew = 0.5	5 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
0.8	hours	\$45.00	\$36	3.8 tons @ 15 to	ons/hr @ 0.3 hours (	@ 3 units/crew = 0.8	3 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
0.3	hours	\$19.18	\$6	3.8 tons @ 15 to	ons/hr @ 0.3 hours (	@ 1 units/crew = 0.3	3 hours		RSM/HC p. 467 (line item 01 54 33 20 0460)
0.3	hours	\$14.39	\$4	3.8 tons @ 15 to	ons/hr @ 0.3 hours (	@ 1 units/crew = 0.3	3 hours		RSM/HC p. 468 (line item 01 54 33 20 4610)
0.3	hours	\$329.70	\$99	3.8 tons @ 15 to	ons/hr @ 0.3 hours (	@ 1 units/crew = 0.3	3 hours		2004 DEC Rate * Implicit Deflator
0.3	hours	\$136.29	\$41	3.8 tons @ 15 to	ons/hr @ 0.3 hours (	@ 1 units/crew = 0.3	3 hours		2004 DEC Rate * Implicit Deflator
	tons	\$0.00	\$0	0.1 tons					
	loads	\$0.00	\$0	0.1 tons @ 20 to	on/load = 0.0 loads				
0.1	tons	\$48.00	\$5						CWM actual 2011 costs
0	units	\$1,000.00	\$0	1.1 CYs @ 30 CY	//unit = 0.0 containe	rs			CWM actual 2011 costs
0	hours	\$19.02	\$0	1.1 CYs @ 30 CY	//unit = 0.0 rolloffs @	0.3 hours/rolloff =	0.0 hours		dumpster RSM/BC p. 42 (02225-730-0800)
			\$210	1 CY tank demo	debris = to 972 SF (	@ 1/3rd" thick; and/	or 432 LF of 3" diam	pipe; and/or 2 pumps	
				offsite disposal i	s determined to be t	the only disposal op	tion		
385	miles	\$3.25			30 CY/load =	0.0 loads @	385 miles/trip =	385 miles	Rate: transporters quote/site experience
		\$337.50			27 CF/CY =	31.0 CF	/- [-		DEC 2004 Estimate accounting for inflation
<del></del>			\$1,623		, -				<u> </u>
				tank/piping/pu	mp demolition, and	offsite transportatio	on & disposal		
		Γ		production rate	= 105 SF/hr for 1-ne	rson crew w/ one iii	nit each: facility expe	rience	T .
5.8	hours	\$39.00		•					two laborers-1 unit each; rate 2011 3rd party quote
									RSM/HC p. 471 (line item 01 54 33 40 5450)
							•		RSM/HC p. 473 (line item 01 54 33 40 7800)
5.0		ψ01.12	\$269	0110. 6	100 0.7	3.000.5 @	I amy or em	5.0 1.04.5	The strate part of the factor
				production rate	= 105 SF/hr for 1-pe	rson crew w/ one u	nit each; facility expe	rience	
5.8	hours	\$39.00			105 SF/hr =	5.8 hours @	1 pers/crew =	5.8 hours	two laborers-1 unit each; rate 2011 3rd party quote
									RSM/HC p. 471 (line item 01 54 33 40 5450)
		\$3.41			105 SF/hr =	5.8 hours @	1 unit/crew =	5.8 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
					,		. ,		, , , , , , , , , , , , , , , , , , , ,
	0.5  0.1  0.1  0.1  0.1  0.1  0.1  0.1		0.5 hours \$5.41  0.1 hours \$39.00  0.1 hours \$45.00  0.1 hours \$30.03  0.1 hours \$5.20  3.8 TONS  0.5 hours \$39.00  0.8 hours \$45.00  0.3 hours \$14.39  0.3 hours \$14.39  0.3 hours \$329.70  0.3 hours \$30.00  loads \$0.00  loads \$0.00  0 units \$1,000.00  0 hours \$19.02  5.8 hours \$3.25  1.1 CY \$337.50  5.8 hours \$39.00  5.8 hours \$34.04  5.8 hours \$34.04	1 hours \$39.00 \$39  0.5 hours \$5.41 \$3  0.1 hours \$39.00 \$4  0.1 hours \$39.00 \$4  0.1 hours \$30.03 \$3  0.1 hours \$5.20 \$1  0.1 hours \$5.20 \$1  0.1 hours \$39.00 \$20  0.8 hours \$45.00 \$36  0.3 hours \$19.18 \$6  0.3 hours \$14.39 \$4  0.3 hours \$136.29 \$41  tons \$0.00 \$0  loads \$0.00 \$0  loads \$0.00 \$0  0.1 tons \$48.00 \$5  0 units \$1,000.00 \$0  0 hours \$19.02 \$0  \$20  \$30  \$40  \$40  \$40  \$40  \$40  \$40  \$4	Dumps/tank   Dumps   1   hours   \$39.00   \$39   0.5 pumps @ 1 pump/hr	Description   Description	1 hours   \$39.00   \$39.05 pumps   1 pump/hr   0.5 hours   2 units/crew = 0.5 hours   \$5.41   \$30.5 pumps   1 pump/hr   0.5 hours   1 units/crew = 0.5 hours   \$5.41   \$30.5 pumps   1 pump/hr   0.5 hours   1 units/crew = 0.5 hours   \$5.41   \$30.5 pumps   1 pump/hr   0.5 hours   1 units/crew = 0.5 hours   \$42   pump weight = 250# each; in the absense of facility data, one pump per two   1 hours   \$45.00   \$41.0 C Y   15 C Y/hr = 0.1 hours   1 units/crew = 0.1 hours   \$45.00   \$51.0 C Y   15 C Y/hr = 0.1 hours   1 units/crew = 0.1 hours   \$45.00   \$51.0 C Y   15 C Y/hr = 0.1 hours   1 units/crew = 0.1 hours   \$39.03   \$33.00 C Y   15 C Y/hr = 0.1 hours   1 units/crew = 0.1 hours   \$52.00   \$10.0 C Y   15 C Y/hr = 0.1 hours   1 units/crew = 0.1 hours   \$52.00   \$10.0 C Y   15 C Y/hr = 0.1 hours   1 units/crew = 0.1 hours	1 hours	

#### 5.12 AWTS (o/s sou wwtrt bl) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	tion and Quantities fo	or In-house Estima	ate		In-house Pricing References
5.12.12 Decon Water Samp/Disp					nroduction rate :	= 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00		1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples	,		analytical price: average of three quotes
On-site Water Disposal	306	gal	\$0.0313	\$10	612 SF @	0.5 gal/sf/wa =	306 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$167						
5.12.13 PCB Wipe Samples					No TCLP analyses	s necessary according	to site-wide closu	re plan		
Technician	1	hours	\$38.00	\$38	1.0 samp @	0.5 hr/samp =	0.5 hours @	2 pers/crew =	1.0 hours	technician rate 2011 3rd party quote
TCLP (Metals?VOCs/Semi-VOCs)	0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	1	samp	\$83.33	\$83	612 SF @	625 SF/samp =	1.0 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$121		•		•	•	
(Subt: Assemb 5.12.10 - 5.12.13)				\$827	decontaminatio	on & sampling of SCA				

Total Non-Super Labor Hours

39.7

					Level C @ 75%;	Mod Level C @ 25% f	or tot non-supv hi	rs for all tasks; HASP @ 2	.5% of non-supv	
5.12.14 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0	days	\$0.00	\$0	51.5 hours @	8 hr/day =	6.4 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	1.6	days	\$9.00	\$14	51.5 hours @	8 hr/day =	6.4 days @	25% "Mod C" days =	: 1.6 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	4.8	days	\$25.00	\$120	51.5 hours @	8 hr/day =	6.4 days @	75% "C" days =	4.8 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.3	hours	\$75.00	\$98	51.5 hours @	2.5% hr/hr =	1.3 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$232						
5.12.15 Supervision					0.2 week for clo	sure of 1 tanks				
Foreman	8	hours	\$65.00	\$520	0.2 week @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0	hours	\$75.00	\$0	Included in Gen	'l Contractor G&A/Ho	ome Office indirec	t costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.12.16 Certification					Engineer @ 1.5%	% and Clerical @ 1.5%	6 of total non-supe	ervisory hours for all task	S	
Engineer	0.8	hours	\$130.00	\$104	51.5 hours @	0.015 hr/hr =	0.8 hours	•		Engineer rate: 2011 3rd party quote
Clerical	0.8	hours	\$45.00	\$36	51.5 hours @	0.015 hr/hr =	0.8 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$140						
(Subt: Assemb 5.12.14 - 5.12.16)				\$892						

5.12 AWTS (o/s sou wwtrt bl) 1 tk Direct Cost Total Basic \$10,119

5.12 AWTS (o/s sou wwtrt bl) 1 tk			
Total Cost Summary			
Total Cost Sammary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	l ·
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$10,119	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$708	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$405	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$607	note: DEC uses 6%
Engineering During Construction	2.00%	\$202	note: DEC uses 2%
General Contractor Profit	6.00%	\$607	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$2,530	
Subt: AWTS (o/s eas ww tr) 4 tks		\$12,649	
Plus Contingency	10.00%	\$1,265	CWM and DEC 10%
Tot: AWTS (o/s eas ww tr) 4 tnks		\$13,913	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.13 AWTS (o/s east ww trt) 4 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	on and Quantities f	or In-house Estima	ate		In-house Pricing References
5.13.1 Inventory Verification					prod'n rates: 100 d	drums/hr; 15 min/t	anker or rolloff; 30	min/tank; two perso	ons required	
Laborer	4	hours	\$39.00	\$156	4 tanks @	0.5 hour/tank =	2.0 hours @	2 units/crew =	4.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$156						
(Subt: Assemb 5.13.1 - 5.13.1)				\$156	tanks: T-3001, T-3	3002, T-3003, and T	-3009			
5.13.2 Onsite Aqueous Treatment					highly-contaminat	ed liquid waste: as:	sume pumped dire	ectly from tanks into A	AWTS	
Onsite Aqueous Treatment - Tanks	9365	gals	\$0.0452	\$423	9365 gals					AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment		0	,	\$423	,					
(Subt: Assemb 5.13.2 - 5.13.2)						of tanks' waste liqu	ıids			
5.13.3 Steel Tank Demolition					prod'n rate = 200 S	SF/hr; 1 CF debris p	per 36 of tank area			T
No. of Tanks/Capacity/Area/Weight	1	tnks @			6000 gallons:	1006 SF Tanks:	28 CF @	490 Lb/CF =	13693 Lbs	Steel Tanks only; estimate 490#/CF
aborer		hours	\$39.00	\$589	1006 SF @	200 SF/hour	5.0 hours @	3 units/crew =	15.1 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		1006 SF @	200 SF/hour	5.0 hours @	2 units/crew =	10.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	10.1	hours	\$84.09		1006 SF @	200 SF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	5	hours	\$34.40		1006 SF @	200 SF/hour	5.0 hours @	1 units/crew =	5.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	5	hours	\$2.47		1006 SF @	200 SF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
.oader	5	hours	\$30.03		1006 SF @	200 SF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
/ard Crane	5	hours	\$86.31		1006 SF @	200 SF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	5	hours	\$5.41	\$27	,	200 SF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 474 (line item 01 54 33 00 2700)
Subt - Steel Tank Demolition	3	110013	75.41	\$2,257			3.0 Hours @	1 units/crew =	3.0 110013	NSW/110 p. 473 (IIIIC REIII 01 34 33 40 7000)
						200 SF/hour (same	as steel tank demo	olition rate); 1 CF deb	ris per 36 SF tank	
5.13.4 FRP Tank Demolition					area					
No. of Tanks/Capacity/Area/Weight		tnks @			3365 gallons:	440 SF Tanks:	12 CF @	245 Lb/CF =	2994 Lbs	FRP Tanks only; facility estimates 245#/CF
aborer		hours	\$39.00		440 SF @	200 SF/hour	2.2 hours @	3 units/crew =	6.6 hours	HASP req's two: loaded labor rate 2011 3rd party quote
quipment Operator (Medium)		hours	\$45.00		440 SF @	200 SF/hour	2.2 hours @	2 units/crew =	4.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
xcavator		hours	\$84.09		440 SF @	200 SF/hour	2.2 hours @	1 units/crew =	2.2 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		440 SF @	200 SF/hour	2.2 hours @	1 units/crew =	2.2 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		440 SF @	200 SF/hour	2.2 hours @	1 units/crew =	2.2 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
oader		hours	\$30.03	\$66		200 SF/hour	2.2 hours @	1 units/crew =	2.2 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
'ard Crane		hours	\$86.31		440 SF @	200 SF/hour	2.2 hours @	1 units/crew =	2.2 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Velding Equipment	0	hours	\$5.41		440 SF @	200 SF/hour	2.2 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
ubt - FRP Tank Demolition				\$977	tank areas based	upon actual tank d	imensions, or upor	n OSWER 9476.00-6, \	/оі 3, р. 5-5	
5.13.5 Tank Piping Demolition					avg prod'n rate = 2	20 LF/hr, rsm/up p.	3-10 (16-01-0621/	/0622) for 2"/4" meta	ıl pipe @ 4#/LF	
Estimated Piping Length	400	LF			4 tanks @	100 LF/tank =	400 LF @	4 Lb/LF =	1600 Lbs	combined Steel and FRP Tanks' Piping
aborers	40	hours	\$39.00	\$1,560	400 LF @	20 LF/hour	20.0 hours @	2 units/crew =	40.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41	\$108		20 LF/hour	20.0 hours @	1 units/crew =	20.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$1,668	in the absence of	•				

### 5.13 AWTS (o/s east ww trt) 4 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	tion and Quantities	for In-house Estim	ate		In-house Pricing References
5.13.6 Tank Pump Demolition					prod'n rate = 1 r	oump/hr assume 0.5	pumps/tank			
Laborers	4	hours	\$39.00	\$156	2.0 pumps @	1 pump/hr	2.0 hours @	2 units/crew =	4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41		2.0 pumps @	1 pump/hr	2.0 hours @	1 units/crew =	2.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition		nours	75.11					ta, one pump per two		13M/116 p. 473 (intertern 01 34 33 40 7000)
				7	pamp mega			то, от е ратер рог сто		
5.13.7 Load Tank Demo Debris					production rate	= 15 CY/hour;				
aborer	0.2	hours	\$39.00	\$8	3.4 CY @	15 CY/hr =	0.2 hours @	1 units/crew	0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.2	hours	\$45.00		3.4 CY @	15 CY/hr =	0.2 hours @	1 units/crew =	0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader		hours	\$30.03	\$6	3.4 CY @	15 CY/hr =	0.2 hours @	1 units/crew =	0.2 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)		hours	\$5.20		3.4 CY @	15 CY/hr =	0.2 hours @	1 units/crew	0.2 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$24	1 CY tank demo	debris = to 972 SF @	1/3rd" thick; and/o	or 432 LF of 3" diam p	ipe; and/or 2 pumps	
5.13.8 Unl'd Stabilize/Encapsulate					production rate containers	= 15 tons/hour = 12	0 tons/day; include	s unloading, shreddin	g, and filling	
PROCESS TONS (incl kiln dust)	9.9	TONS				5% kiln dust = 3.93 C	Y total total tonnag	e = 9.9 tons		total tons derived from foregoing assemblies + kiln dust
aborer		hours	\$39.00	\$51		ons/hr @ 0.7 hours				loaded labor rate: loaded labor rate 2011 3rd party quote
quipment Operator (Medium)		hours	\$45.00			ons/hr @ 0.7 hours				loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)		hours	\$19.18			ons/hr @ 0.7 hours				RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)		hours	\$14.39			ons/hr @ 0.7 hours				RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.7	hours	\$329.70			ons/hr @ 0.7 hours				2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.7	hours	\$136.29			ons/hr @ 0.7 hours				2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		0.5 tons		· ·			·
Cement Kiln Dust - Delivery Cost		loads	\$0.00	\$0	0.5 tons @ 20 to	on/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost	0.5	tons	\$48.00	\$24		•				CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.1	units	\$1,000.00	\$100	3.9 CYs @ 30 CY	//unit = 0.1 containe	ers			CWM actual 2011 costs
Rolloffs (30-CY)	0.1	hours	\$19.02	\$2	3.9 CYs @ 30 CY	//unit = 0.1 rolloffs (	@ 0.7 hours/rolloff =	= 0.1 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$616	1 CY tank demo	debris = to 972 SF @	1/3rd" thick; and/	or 432 LF of 3" diam p	ipe; and/or 2 pumps	
5.13.9 Offsite T&D - Tank Demo					offsite disposal i	s determined to be	the only disposal or	ntion		
Offsite Transportation - Debris	325	miles	\$3.25	\$1 251	3.9 CY @	30 CY/load =	0.1 loads @	385 miles/trip =	385 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	3.9		\$337.50		3.9 CY @	27 CF/CY =	106.0 CF	555 miles/ mp =	505 1111105	DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo	3.3		Ç337.30	\$2,568		2, 0., 0.	200.0 0.			220 200 : 25th late accounting for inhation
(Subt: Assemb 5.13.3 - 5.13.9)						mp demolition, and	offsite transportation	on & disposal		
,				7-7	711 371		,	,		
5.13.10 Decon SCA (wash)					production rate	= 105 SF/hr for 1-pe	erson crew w/ one u	nit each; facility expe	rience	
Laborer	3.9	hours	\$39.00	\$152	411 SF @	105 SF/hr =	3.9 hours @	1 pers/crew =	3.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		411 SF @	105 SF/hr =	3.9 hours @	1 unit/crew =	3.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		411 SF @	105 SF/hr =	3.9 hours @	1 unit/crew =	3.9 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)	3.3	,	7	\$181	_					. , . , . , . ,
			1							

### 5.13 AWTS (o/s east ww trt) 4 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities fo	or In-house Estima	ite		In-house Pricing References
		1	•							
5.13.11 Decon SCA (rinse)					•	= 105 SF/hr for 1-pers	son crew w/ one u	nit each; facility expe	erience	
Laborer	3.9	hours	\$39.00	\$152	411 SF @	105 SF/hr =	3.9 hours @	1 pers/crew =	3.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	3.9	hours	\$4.04	\$16	411 SF @	105 SF/hr =	3.9 hours @	1 unit/crew =	3.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	3.9	hours	\$3.41	\$13	411 SF @	105 SF/hr =	3.9 hours @	1 unit/crew =	3.9 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$181						
5.13.12 Decon Water Samp/Disp					production rate =	= 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	205.5	gal	\$0.0313	\$6	411 SF @	0.5 gal/sf/wa =	205.5 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$164						
5.13.13 PCB Wipe Samples					No TCLP analyses	necessary according	to site-wide closu	ire plan		
Technician	0.7	hours	\$38.00	\$27	0.7 samp @	0.5 hr/samp =	0.35 hours @	2 pers/crew =	0.7 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0	samp	\$446.67	\$0		_				analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	0.7	samp	\$83.33	\$58	411 SF @	625 SF/samp =	0.7 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$85						
(Subt: Assemb 5.13.10 - 5.13.13)				\$611	decontamination	n & sampling of SCA				

Total Non-Super Labor Hours

97.5

				Level C @ 75%; Mod Level C @ 25% for tot non-supv hrs for all tasks; HASP @ 2.5% of non-supv	
5.13.14 PPE Usage/H&S Planning				hrs	
PPE Usage - Level D	0	days	\$0.00	\$0 97.5 hours @ 8 hr/day = 12.2 days @ 0% "D" days = 0.0 days Standard Work Clothes - Site Experience	
PPE Usage - Mod Level C	3	days	\$9.00	\$27 97.5 hours @ 8 hr/day = 12.2 days @ 25% "Mod C" days = 3.0 days 25% of non-supv hrs in Mod Level C (price: \$9/day)	
PPE Usage - Level C	9.2	days	\$25.00	\$230 97.5 hours @ 8 hr/day = 12.2 days @ 75% "C" days = 9.2 days 75% of non-supv hrs in Level C (price: \$25/day)	
Safety Engineer	2.4	hours	\$75.00	\$180 97.5 hours @ 2.5% hr/hr = 2.4 hours Safety Eng Rate: rate 2011 3rd party quote	
Subt - PPE Usage/H&S Planning				\$437	
5.13.15 Supervision				0.4 week for closure of 4 tanks	
Foreman	16	hours	\$65.00	\$1,040 0.4 week @ 40 hrs/wk = 16.0 hours Outside foreman rate: 2011 3rd party quote	
Site Project manager	0	hours	\$75.00	\$0 Included in Gen'l Contractor G&A/Home Office indirect costs Site Manager Rate: 2011 3rd party quote	
Subtotal - Supervision				\$1,040	
5.13.16 Certification				Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	1.5	hours	\$130.00	\$195 97.5 hours @ 0.015 hr/hr = 1.5 hours Engineer rate: 2011 3rd party quote	
Clerical	1.5	hours	\$45.00	\$68 97.5 hours @ 0.015 hr/hr = 1.5 hours Clerical rate: 2011 3rd party quote	
Subtotal -Certification				\$263	
(Subt: Assemb 5.13.14 - 5.13.16)				\$1,740	_

5.13 AWTS (o/s east ww trt) 4 tks Direct Cost Total Basic \$11,207

5.13 AWTS (o/s east ww trt) 4 tks			
Total Cost Summary - Basic Opt.			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$11,207	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$784	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$448	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$672	note: DEC uses 6%
Engineering During Construction	2.00%	\$224	note: DEC uses 2%
General Contractor Profit	6.00%	\$672	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$2,802	
Subt: AWTS (o/s eas ww tr) 4 tks		\$14,009	
Plus Contingency	10.00%	\$1,401	CWM and DEC 10%
		44= 400	
Tot: AWTS (o/s eas ww tr) 4 tnks		\$15,409	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.14 AWTS (nor SLF 1 - 6) 2 tanks

Estimated	Unit of	Unit Price	2011 CWM Extended	Basis of Production and Quantities for In-house Estimate In-house Pricing References	
Quantity	Measure		Price		
				prod'n rates: 100 drums/hr; 15 min/tanker or rolloff; 30 min/tank; two persons required	
2.0	hours	\$39.00	\$78		ote
			\$78		
				production rate = 1.650 gals/hr:	
0.0	hours	\$39.00	\$0		ote
		\$6.31			
		, , , , ,			
				production rate = 0.5 hours for onsite transport	
0.8	hours	\$32.45	\$26	8732 gals @ 5500 gals/load = 1.6 loads @ 0.5 hrs/trip = 0.8 hours RSM/HC p. 472 (line item 01 54 33 40 7410)	
		\$45.00			ote
		\$6.31			
	*	,			
				production rate = 1,650 gals/hr;	
0.0	hours	\$39.00	\$0		ote
0.0	hours	\$0.00			
5.3	hours	\$6.31			
			\$33		
			\$98	empty and transport onsite contents from tanks T-105 and T-130	
				highly-contaminated liquid wastes.	
8732.0	gals	\$1.8244	\$15,931		
			\$15,931		
				onsite treatment of tanks' waste liquids	
				prod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf	
				tank area	
2.0	tnks @				
		\$39.00	\$437		te
		\$45.00			
		\$84.09			
		\$34.40			
		\$5.41			
		<b>Ψ</b> 1	027	7 . 10 5. 6 100 17 100 10 10 10 10 10 10 10 10 10 10 10 10	
	Quantity  2.0  0.0  0.0  5.3  0.8  0.0  0.0  0.0  0.0  1.1  2.0  11.2  7.5  3.7  3.7  3.7  3.7	Quantity Measure	Quantity Measure Unit Price  2.0 hours \$39.00  0.0 hours \$39.00  0.0 hours \$0.00  5.3 hours \$6.31  0.8 hours \$32.45  0.0 hours \$45.00  0.8 hours \$6.31  0.0 hours \$6.31  8732.0 gals \$1.8244  2.0 trks @ 11.2 hours \$39.00  7.5 hours \$45.00  3.7 hours \$45.00  3.7 hours \$39.00  7.5 hours \$39.00  7.5 hours \$39.00  7.5 hours \$39.00  7.5 hours \$39.00  7.5 hours \$34.40  3.7 hours \$34.40  3.7 hours \$30.03  3.7 hours \$30.03  3.7 hours \$30.03	Comparison	Stimated   Unit Price   Price   Basis of Production and Quantities for in-house Estimate   In-house Pricing References   In-house Pricing References

#### 5.14 AWTS (nor SLF 1 - 6) 2 tanks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate				In-house Pricing References	
					nroduction rate	= 200 SE/hour (same	as steel tank demo	olition rate); 1 CF debi	is ner 36 SE tank	1
5.14.7 FRP Tank Demolition					area	- 200 31/110di (3ai11e	as steer tank demic	intion rate, i cr debi	is per 50 Si talik	
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
_aborer		hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition			·	\$0	tank areas base	rd ı		,		
5.14.8 Tank Piping Demolition					avg prod'n rate =			0622) for 2"/4" metal		
Estimated Piping Length	200.0	LF			2 tanks @	100 LF/tank =	200 LF @	4 Lb/LF =	800 Lbs	combined Steel and FRP Tanks' Piping
Laborers	20.0	hours	\$39.00		200 LF @	20 LF/hour	10.0 hours @	2 units/crew =	20.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	10.0	hours	\$5.41	\$54	200 LF @	20 LF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$834	in the absence of	of f				
5.14.9 Tank Pump Demolition					prod'n rate = 1 p pumps/tank	ump/hr (see RSM/UI	P p. 3-11, 16-01-06	34 and 16-01-0636) a	ssume 0.5	
Laborers	2.0	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1.0	hours	\$5.41	\$5	1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$83	pump weight = .	250# each; in the ab	sense of facility dat	ta, one pump per two	tanks is estimated	
5.14.10 Load Tank Demo Debris					•	= 15 CY/hour; RSM/B	<u> </u>			
Laborer		hours	\$39.00		1.7 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		1.7 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
oader	0.1	hours	\$30.03		1.7 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.1	hours	\$5.20	\$1	1.7 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$12	2 1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pump				5	

#### 5.14 AWTS (nor SLF 1 - 6) 2 tanks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produ	sis of Production and Quantities for In-house Estimate				In-house Pricing References
			1		production rate	e = 15 tons/hour = 120	tons/day; includes	unloading, shredding	g, and filling	
5.14.11 Unl'd Stabilize/Encapsulate					containers	,	., ., ,,	, , , , , , , , , , , , , , , , , , ,	5,	
PROCESS TONS (incl kiln dust)	5.9	TONS				15% kiln dust = 1.99 CY	total total tonnage	e = 5.9 tons		total tons derived from foregoing assemblies + kiln dust
Laborer	0.8	hours	\$39.00	\$31		tons/hr @ 0.4 hours @				loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	1.2	hours	\$45.00	\$54	5.9 tons @ 15	tons/hr @ 0.4 hours @	3 units/crew = 1.2	! hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.4	hours	\$19.18			tons/hr @ 0.4 hours @				RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.4	hours	\$14.39			tons/hr @ 0.4 hours @				RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.4	hours	\$329.70	\$132	5.9 tons @ 15	tons/hr @ 0.4 hours @	1 units/crew = 0.4	hours		2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.4	hours	\$136.29	\$55	5.9 tons @ 15	tons/hr @ 0.4 hours @	1 units/crew = 0.4	hours		2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00	\$0	0.3 tons					
Cement Kiln Dust - Delivery Cost		loads	\$0.00	\$0	0.3 tons @ 20	ton/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost	0.3	tons	\$48.00	\$14						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.1	units	\$1,000.00	\$100	2.0 CYs @ 30 C	CY/unit = 0.1 containers	S			CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	2.0 CYs @ 30 C	CY/unit = 0.1 rolloffs @	0.4 hours/rolloff =	0.0 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$399	1 CY tank dem	no debris = to 972 SF @	1/3rd" thick; and/	or 432 LF of 3" diam μ	pipe; and/or 2 pumps	
5.14.12 Offsite T&D - Tank Demo					offsite disposal	is determined to be th	ne only disposal opt	tion		
Offsite Transportation - Debris	385.0	miles	\$3.25	\$1,251	2.0 CY @	30 CY/load =	0.1 loads @	385 miles/trip =	385 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	2.0	CF	\$337.50	\$675	2.0 CY @	27 CF/CY =	53.8 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$1,926						
(Subt: Assemb 5.14.6 - 5.14.12)				\$4,927	tank/piping/p	ump demolition, and o	ffsite transportatio	n & disposal		
5.14.13 Decon SCA (wash)					production rate	e = 105 SF/hr for 1-pers	son crew w/ one ur	nit each; facility exper	rience	
Laborer	11.9	hours	\$39.00		1254 SF @	105 SF/hr =	11.9 hours @	1 pers/crew =	11.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	11.9	hours	\$4.04	\$48	1254 SF @	105 SF/hr =	11.9 hours @	1 unit/crew =	11.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	11.9	hours	\$3.41	\$41	1254 SF @	105 SF/hr =	11.9 hours @	1 unit/crew =	11.9 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$553						
5.14.14 Decon SCA (rinse)			400.00	4		e = 105 SF/hr for 1-pers				
Laborer		hours	\$39.00		1254 SF @	105 SF/hr =	11.9 hours @	1 pers/crew =	11.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		1254 SF @	105 SF/hr =	11.9 hours @	1 unit/crew =	11.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	11.9	hours	\$3.41		1254 SF @	105 SF/hr =	11.9 hours @	1 unit/crew =	11.9 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$553						
5.14.15 Decon Water Samp/Disp					production rate	e = 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)		samp	\$105.00		1.0 areas @	1.1 samp/area =		, 3. 0		analytical price: average of three quotes
On-site Water Disposal	627.0		\$0.0313		1254 SF @	2.4 gal/sf/wa =	627 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose	327.0	o	70.0010	\$177		60., 0.,	60			The state of the price of the group and the daily and the daily and

### 5.14 AWTS (nor SLF 1 - 6) 2 tanks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate				In-house Pricing References	
5.14.16 PCB Wipe Samples					No TCLP analys	ses necessary accord	ling to site-wide clo	sure plan		
Technician	2.0	hours	\$38.00	\$76	2.0 samp @	0.5 hr/samp =	1.0 hours @	2 pers/crew =	2.0 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	2.0	samp	\$83.33	\$167	1254 SF @	625 SF/samp	= 2.0 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$243						
(Subt: Assemb 5.14.13 - 5.14.16)				\$1,525	decontaminat	tion & sampling of S	CA			

Total Non-Super Labor Hours

71.8

					Level C @ 75%;	Mod Level C @ 25%	for tot non-supv h	rs for all tasks; HASP @	2.5% of non-supv	
5.14.17 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	71.8 hours @	8 hr/day =	9.0 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	2.2	days	\$9.00	\$20	71.8 hours @	8 hr/day =	9.0 days @	25% "D" days =	2.2 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	6.8	days	\$25.00	\$170	71.8 hours @	8 hr/day =	9.0 days @	75% "C" days =	6.8 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.8	hours	\$75.00	\$135	71.8 hours @	2.5% hr/hr =	1.8 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$325						
5.14.18 Supervision					0.2 week for clo	sure of 2 tanks				+
Foreman	8.0	hours	\$65.00	\$520	0.2 week @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	Included in Gen	'l Contractor G&A/H	Iome Office indired	ct costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.14.19 Certification					Engineer @ 1.5%	% and Clerical @ 1.5%	% of total non-supe	ervisory hours for all ta	isks	+
Engineer	1.1	hours	\$130.00	\$143	71.8 hours @	0.015 hr/hr =	1.1 hours			Engineer rate: 2011 3rd party quote
Clerical	1.1	hours	\$45.00	\$50	71.8 hours @	0.015 hr/hr =	1.1 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$193		<u> </u>			<u> </u>	
(Subt: Assemb 5.14.17 - 5.14.19)				\$1,037						

5.14 AWTS (nor SLF 1 - 6) 2 tanks	Direct Cost	Total Basic	\$23,596

5.14 AWTS (nor SLF 1 - 6) 2 tanks			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$23,596	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$1,652	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$944	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$1,416	note: DEC uses 6%
Engineering During Construction	2.00%	\$472	note: DEC uses 2%
General Contractor Profit	6.00%	\$1,416	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$5,899	
Subt: AWTS (nor SLF 1 - 6) 2 tnks		\$29,495	
Plus Contingency	10.00%	\$2,950	CWM and DEC 10%
Tot: AWTS (nor SLF 1 - 6) 2 tnks		\$32,445	

### 5.15 AWTS (i/s betw slf 7&11) 3 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities fo	or In-house Estima	nte		In-house Pricing References
E 1E 1 Inventory Verification					prod'n rates: E0	drums/br. 15 min/tan	kor or rolloff: 20 r	min/tank; two person:	c required	
5.15.1 Inventory Verification Laborer	3.0	hours	\$39.00	¢117	3 tanks @	0.5 hour/tank =		2 units/crew =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	3.0	Hours	Ş39.00	\$117	5 tanks @	0.5 Hour/tank =	1.5 110013 @	Z units/crew =	3.0 110013	loaded labor rate. loaded labor rate 2011 3rd party quote
(Subt: Assemb 5.15.1 - 5.15.1)					tanks: T-107, T-	108 and T-111				
(3450.76361115 3.13.1				<b>711</b> ,	turno. 1 107, 1	100, 0110 1 111				
5.15.2 Empty T-107, T-108, & T-111					production rate =	= 1.650 gals/hr:				
Laborer	0.0	hours	\$39.00		•	third party operation	n of AWTS			loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00			ent part of tank systen				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gal)	6.5	hours	\$6.31	\$41	10700 gals @	1650 SF/hr =	6.5 hours @	1 unit/crew =	6.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanks' Contents				\$41						
5.15.3 Transport Tanker(s) Onsite					•	= 0.5 hours for onsite	<u>'</u>			
Road Tractor (4 x 2, 30-ton)		hours	\$32.45		10700 gals @	5500 gals/load =		0.5 hrs/trip =	1.0 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver		samp	\$45.00			third party operation				loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gal)	1.0	gal	\$6.31		10700 gals @	5500 gals/load =	1.9 loads @	0.5 hrs/trip =	1.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Onsite Transport				\$39						
5.15.4 Empty Tanker(s)					production rate =	- 1 650 gals/hr:				
Laborer	0.0	hours	\$39.00		•	third party operation	of AWTS			loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment		samp	\$0.00			ent part of tank system		RSM/UP p. 9-171 (line item 33-19-0108)		
Tank Trailer (5,500 gal)		samp	\$6.31		10700 gals @	1650 SF/hr =	6.5 hours @	1 unit/crew =	6.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tankers	0.5	Sump	Ç0.51	\$41	10700 gais @	1030 31 / 111	0.5 110013 @	1 amy crew	0.5 110015	11.511/110 p. 472 (iiile teem 01 54 55 40 0500)
(Subt: Assemb 5.15.2 - 5.15.4)					empty tanks' co	ntents and transport	onsite to AWTS			+
,				¥	, ,	,				
5.15.5 Onsite Aqueous Treatment					highly-contamina	ated liquid waste stre	am			
Onsite Aqueous Treatment - Tanks - SLF-7	2675.0	gals	\$0.2295		10700 gals @	25% for SLF-7 =	2675 gals			AWTS treatment costs @ \$0.2295
Onsite Aqueous Treatment - Tanks - SLF-11	8025.0		\$0.3532		10700 gals @	75% for SLF-11 =	8025 gals			AWTS treatment costs @ \$0.3532
Subt - Onsite Aqueous Treatment				\$3,448			_			
(Subt: Assemb 5.15.5 - 5.15.5)				\$3,448						
					·	) SF/hr (rsm/up 16-01	-014 <mark>2/0216/0308</mark>	, pp. 3-2/3-3,3-5); 1 C	F debris per 36 sf	
5.15.6 Steel Tank Demolition			ļļ		tank area					
No. of Tanks/Capacity/Area/Weight		tnks @			0 gallons:	0 SF Tanks:	0 CF @	490 Lb/CF =	0 Lbs	Steel Tanks only; estimate 490#/CF
Laborer		hours	\$39.00		0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment			\$34.40		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment			\$2.47		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane			\$86.31		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				ŚN	tank areas base	d i				

### 5.15 AWTS (i/s betw slf 7&11) 3 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	nded Basis of Production and Quantities for In-house Estimate					In-house Pricing References
			1		nroduction rate =	200 SE/hour (same	as steel tank demo	olition rate); 1 CF deb	ris ner 36 SE tank	I
5.15.7 FRP Tank Demolition					area	- 200 31/110u1 (3ai11e	as steer tank demic	intion rate, i cr deb	ris per 30 31 talik	
No. of Tanks/Capacity/Area/Weight	3.0	tnks @			10700 gallons:	552 SF Tanks:	15 CF @	245 Lb/CF =	3757 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer		hours	\$39.00	\$324	552 SF @	200 SF/hour	2.8 hours @	3 units/crew =	8.3 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		552 SF @	200 SF/hour	2.8 hours @	2 units/crew =	5.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		552 SF @	200 SF/hour	2.8 hours @	1 units/crew =	2.8 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		552 SF @	200 SF/hour	2.8 hours @	1 units/crew =	2.8 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	2.8	hours	\$2.47	\$7	552 SF @	200 SF/hour	2.8 hours @	1 units/crew =	2.8 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03	\$84	552 SF @	200 SF/hour	2.8 hours @	1 units/crew =	2.8 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	2.8	hours	\$86.31	\$242	552 SF @	200 SF/hour	2.8 hours @	1 units/crew =	2.8 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	552 SF @	200 SF/hour	2.8 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$1,236	tank areas base	d upon actual tank a	limensions, or upor	OSWER 9476.00-6, \	/ol 3, p. 5-5	
5.15.8 Tank Piping Demolition	222.0							0622) for 2"/4" meta	· ·	L: 16: 1 1505 - 110: :
Estimated Piping Length	300.0		¢20.00	64.470	3 tanks @	100 LF/tank =	300 LF @	4 Lb/LF =	1200 Lbs	combined Steel and FRP Tanks' Piping
Laborers	30.0		\$39.00		300 LF @	20 LF/hour	15.0 hours @	2 units/crew =	30.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	15.0	hours	\$5.41		300 LF @	20 LF/hour	15.0 hours @	1 units/crew =	15.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$1,251	in the absence o	J J				
5.15.9 Tank Pump Demolition					prod'n rate = 1 po pumps/tank	ump/hr (see RSM/UI	P p. 3-11, 16-01-06	34 and 16-01-0636) a	ssume 0.5	
Laborers	3.0	hours	\$39.00	\$117	1.5 pumps @	1 pump/hr	1.5 hours @	2 units/crew =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1.5	hours	\$5.41	\$8	1.5 pumps @	1 pump/hr	1.5 hours @	1 units/crew =	1.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$125	pump weight = 2	250# each; in the ab	sense of facility dat	ta, one pump per two	tanks is estimated	
5.15.10 Load Tank Demo Debris					production rate =	= 15 CY/hour; RSM/B	C p. 42 (line item 0	02225-730-3080)		
Laborer	0.1	hours	\$39.00	\$4	2.0 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.1	hours	\$45.00	\$5	2.0 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.1	hours	\$30.03	·	2.0 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.1	hours	\$5.20	\$1	2.0 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$12	\$12 1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pump.					

### 5.15 AWTS (i/s betw slf 7&11) 3 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	ction and Quantities f	or In-house Estima	te		In-house Pricing References
					production rate	= 15 tons/hour = 120	tons/day: includes	unloading, shredding	g. and filling	
5.15.11 Unl'd Stabilize/Encapsulate					containers		,,		8,	
PROCESS TONS (incl kiln dust)	3.0	TONS				5% kiln dust = 2.31 CY	total total tonnage	e = 3.0 tons		total tons derived from foregoing assemblies + kiln dust
Laborer		hours	\$39.00	\$16		tons/hr @ 0.2 hours @				loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00			tons/hr @ 0.2 hours @				loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)		hours	\$19.18			tons/hr @ 0.2 hours @				RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)		hours	\$14.39			tons/hr @ 0.2 hours @				RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder		hours	\$329.70			tons/hr @ 0.2 hours @				2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo		hours	\$136.29			tons/hr @ 0.2 hours @				2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		0.3 tons		•			·
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	0.3 tons @ 20 t	ton/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost	0.3	tons	\$48.00	\$14		·				CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.1	units	\$1,000.00	\$100	2.3 CYs @ 30 C	Y/unit = 0.1 container	S			CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	2.3 CYs @ 30 C	Y/unit = 0.1 rolloffs @	0.2 hours/rolloff =	0.0 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$257	1 CY tank dem	o debris = to 972 SF @	1/3rd" thick; and/o	or 432 LF of 3" diam <sub>l</sub>	pipe; and/or 2 pump	s
5.15.12 Offsite T&D - Tank Demo					offsite disposal	is determined to be th	ne only disposal opt	ion		
Offsite Transportation - Debris	385.0	miles	\$3.25	\$1,251	\$1,251 2.3 CY @ 30 CY/load = 0.1 loads @ 385 miles/trip = 385.0 miles Ri					Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	2.3	CY	\$337.50	\$776	2.3 CY @	27 CF/CY =	62.5 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$2,028						
(Subt: Assemb 5.15.6 - 5.15.12)				\$4,908	tank/piping/pu	ump demolition, and o	ffsite transportatio	n & disposal		
5.15.13 Decon SCA (wash)					production rate	= 105 SF/hr for 1-per	son crew w/ one ur	nit each: facility expe	rience	
Laborer	11.7	hours	\$39.00	\$456	1229 SF @	105 SF/hr =	11.7 hours @	1 pers/crew =	11.7 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	11.7	hours	\$4.04		1229 SF @	105 SF/hr =	11.7 hours @	1 unit/crew =	11.7 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		1229 SF @	105 SF/hr =	11.7 hours @	1 unit/crew =	11.7 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$543		•	_			
5.15.14 Decon SCA (rinse)					production rate	= 105 SF/hr for 1-per	son crew w/ one ur	nit each; facility expe	rience	
Laborer	11.7	hours	\$39.00		1229 SF @	105 SF/hr =	11.7 hours @	1 pers/crew =	11.7 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	11.7	hours	\$4.04	\$47	1229 SF @	105 SF/hr =	11.7 hours @	1 unit/crew =	11.7 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	11.7	hours	\$3.41	\$40	1229 SF @	105 SF/hr =	11.7 hours @	1 unit/crew =	11.7 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$543			_			
5.15.15 Decon Water Samp/Disp					production rate	= 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00		1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
/OC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	614.5	gal	\$0.0313		1229 SF @	0.5 gal/sf/wa =	614.5 gallons			site waters waste treat price ; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$177			-			

### 5.15 AWTS (i/s betw slf 7&11) 3 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate In-house Pricing References
5.15.16 PCB Wipe Samples					No TCLP analyses necessary according to site-wide closure plan
Technician	2.0	hours	\$38.00	\$76	.76 2.0 samp @ 0.5 hr/samp = 1.0 hours @ 2 pers/crew = 2.0 hours technician rate 2011 3rd party quote
TCLP VOC & Metals Analysis	0.0	samp	\$446.67	\$0	\$0 analytical price: average of three quotes
PCB Analysis (SW 8080)	2.0	samp	\$83.33	\$167	67 1229 SF @ 625 SF/samp = 2.0 samples analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$243	43
(Subt: Assemb 5.15.13 - 5.15.16)				\$1,506	06 decontamination & sampling of SCA

Total Non-Super Labor Hours

77.5

					Level C @ 75%	; Mod Level C @ 25% t	or tot non-supv hr	rs for all tasks; HASP @ :	2.5% of non-supv	
5.15.17 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	77.5 hours @	8 hr/day =	9.7 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	2.4	days	\$9.00	\$22	77.5 hours @	8 hr/day =	9.7 days @	25% "Mod C" days	= 2.4 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	7.3	days	\$25.00	\$183	77.5 hours @	8 hr/day =	9.7 days @	75% "C" days =	7.3 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.9	hours	\$75.00	\$143	77.5 hours @	2.5% hr/hr =	1.9 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$347						
5.15.18 Supervision					0.6 week for cl	osure of 3 tanks				
Foreman	24.0	hours	\$65.00	\$1,560	0.6 week @	40 hrs/wk =	24.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	Included in Ge	n'l Contractor G&A/H	ome Office indirec	t costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$1,560						
5.15.19 Certification					Engineer @ 1.5	5% and Clerical @ 1.5%	6 of total non-supe	ervisory hours for all tas	ks	
Engineer	1.2	hours	\$130.00	\$156	77.5 hours @	0.015 hr/hr =	1.2 hours			Engineer rate: 2011 3rd party quote
Clerical	1.2	hours	\$45.00	\$54	77.5 hours @	0.015 hr/hr =	1.2 hours			Clerical rate: 2011 3rd party quote
Subtotal Certification				\$210		•	•			
(Subt: Assemb 5.15.17 - 5.15.19)				\$2,117	<u> </u>	·				

5.15 AWTS (i/s betw slf 7&11) 3 tk	Direct Cost	Total	Basic	\$12,217

5.15 AWTS (i/s betw slf 7&11) 3 tk			
Total Cost Summary			
Total Cost Sullillary			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost	Cost Range
Direct Costs/Basic Disposal	Cost	\$12,217	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$855	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$489	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$733	note: DEC uses 6%
Engineering During Construction	2.00%	\$244	note: DEC uses 2%
General Contractor Profit	6.00%	\$733	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$3,054	
Subt: AWTS (i/s betw slf 7&11) 3 t		\$15,271	
Plus Contingency	10.00%	\$1,527	CWM and DEC 10%
Tot. AMTC /: /- b-sh.u. slf 70.44\ 2.44.		¢1.C 700	
Tot: AWTS (i/s betw slf 7&11) 3 tk		\$16,799	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.16 AWTS (i/s A n/w SLF 10) 2 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended	Basis of Produ	ction and Quantities	for In-house Estima	ate		In-house Pricing References
				Price						
					l					
5.16.1 Inventory Verification					prod'n rates: 10	00 drums/hr; 15 min/t	anker or rolloff; 30	min/tank; two perso	ns required	
Laborer	2.0	hours	\$39.00	\$78	2 tanks @	0.5 hour/tank =		2 units/crew =	2.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$78		•		•		
(Subt: Assemb 5.16.1 - 5.16.1)				\$78	tanks: T-109 a	nd T-110				
5.16.2 Empty T-109 & T-110						e = 1,650 gals/hr; RSM		tem 33-19-0101)		
Laborer		hours	\$39.00			in third party operation				HASP reg's two: loaded labor rate 2011 3rd party quote
Pumping Equipment		hours	\$0.00			nent part of tank syste				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	2.0	hours	\$6.31		3350 gals @	1650 gals/hr =	2.0 hours @	1 unit/crew =	2.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanks				\$13						
5.16.3 Transport Tanker(s) Onsite					production rate	e = 0.5 hours/trip for c	onsite transport			
Road Tractor (4 x 2, 30-ton)	0.3	hours	\$32.45	\$10	3350 gals @	5500 gals/load =	<u> </u>	0.5 hrs/trip =	0.3 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0.0	hours	\$45.00	\$0	Labor included	in third party operation	on of AWTS	· ·		loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)		hours	\$6.31		3350 gals @	5500 gals/load =		0.5 hrs/trip =	0.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Onsite Tanker Transport			·	\$12		<u> </u>	_	•		
5.16.4 Empty tanker(s)					production rate	e = 1,650 gals/hr; RSM	/IID n 0-171 (line i	tem 33-10-0101)		
Laborer	0.0	hours	\$39.00	ŚŊ	•	in third party operation		tem 33 13 0101 <sub>j</sub>		HASP reg's two: loaded labor rate 2011 3rd party quote
Pumping Equipment		hours	\$0.00			nent part of tank syste				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)		hours	\$6.31		3350 gals @	1650 gals/hr =	2.0 hours @	1 unit/crew =	2.0	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanker(s)	2.0	110415	Ψ0.51	\$13		1000 6010/111	2.00 6	2 41119 61 611	2.0	nom, no prinz (mie kem ezer es ie esee)
(Subt: Assemb 5.16.2 - 5.16.4)						contents and onsite tro	ansport to AWTS			
5.16.5 Onsite Aqueous Treatment					liquid waste str	ream				
Onsite Aqueous Treatment - Tanks	3350.0	gals	\$0.2295		3350 gals					AWTS treatment costs @ \$0.2295
Subt - Onsite Aqueous Treatment				\$769						
(Subt: Assemb 5.16.5 - 5.16.5)				\$769	onsite treatme	ent of tanks' waste liqu	uids			
					prod'n rate = 20	00 SF/hr (rsm/up 16-0	1-0142/0216/0308	3, pp. 3-2/3-3,3-5): 1 C	CF debris per 36 sf	
5.16.6 Steel Tank Demolition					tank area	. , , ,	. , , , , , , , , ,	, , , ,		
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	490 Lb/CF =	0 Lbs	Steel Tanks only; estimate 490#/CF
Laborer		hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
					tank areas bas	,				

### 5.16 AWTS (i/s A n/w SLF 10) 2 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities	for In-house Estima	ate		In-house Pricing References
					production rate :	= 200 SE/hour (same	as steel tank demo	olition rate); 1 CF deb	ris ner 36 SE tank	
5.16.7 FRP Tank Demolition					area	- 200 31 / 110 at (3atilic	as steer tank active	ontion rate, i er deb	ris per 30 Si talik	
No. of Tanks/Capacity/Area/Weight	2.0	tnks @			3350 gallons:	410 SF Tanks:	11 CF @	245 Lb/CF =	2790 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer		hours	\$39.00	\$242	410 SF @	200 SF/hour	2.1 hours @	3 units/crew =	6.2 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		410 SF @	200 SF/hour	2.1 hours @	2 units/crew =	4.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		410 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		410 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		410 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		410 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		410 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		410 SF @	200 SF/hour	2.1 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition	0.0	Hours	Ş3. <del>4</del> 1					n OSWER 9476.00-6, \		(including 54 33 40 7666)
The second secon				70-0	turn areas suse	a apon actual tarm	annensions) or upor	7 00 11 2 11 3 11 0100 07	. o. o, p. o o	
5.16.8 Tank Piping Demolition					avg prod'n rate =	: 20 LF/hr, rsm/up p.	. 3-10 (16-01-0621/	(0622) for 2"/4" meta	l pipe @ 4#/LF	
Estimated Piping Length	200.0	LF			2 tanks @	100 LF/tank =	200 LF @	4 Lb/LF =	800 Lbs	combined Steel and FRP Tanks' Piping
Laborers	20.0	hours	\$39.00	\$780	200 LF @	20 LF/hour	10.0 hours @	2 units/crew =	20.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	10.0	hours	\$5.41	\$54	200 LF @	20 LF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$834	in the absence o	of facility data, pipin	g assumed to averd	age 100 LF/tank		
5.16.9 Tank Pump Demolition					prod'n rate = 1 p pumps/tank	ump/hr (see RSM/U	P p. 3-11, 16-01-06	34 and 16-01-0636) a	assume 0.5	
Laborers	2.0	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1.0	hours	\$5.41		1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$83	pump weight = 2	50# each; in the abs	ense of facility date	a, one pump per two t	tanks is estimated	
5.16.10 Load Tank Demo Debris					production rate :	= 15 CY/hour; RSM/E	BC p. 42 (line item (	02225-730-3080)		
Laborer	0.1	hours	\$39.00	\$4	1.4 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.1	hours	\$45.00	\$5	1.4 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.1	hours	\$30.03	\$3	1.4 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.1	hours	\$5.20		1.4 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$12	1 CY tank demo (	debris = to 972 SF @	1/3rd" thick; and/c	or 432 LF of 3" diam p	ipe; and/or 2 pumps	

### 5.16 AWTS (i/s A n/w SLF 10) 2 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produ	ction and Quantities f	or In-house Estima	ate		In-house Pricing References
					production rate	e = 15 tons/hour = 120	tons/day; includes	s unloading, shredding	g, and filling	
5.16.11 Unl'd Stabilize/Encapsulate					containers					
PROCESS TONS (incl kiln dust)	2.1	TONS			1.4 CY debr + 1	15% kiln dust = 1.59 CY	total total tonnage	e = 2.1 tons		total tons derived from foregoing assemblies + kiln dust
Laborer	0.3	hours	\$39.00	\$12	2.1 tons @ 15	tons/hr @ 0.1 hours @	2 units/crew = 0.3	3 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.4	hours	\$45.00	\$18	2.1 tons @ 15	tons/hr @ 0.1 hours @	3 units/crew = 0.4	4 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.1	hours	\$19.18	\$2	2.1 tons @ 15	tons/hr @ 0.1 hours @	1 units/crew = 0.1	1 hours		RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.1	hours	\$14.39	\$1	2.1 tons @ 15	tons/hr @ 0.1 hours @	1 units/crew = 0.1	1 hours		RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.1	hours	\$329.70	\$33	2.1 tons @ 15	tons/hr @ 0.1 hours @	1 units/crew = 0.1	1 hours		2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.1	hours	\$136.29	\$14	2.1 tons @ 15	tons/hr @ 0.1 hours @	0 1 units/crew = 0.3	1 hours		2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0	0.2 tons					
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	0.2 tons @ 20	ton/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost	0.2	tons	\$48.00	\$10						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.1	units	\$1,000.00	\$100	1.6 CYs @ 30 C	CY/unit = 0.1 container	S			CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	1.6 CYs @ 30 C	CY/unit = 0.1 rolloffs @	0.1 hours/rolloff =	0.0 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate	2.1	tons		\$189		o debris = to 972 SF @		· ·	ipe; and/or 2 pumps	
5.16.12 Offsite T&D - Tank Demo					offsite disposal	is determined to be the	ne only disposal op			
Offsite Transportation - Debris	38.5	miles	\$3.25		1.6 CY @	30 CY/load =	0.1 loads @	385 miles/trip =	38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	1.6	CY	\$337.50	\$540	1.6 CY @	27 CF/CY =	43.0 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$665						
(Subt: Assemb 5.16.6 - 5.16.12)				\$2,708	tank/piping/p	ump demolition, and o	offsite transportation	on & disposal		
5.16.13 Decon SCA (wash)		1			production rate	e = 105 SF/hr for 1-per	son crew w/ one u	nit each; facility expe	rience	
Laborer	9.1	hours	\$39.00	\$355	951 SF @	105 SF/hr =	9.1 hours @	1 pers/crew =	9.1 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	9.1	hours	\$4.04	\$37	951 SF @	105 SF/hr =	9.1 hours @	1 unit/crew =	9.1 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	9.1	hours	\$3.41	\$31	951 SF @	105 SF/hr =	9.1 hours @	1 unit/crew =	9.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$423						
5.16.14 Decon SCA (rinse)					production rate	e = 105 SF/hr for 1-per	son crew w/ one u	nit each; facility expe	rience	
Laborer	9.1	hours	\$39.00	\$355	951 SF @	105 SF/hr =	9.1 hours @	1 pers/crew =	9.1 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		951 SF @	105 SF/hr =	9.1 hours @	1 unit/crew =	9.1 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		951 SF @	105 SF/hr =	9.1 hours @	1 unit/crew =	9.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$423		•		•		
5.16.15 Decon Water Samp/Disp					production rate	e = 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
/OC Analysis (EPA 624)		samp	\$105.00		1.0 areas @	1.1 samp/area =				analytical price: average of three quotes
On-site Water Disposal	475.5		\$0.0313		951 SF @	0.5 gal/sf/wa =	475.5 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose		<u> </u>		\$172	,	<u> </u>				1 , 5 5 , (242) 3

### 5.16 AWTS (i/s A n/w SLF 10) 2 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate  In-house Pricing References
5.16.16 PCB Wipe Samples					No TCLP analyses necessary according to site-wide closure plan
Technician	1.5	hours	\$38.00	\$57	7 1.5 samp @ 0.5 hr/samp = 0.75 hours @ 2 pers/crew = 1.5 hours technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0	analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	1.5	samp	\$83.33	\$125	5 951 SF @ 625 SF/samp = 1.5 samples analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$182	2
(Subt: Assemb 5.16.13 - 5.16.16)				\$1,200	o decontamination & sampling of SCA

Total Non-Super Labor Hours

56.0

5.16.17 PPE Usage/H&S Planning					Level C @ 75%; I	Level D @ 25% for to	t non-supv hrs for	all tasks; HASP @ 2.5%	6 of non-supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0	56.0 hours @	8 hr/day =	7.0 days @	25% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	1.8	days	\$9.00	\$16	56.0 hours @	8 hr/day =	7.0 days @	25% "D" days =	1.8 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	5.2	days	\$25.00	\$130	56.0 hours @	8 hr/day =	7.0 days @	75% "C" days =	5.2 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.4	hours	\$75.00	\$105	56.0 hours @	2.5% hr/hr =	1.4 hours	•		Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$251						
5.16.18 Supervision					0.2 week for clo	sure of 3 tanks				
Foreman	8.0	hours	\$65.00	\$520	0.2 week @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen	'l Contractor G&A/H	ome Office indirec	t costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.16.19 Certification					Engineer @ 1.5%	% and Clerical @ 1.5%	6 of total non-supe	ervisory hours for all ta	sks	
Engineer	0.8	hours	\$130.00	\$104	56.0 hours @	0.015 hr/hr =	0.8 hours		•	Engineer rate: 2011 3rd party quote
Clerical	0.8	hours	\$45.00	\$36	56.0 hours @	0.015 hr/hr =	0.8 hours	•		Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$140						
(Subt: Assemb 5.16.17 - 5.16.19)				\$911						

5.16 AWTS (i/s A n/w SLF 10) 2 tk	Direct Cost	Total	Basic	\$5,703

5.16 AWTS (i/s A n/w SLF 10) 2 tk			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
,	Percent	2011	
	of Direct	Cost	
	Cost	-	
Direct Costs/Basic Disposal		\$5,703	
Plus Indirect Costs/Profit:			
	7.000/	¢200	- PEG - 78'
Site Activity Management Costs	7.00%		note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%		note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$342	note: DEC uses 6%
Engineering During Construction	2.00%	\$114	note: DEC uses 2%
General Contractor Profit	6.00%	\$342	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$1,426	
Subt: AWTS (i/s A n/w SLF 10) 2		\$7,129	
,		,	
Plus Contingency	10.00%	\$713	CWM and DEC 10%
		4= 044	
Tot: AWTS (i/s A n/w SLF 10) 2 tk		\$7,841	
			1

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.17 AWTS (i/s A east LTF) 2 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	on and Quantities fo	r In-house Estima	ite		In-house Pricing References
E 17.1 Inventory Varification					prod'n rates: 100	drums/hr. 15 min/ta	akar ar rallaffi 20	min/tank; two persons	roquirod	
5.17.1 Inventory Verification Laborer	2.0	hours	\$39.00	¢70	2 tanks @	0.5 hour/tank =	1.0 hours @	2 units/crew =	2.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	2.0	Hours	\$59.00	\$78		0.5 Hour/talik -	1.0 110013 @	z units/crew –	2.0 110013	HASP req s two. loaded labor rate 2011 Std party quote
(Subt: Assemb 5.17.1 - 5.17.1)					tanks: T-158 and	T_150				
(Subt. Assemb 3.17.1 - 3.17.1)				770	tanks. 1-156 and	1-133				
5.17.2 Onsite Aqueous Treatment					80% of T-158 & 10	00% of T-159 liquid w	aste pumped dire	ectly from tanks into A\	WTS	
Onsite Aqueous Treatment - Tanks	14600.0	gals	\$0.2210		14600 gals	1	Pro Processing	,		AWTS treatment costs @ \$0.2295
Subt - Onsite Aqueous Treatment		_		\$3,226	<u> </u>					
(Subt: Assemb 5.17.2 - 5.17.2)				\$3,226	onsite treatment	of tanks' waste liqui	ds			
	•		•							
5.17.3 Load 20% of T-158 to Tnkr					production rate =	1,650 gal/hour;				
Laborer	0.0	hours	\$39.00	\$0	Labor included in	third party operation	of AWTS			HASP reg's two: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00	\$0	Existing equipmer	nt part of tank system	1			RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gal)	2.1	hours	\$6.31	\$13	3400.0 gals @	1650 gals/hr =	2.1 hours @	1 units/crew	2.1 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Load 20% of Tank T-158				\$13						
5.17.4 Offsite T&D - 20% T-158					20% of T-158 PCB					
Offsite Transportation - PCB Liqs	945.2		\$3.50		3400.0 gals @	5500 gals/load =	0.6 loads @	1529 miles/trip =	945.2 hours	Rate: transporters quote/site experience
Offsite Disposal - PCB Liqs	3400.0	gals	\$4.68		3400.0 gals					HWC/ETC 2004 & Current third party rate
Subt - Offsite T&D: 20% of T-158				\$19,220		10/ C CT	L T 450			
(Subt: Assemb 5.17.3 - 5.17.4)				\$19,233	offsite 1&D of 20	% of contents of Tan	K 1-158			
5.17.5 Steel Tank Demolition	<u> </u>		T		prod'n rato = 200	SF/hr; 1 CF debris pe	r 26 of tank area			T
No. of Tanks/Capacity/Area/Weight	1.0	tnks @			17000 gallons:	905 SF Tanks:	25 CF @	490 Lb/CF =	12318 Lbs	Steel Tanks only; estimate 490#/CF
Laborer		hours	\$39.00	\$530	905 SF @	200 SF/hour	4.5 hours @	3 units/crew =	13.6 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		905 SF @	200 SF/hour	4.5 hours @	2 units/crew =	9.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		905 SF @	200 SF/hour	4.5 hours @	1 units/crew =	4.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		905 SF @	200 SF/hour	4.5 hours @	1 units/crew =	4.5 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours	\$2.47		905 SF @	200 SF/hour	4.5 hours @	1 units/crew =	4.5 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		905 SF @	200 SF/hour	4.5 hours @	1 units/crew =	4.5 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		905 SF @	200 SF/hour	4.5 hours @	1 units/crew =	4.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	4.5	hours	\$5.41		905 SF @	200 SF/hour	4.5 hours @	1 units/crew =	4.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$2,032	tank areas based	l upon actual tank dir	nensions, or upon	OSWER 9476.00-6, Vo	ol 3. p. 5-5	

### 5.17 AWTS (i/s A east LTF) 2 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities	or In-house Estima	te		In-house Pricing References
					•	= 200 SF/hour (same	as steel tank demo	lition rate); 1 CF deb	ris per 36 SF tank	
5.17.6 FRP Tank Demolition					area					
No. of Tanks/Capacity/Area/Weight		tnks @			1000 gallons:	160 SF Tanks:	4 CF @	245 Lb/CF =	1089 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer		hours	\$39.00		160 SF @	200 SF/hour	0.8 hours @	3 units/crew =	2.4 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		160 SF @	200 SF/hour	0.8 hours @	2 units/crew =	1.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09		160 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		160 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.8	hours	\$2.47		160 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.8	hours	\$30.03	\$24	160 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.8	hours	\$86.31	\$69	160 SF @	200 SF/hour	0.8 hours @	1 units/crew =	0.8 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	160 SF @	200 SF/hour	0.8 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$355	tank areas base	d upon actual tank o	limensions, or upon	OSWER 9476.00-6, \	/ol 3, p. 5-5	
5.17.7 Tank Piping Demolition								0622) for 2"/4" meta	· ·	
Estimated Piping Length	200.0				2 tanks @	100 LF/tank =	200 LF @	4 Lb/LF =	800 Lbs	combined Steel and FRP Tanks' Piping
Laborers	20.0	hours	\$39.00	\$780	200 LF @	20 LF/hour	10.0 hours @	2 units/crew =	20.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	10.0	hours	\$5.41		200 LF @	20 LF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$834	in the absence of	of facility data, pipin	g assumed to avera	ge 100 LF/tank		
5.17.8 Tank Pump Demolition					prod'n rate = 1 p pumps/tank	ump/hr (see RSM/U	P p. 3-11, 16-01-063	34 and 16-01-0636) a	ssume 0.5	
Laborers	2.0	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1.0	hours	\$5.41	\$5	1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$83	pump weight =	250# each; in the ab	sense of facility date	a, one pump per two	tanks is estimated	
5.17.9 Load Tank Demo Debris					production rate	= 15 CY/hour; RSM/E	BC p. 42 (line item 0	2225-730-3080)		
Laborer	0.1	hours	\$39.00	\$4	2.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.1	hours	\$45.00	\$5	2.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.1	hours	\$30.03	\$3	2.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.1	hours	\$5.20	\$1	2.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris									pipe; and/or 2 pumps	

#### 5.17 AWTS (i/s A east LTF) 2 tnks

Basic Closure Activities: Direct Costs	Costs Estimated Quantity Measure Unit of Quantity Measure Price Extended Price Price In-house Estimate Price					In-house Pricing References				
					production rate	e = 15 tons/hour = 120	tons/day; includes	unloading, shredding	g, and filling	I
5.17.10 Unl'd Stabilize/Encapsulate					containers	,		<i>5</i> ,	5,	
PROCESS TONS (incl kiln dust)	7.5	TONS			2.1 CY debr + 1	15% kiln dust = 2.37 CY	total total tonnage	total tons derived from foregoing assemblies + kiln dust		
Laborer	1.0	hours	\$39.00	\$39		tons/hr @ 0.5 hours @				loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	1.5	hours	\$45.00			tons/hr @ 0.5 hours @				loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.5	hours	\$19.18			tons/hr @ 0.5 hours @				RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.5	hours	\$14.39			tons/hr @ 0.5 hours @				RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.5	hours	\$329.70			tons/hr @ 0.5 hours @				2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.5	hours	\$136.29			tons/hr @ 0.5 hours @				2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00		0.3 tons					_
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	0.3 tons @ 20	ton/load = 0.0 loads				_
Cement Kiln Dust - Mat'l&Delv Cost	0.3	tons	\$48.00	\$14						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.1	units	\$1,000.00	\$100	2.4 CYs @ 30 0	CY/unit = 0.1 container	s			CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	2.4 CYs @ 30 0	CY/unit = 0.1 rolloffs @	0.5 hours/rolloff =	0.0 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate	7.5	tons		\$471	1 CY tank demo	o debris = to 972 SF @	1/3rd" thick; and/o	r 432 LF of 3" diam p	ipe; and/or 2 pumps	
5.17.11 Offsite T&D - Tank Demo						al is determined to be	the only disposal op	tion		
Offsite Transportation - Debris	38.5	miles	\$3.25		2.4 CY @	30 CY/load =	0.1 loads @	385 miles/trip =	38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	2.4	CY	\$337.50		2.4 CY @	27 CF/CY =	63.9 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$935						
(Subt: Assemb 5.17.5 - 5.17.11)				\$4,723	tank/piping/p	ump demolition, and c	ffsite transportatio	n & disposal		
5.17.12 Decon SCA (wash)			1		production rate	e = 105 SF/hr for 1-per	son crew w/ one un	uit each: facility exner	rience	Т
Laborer	13.5	hours	\$39.00	\$527	1421 SF @	105 SF/hr =	13.5 hours @	1 pers/crew =	13.5 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		1421 SF @	105 SF/hr =	13.5 hours @	1 unit/crew =	13.5 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		1421 SF @	105 SF/hr =	13.5 hours @	1 unit/crew =	13.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)	15.5		7	\$627						,
						105.05/1.5				
5.17.13 Decon SCA (rinse)			4	4		e = 105 SF/hr for 1-per				
Laborer		hours	\$39.00		1421 SF @	105 SF/hr =	13.5 hours @	1 pers/crew =	13.5 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		1421 SF @	105 SF/hr =	13.5 hours @	1 unit/crew =	13.5 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	13.5	hours	\$3.41		1421 SF @	105 SF/hr =	13.5 hours @	1 unit/crew =	13.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)			<del> </del>	\$627						
5.17.14 Decon Water Samp/Disp			+		production rate	e = 0.5 hours/sample f	or two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
/OC Analysis (EPA 624)		samp	\$105.00		1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
	710.5	•	\$0.0313		1421 SF @	0.5 gal/sf/wa =	710.5 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
On-site Water Disposal	/10.5	gai	\$U.U313	722		0.5 gai/ 31/ wa =				

### 5.17 AWTS (i/s A east LTF) 2 tnks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate In-house Pricing References
5.17.15 PCB Wipe Samples					No TCLP analyses necessary according to site-wide closure plan
Technician	2.3	hours	\$38.00		87 2.3 samp @ 0.5 hr/samp = 1.15 hours @ 2 pers/crew = 2.3 hours technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0	analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	2.3	samp	\$83.33	\$192	92 1421 SF @ 625 SF/samp = 2.3 samples analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$279	79
(Subt: Assemb 5.17.12 - 5.17.15)				\$1,713	decontamination & sampling of SCA

Total Non-Super Labor Hours

83.8

					Level C @ 75%	; Mod Level C @ 25% f	or tot non-supv hrs	s for all tasks; HASP @ 2	5% of non-supv	
5.17.16 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	83.8 hours @	8 hr/day =	10.5 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	2.6	days	\$9.00	\$23	83.8 hours @	8 hr/day =	10.5 days @	25% "Mod C" days =	: 2.6 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	7.9	days	\$25.00	\$198	83.8 hours @	8 hr/day =	10.5 days @	75% "C" days =	7.9 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	2.1	hours	\$75.00	\$158	83.8 hours @	2.5% hr/hr =	2.1 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$378						
5.17.17 Supervision					0.2 week for cl	osure of 2 tanks				
Foreman	8.0	hours	\$65.00	\$520	0.2 week @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Ge	n'l Contractor G&A/Ho	ome Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.17.18 Certification					Engineer @ 1.5	5% and Clerical @ 1.5%	of total non-super	rvisory hours for all task	xs	
Engineer	1.3	hours	\$130.00	\$169	83.8 hours @	0.015 hr/hr =	1.3 hours			Engineer rate: 2011 3rd party quote
Clerical	1.3	hours	\$45.00	\$59	83.8 hours @	0.015 hr/hr =	1.3 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$228						
(Subt: Assemb 5.17.16 - 5.17.18)				\$1,126						

5.17 AWTS (i/s A east LTF) 2 tnks	Direct Cost	Total	Basic	\$30,099

5.17 AWTS (i/s A east LTF) 2 tnks			
Total Cost Summary - Basic Opt.			
		•	
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$30,099	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$2,107	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$1,204	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$1,806	note: DEC uses 6%
Engineering During Construction	2.00%	\$602	note: DEC uses 2%
General Contractor Profit	6.00%	\$1,806	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$7,525	
Subt: AWTS (i/s A east LTF) 2 tks		\$37,623	
Plus Contingency	10.00%	\$3,762	CWM and DEC 10%
Tot: AWTS (i/s A east LTF) 2 tnks		\$41,386	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.18 AWTS (i/s A s/e SLF 12) 1 tnk

Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities f	or In-house Estima	ate		In-house Pricing References
				prod'n rates: 100	drums/hr; 15 min/ta	anker or rolloff; 30	min/tank; two persor	s required	
1.0	hours	\$39.00	\$39	1 tanks @	0.5 hour/tank =	0.5 hours @	2 units/crew =	1.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
			\$39						
			\$39	tank: T-150					
<del></del>				liquid waste strea	am pumped directly	from tanks into AV	VTS		1
8000.0	gals	\$0.1526	\$1,221		<u> </u>		-		AWTS treatment costs @ \$0.1526
		·	\$1,221						
			\$1,221	onsite treatmen	t of tanks' waste liqu	ids			
				prod'n rate = 200	SF/hr, pp. 3-2/3-3,3	-5); 1 CF debris per	r 36 sf tank area		
1.0	tnks @			8000 gallons:	600 SF Tanks:	17 CF @	490 Lb/CF =	8167 Lbs	Steel Tanks only; estimate 490#/CF
9.0	hours	\$39.00	\$351	600 SF @	200 SF/hour	3.0 hours @	3 units/crew =	9.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
6.0	hours	\$45.00	\$270	600 SF @	200 SF/hour	3.0 hours @	2 units/crew =	6.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
3.0	hours	\$84.09	\$252	600 SF @	200 SF/hour	3.0 hours @	1 units/crew =	3.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
3.0	hours	\$34.40	\$103	600 SF @	200 SF/hour	3.0 hours @	1 units/crew =	3.0 hours	2004 DEC Rate * Implicit Deflator
3.0	hours	\$2.47	\$7	600 SF @	200 SF/hour	3.0 hours @	1 units/crew =	3.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
3.0	hours	\$30.03	\$90	600 SF @	200 SF/hour	3.0 hours @	1 units/crew =	3.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
3.0	hours	\$86.31	\$259	600 SF @	200 SF/hour	3.0 hours @	1 units/crew =	3.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
3.0	hours	\$5.41	\$16	600 SF @	200 SF/hour	3.0 hours @	1 units/crew =	3.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
			\$1,349	tank areas base	d upon actual tank d	imensions, or upor	OSWER 9476.00-6, V	ol 3, p. 5-5	
				production rate =	200 SF/hour (same	as steel tank demo	olition rate); 1 CF debr	is per 36 SF tank	
				area					
0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
0.0	hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
0.0	hours	\$45.00	\$0	0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
		\$84.09	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
0.0	hours	\$34.40	\$0			0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
		\$2.47	\$0		200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
0.0	hours	\$30.03	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
0.0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
0.0	hours	\$5.41	\$0	0 SF @		0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
			\$0	tank areas base	d upon actual tank d	imensions, or upor	OSWER 9476.00-6, V	ol 3, p. 5-5	
				avg prod'n rate =	20 LF/hr, for 2"/4" i	metal pipe @ 4#/LI			
100.0	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	combined Steel and FRP Tanks' Piping
10.0	hours	\$39.00	\$390	100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
5.0	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
			\$417	in the absence of facility data, piping assumed to average 100 LF/tank					
	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	1.0   hours     8000.0   gals     1.0   tnks @     9.0   hours     6.0   hours     3.0   hours     3.0   hours     3.0   hours     3.0   hours     3.0   hours     3.0   hours     0.0   tnks @     0.0   tnks @     0.0   hours     0.0   hours	1.0   hours   \$39.00	Stimated Quantity   Company   Comp	Stimated Quantity   Continue   Stimated Quantity	Stimated Quantity	District   Comparison   Compa	Dint of Measure	

#### 5.18 AWTS (i/s A s/e SLF 12) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities	for In-house Estima	In-house Pricing References		
540.57 1.0 0 100		ī	1			// 0.7	- /			1
5.18.6 Tank Pump Demolition	1.0	<b>1</b>	620.00	¢20	<del> </del>	ump/hr assume 0.5	· · ·	2	1.0 5	
Laborers	_	hours	\$39.00	\$39	0.5 pumps @	1 pump/hr	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	0.5	hours	\$5.41	\$3	0.5 pumps @	1 pump/hr	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$42	pump weight = 2	250# eacn; in the ai	osense of facility dat	ta, one pump per two	tanks is estimatea	
5.18.7 Load Tank Demo Debris					production rate =	= 15 CV/hour:				
Laborer	0.1	hours	\$39.00	\$4	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	_	hours	\$45.00	\$5	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader		hours	\$30.03	\$3	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	_	hours	\$5.20	\$1	1.1 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris	0.1	nours	ψ3. <b>2</b> 0	\$12				or 432 LF of 3" diam		
Sabe 2000 rain Seine Sebin				<del></del>	1 or tarm acris	400.00 10 372 6. (	g 1/0/a timeny array	o52 2. 6, 6 a.a	o.pc, a.ra, o. 2 pa.r.pc	
					I -	= 15 tons/hour = 12	0 tons/day; includes	unloading, shredding	g, and filling	
5.18.8 Unl'd Stabilize/Encapsulate	4.5	TONG			containers	0/1:1 1 1 1 20.0		4.5.		
PROCESS TONS (incl kiln dust)	_	TONS	400.00	400			CY total total tonnage			total tons derived from foregoing assemblies + kiln dust
Laborer		hours	\$39.00	\$23			@ 2 units/crew = 0.6			loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	_	hours	\$45.00	\$41	_		@ 3 units/crew = 0.9			loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)		hours	\$19.18	\$6			@ 1 units/crew = 0.3			RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	_	hours	\$14.39	\$4			@ 1 units/crew = 0.3	RSM/HC p. 468 (line item 01 54 33 20 4610)		
Shredder		hours	\$329.70	\$99			@ 1 units/crew = 0.3	2004 DEC Rate * Implicit Deflator		
Mixing Pit/Screening/Silo		hours	\$136.29	\$41						2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	_	tons	\$0.00	\$0 \$0	0.2 tons	/!!				
Cement Kiln Dust - Delivery Cost		loads	\$0.00	\$0 \$10	0.2 tons @ 20 to	on/load = 0.0 loads				CMAAt   2044t-
Cement Kiln Dust - Mat'l&Delv Cost		tons	\$48.00	\$10 \$43	1 2 6/- @ 20 6/	/it 0.042t-	·			CWM actual 2011 costs
Encapsulation Containers (30-CY)			\$1,000.00			/unit = 0.043 contai		0.0 h		CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0 <b>\$266</b>			@ 0.3 hours/rolloff =		-:	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate	+			\$266	1 CY tank aemo	<i>debris = to 9/2 SF (</i>	@ 1/3ra tnick; ana/	or 432 LF of 3" diam	oipe; ana/or 2 pumps	
5.18.9 Offsite T&D - Tank Demo					offcita disposal is	determined to he	the only disposal op	tion		
Offsite Transportation - Debris	3 g 5	miles	\$3.25	\$125	1.3 CY @	30 CY/load =	0.0 loads @	385 miles/trip =	38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	1.3		\$337.50	\$439	1.3 CY @	27 CF/CY =	34.1 CF	303 IIIIE3/ IIIP =	30.3 IIIIE3	DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo	1.3	-	7337.30	\$564	1.5 01 @	27 01/01 -	J-7.1 CI			DEC 2007 Estimate accounting for illiation
(Subt: Assemb 5.18.3 - 5.18.9)				\$2,650	tank/pipina/pur	mp demolition. and	offsite transportation	on & disposal		
(				<b>72,030</b>						
5.18.10 Decon SCA (wash)					production rate =	= 105 SF/hr for 1-pe	erson crew w/ one u	nit each; facility expe	rience	
Laborer	8.5	hours	\$39.00	\$332	896 SF @	105 SF/hr =	8.5 hours @	1 pers/crew =	8.5 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04	\$34	896 SF @	105 SF/hr =	8.5 hours @	1 unit/crew =	8.5 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	8.5	hours	\$3.41	\$29	896 SF @	105 SF/hr =	8.5 hours @	1 unit/crew =	8.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$395			_			
5.18.11 Decon SCA (rinse)					production rate	- 105 SE/hr for 1 no	arson crew w/ cno !!	nit each; facility expe	rience	
Laborer	0 5	hours	\$39.00	\$332	896 SF @	= 105 SF/fir for 1-pe 105 SF/hr =	8.5 hours @	1 pers/crew =	8.5 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	_	hours	\$39.00 \$4.04	\$332 \$34	896 SF @	105 SF/hr = 105 SF/hr =	8.5 hours @ 8.5 hours @	1 unit/crew =	8.5 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$4.04	\$34 \$29	896 SF @	105 SF/hr = 105 SF/hr =	8.5 hours @ 8.5 hours @	1 unit/crew =	8.5 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)  RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)	8.5	nours	Ş3.4I	\$29 <b>\$395</b>	350 3F W	102 21/111 -	o.s nours @	1 um/crew –	o.J HUUIS	NOWITHE μ. 473 (HITE ILEHT UI 34 33 40 / 000)
Subt - Decoil SCA (TIIISE)				<b>Ş</b> 555						

### 5.18 AWTS (i/s A s/e SLF 12) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price		tion and Quantities fo	or In-house Estim	In-house Pricing References		
5.18.12 Decon Water Samp/Disp					production rate	= 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	448.0	gal	\$0.0313	\$14	896 SF @	0.5 gal/sf/wa =	448 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$171						
5.18.13 PCB Wipe Samples					No TCLP analyse	s necessary according	to site-wide closi	ıre plan		
Technician	1.4	hours	\$38.00	\$53	1.4 samp @	0.5 hr/samp =	0.7 hours @	2 pers/crew =	1.4 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	1.4	samp	\$83.33	\$117	896 SF @	625 SF/samp =	1.4 samples	•	•	analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$170						
(Subt: Assemb 5.18.10 - 5.18.13)				\$1,131	decontamination	on & sampling of SCA				

Total Non-Super Labor Hours

48.2

					Level C @ 75%; I	Mod Level C @ 25% f	or tot non-supv hr	rs for all tasks; HASP @ 2	5% of non-supv	
5.18.14 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	48.2 hours @	8 hr/day =	6.0 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	1.5	days	\$9.00	\$14	48.2 hours @	8 hr/day =	6.0 days @	25% "Mod C" days =	: 1.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	4.5	days	\$25.00	\$113	48.2 hours @	8 hr/day =	6.0 days @	75% "C" days =	4.5 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.2	hours	\$75.00	\$90	48.2 hours @	2.5% hr/hr =	1.2 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$216						
5.18.15 Supervision					0.2 week for clos	sure of 1 tank				
Foreman	8.0	hours	\$65.00	\$520	0.2 week @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen	'l Contractor G&A/Ho	me Office indirect	t costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.18.16 Certification					Engineer @ 1.5%	6 and Clerical @ 1.5%	of total non-supe	ervisory hours for all task	:S	
Engineer	0.7	hours	\$130.00	\$91	48.2 hours @	0.015 hr/hr =	0.7 hours			Engineer rate: 2011 3rd party quote
Clerical	0.7	hours	\$45.00	\$32	48.2 hours @	0.015 hr/hr =	0.7 hours		•	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$123					•	
(Subt: Assemb 5.18.14 - 5.18.16)				\$859					•	

5.18 AWTS (i/s A s/e SLF 12) 1 tnk Direct Cost | Total | Basic | \$5,899

5.18 AWTS (i/s A s/e SLF 12) 1 tnk			
• · · · · · · · · · · · · · · · · · · ·			
Total Cost Summary - Basic Opt.			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$5,899	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$413	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$236	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$354	note: DEC uses 6%
Engineering During Construction	2.00%	\$118	note: DEC uses 2%
General Contractor Profit	6.00%	\$354	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$1,475	
Subt: AWTS (i/s A s/e SLF12) 1 tk		\$7,374	
·			
Plus Contingency	10.00%	\$737	CWM and DEC 10%
Tot: AWTS (i/s A s/e SLF12) 1 tnk		\$8,111	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.19 AWTS (i/s form o/w sep) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities fo	or In-house Estima	te		In-house Pricing References
5.19.1 Inventory Verification					prod'n rates: 100	drums/hr; 15 min/ta	nker or rolloff; 30	min/tank; two person	is required	
Laborer	5.0	hours	\$39.00		5 tanks @	0.5 hour/tank =	2.5 hours @	2 units/crew =	5.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$195						
(Subt: Assemb 5.19.1 - 5.19.1)				\$195	currently permit	ted tank: T-157 (also	demo non-operat	ing tanks T-152, T-153	3, T-154, & T-155 at o	
5.19.2 Onsite Aqueous Treatment	Ī	I			Non-hazardous si	ite waters only				I
Onsite Aqueous Treatment - Tanks		gals	\$0.0453	ŚŊ	8000 gals	ite waters only				AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment		guis	Ş0.0 <del>-</del> 33	\$0	·					AW15 average cost for all wastewater
(Subt: Assemb 5.19.2 - 5.19.2)						s site waters no treat	ment necessary			
	<u> </u>			<b>30</b>	All Holl Hazardou	3 Site Waters no treat	ment necessary			
5.19.3 Steel Tank Demolition					prod'n rate = 200	SF/hr; 1 CF debris pe	er 36 sf tank area			
No. of Tanks/Capacity/Area/Weight	5.0	tnks @			8000 gallons:	2521 SF Tanks:	70 CF @	490 Lb/CF =	34314 Lbs	Steel Tanks only; estimate 490#/CF
aborer	37.8	hours	\$39.00	\$1,474	2521 SF @	200 SF/hour	12.6 hours @	3 units/crew =	37.8 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	25.2	hours	\$45.00	\$1,134	2521 SF @	200 SF/hour	12.6 hours @	2 units/crew =	25.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	12.6	hours	\$84.09	\$1,060	2521 SF @	200 SF/hour	12.6 hours @	1 units/crew =	12.6 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	12.6	hours	\$34.40	\$433	2521 SF @	200 SF/hour	12.6 hours @	1 units/crew =	12.6 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	12.6	hours	\$2.47	\$31	2521 SF @	200 SF/hour	12.6 hours @	1 units/crew =	12.6 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	12.6	hours	\$30.03	\$378	2521 SF @	200 SF/hour	12.6 hours @	1 units/crew =	12.6 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	12.6	hours	\$86.31	\$1,088	2521 SF @	200 SF/hour	12.6 hours @	1 units/crew =	12.6 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	12.6	hours	\$5.41	\$68	2521 SF @	200 SF/hour	12.6 hours @	1 units/crew =	12.6 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$5,666	tank areas base	d upon actual tank di	mensions, or upon	OSWER 9476.00-6, Vo	ol 3, p. 5-5	·
					production rate =	= 200 SF/hour (same a	as steel tank demo	lition rate); 1 CF debri	is per 36 SF tank	
5.19.4 FRP Tank Demolition					area					
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	0.0	hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00	\$0	0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.0	hours	\$84.09	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.0	hours	\$34.40	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0	hours	\$2.47	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.0	hours	\$30.03	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition	0.0	SF @		\$0	tank areas base	d upon actual tank di	mensions, or upon	OSWER 9476.00-6, V	ol 3, p. 5-5	
5.19.5 Tank Piping Demolition					ava prod'n rato -	20 LF/hr, for 2"/4" n	netal nine @ 1#/IE	:		
Estimated Piping Length	500.0	I E			5 tanks @	100 LF/tank =	500 LF @	4 Lb/LF =	2000 Lbs	combined Steel and FRP Tanks' Piping
Laborers		hours	\$39.00	¢1 QEO	500 LF @	20 LF/hour	25.0 hours @	2 units/crew =	50.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41		500 LF @	20 LF/hour	25.0 hours @	1 units/crew =	25.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition	25.0	110013	14.دډ		,	of facility data, piping			23.0 HOUIS	1347110 p. 473 (iiiie iteili 01 34 33 40 7000)
SUDI - AII TAIIKS PIPING DEMONITION		ļ		<b>\$2,085</b>	iii tile absence o	j jacility data, piping	ussumeu to avera	JE 100 LF/LUIIK		

### 5.19 AWTS (i/s form o/w sep) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities	for In-house Estima	In-house Pricing References		
5.19.6 Tank Pump Demolition	prod'n rate = 1 pump/hr assume 0.5 pumps/tank									
Laborers	5.0	hours	\$39.00		2.5 pumps @	1 pump/hr	2.5 hours @	2 units/crew =	5.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	2.5	hours	\$5.41	\$14	2.5 pumps @	1 pump/hr	2.5 hours @	1 units/crew =	2.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition						250# each; in the ab	sense of facility da	a, one pump per two	tanks is estimated	
5.19.7 Load Tank Demo Debris					production rate =	· · ·				
Laborer	0.3	hours	\$39.00	\$12	5.0 CY @	15 CY/hr =	0.3 hours @	1 units/crew	0.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.3	hours	\$45.00		5.0 CY @	15 CY/hr =	0.3 hours @	1 units/crew =	0.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.3	hours	\$30.03	\$9	5.0 CY @	15 CY/hr =	0.3 hours @	1 units/crew =	0.3 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.3	hours	\$5.20	\$2	5.0 CY @	15 CY/hr =	0.3 hours @	1 units/crew	0.3 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$36	1 CY tank demo	debris = to 972 SF @	2 1/3rd" thick; and	or 432 LF of 3" diam	pipe; and/or 2 pumps	
5.19.8 Unl'd Stabilize/Encapsulate					production rate = containers	= 15 tons/hour = 120	) tons/day; includes	unloading, shreddin	g, and filling	
PROCESS TONS (incl kiln dust)	19.2	TONS			5.0 CY debr + 15	% kiln dust = 5.75 C	Y total total tonnag	e = 19.2 tons		total tons derived from foregoing assemblies + kiln dust
Laborer	2.6	hours	\$39.00	\$101					loaded labor rate: loaded labor rate 2011 3rd party quote	
Equipment Operator (Medium)	3.8	hours	\$45.00	\$171	19.2 tons @ 15 t	ons/hr @ 1.3 hours	@ 3 units/crew = 3	.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	1.3	hours	\$19.18	\$25	19.2 tons @ 15 t	ons/hr @ 1.3 hours	@ 1 units/crew = 1	.3 hours		RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	1.3	hours	\$14.39			ons/hr @ 1.3 hours				RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	1.3	hours	\$329.70	\$429	19.2 tons @ 15 t	ons/hr @ 1.3 hours	@ 1 units/crew = 1	.3 hours		2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	1.3	hours	\$136.29	\$177	19.2 tons @ 15 t	ons/hr @ 1.3 hours	@ 1 units/crew = 1	.3 hours		2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0	0.8 tons					
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00			n/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost	0.8	tons	\$48.00	\$38						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.2	units	\$1,000.00			unit = 0.2 containe				CWM actual 2011 costs
Rolloffs (30-CY)	0.2	hours	\$19.02	\$4	5.8 CYs @ 30 CY/	unit = 0.2 rolloffs @	1.3 hours/rolloff =	0.2 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$1,164	1 CY tank demo a	lebris = to 972 SF @	1/3rd" thick; and/c	r 432 LF of 3" diam p	ipe; and/or 2 pumps	
5.19.9 Offsite T&D - Tank Demo					offsite disposal is	determined to be t	he only disposal op	tion		
Offsite Transportation - Debris	77.0	miles	\$3.25	\$250	5.8 CY @	30 CY/load =	0.2 loads @	385 miles/trip =	77.0 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	5.8	CY	\$337.50	\$1,958	5.8 CY @	27 CF/CY =	155.3 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$2,208						
(Subt: Assemb 5.19.3 - 5.19.9)		_	_	\$11,368	tank/piping/pur	np demolition, and	offsite transportatio	on & disposal		
5.19.10 Decon SCA (wash)					not applicable - d	econtamination and	d sampling of SCA p	erformed & certified	in 2011	
Subt - Decon SCA (wash)	1			\$0			- '			

### 5.19 AWTS (i/s form o/w sep) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.19.11 Decon SCA (rinse)						
Subt - Decon SCA (rinse)				\$0		
5.19.12 Decon Water Samp/Disp						
Subt - Decon Water Samp/Dispose				\$0		
5.19.13 PCB Wipe Samples						
Subt - PCB Wipe/Destruct Samp				\$0		
(Subt: Assemb 5.19.10 - 5.19.13)				\$0	decontamination & sampling of SCA performed and certified in 2011	

Total Non-Super Labor Hours

130.0

					Level C @ 75%; N	Mod Level C @ 25% f	or tot non-supv hr	s for all tasks; HASP @ 2	.5% of non-supv	
5.19.14 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	130.0 hours @	8 hr/day =	16.2 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	4.1	days	\$9.00	\$37	130.0 hours @	8 hr/day =	16.2 days @	25% "ModC" days =	4.1 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	12.1	days	\$25.00	\$303	130.0 hours @	8 hr/day =	16.2 days @	75% "C" days =	12.1 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	3.25	hours	\$75.00	\$244	130.0 hours @	2.5% hr/hr =	3.25 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$583						
5.19.15 Supervision					1.0 week for clos	sure of 1 tank				
Foreman	40.0	hours	\$65.00	\$2,600	1.0 week @	40 hrs/wk =	40.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen'	'l Contractor G&A/Ho	ome Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$2,600						
5.19.16 Certification					Engineer @ 1.5%	and Clerical @ 1.5%	6 of total non-super	rvisory hours for all task	S	
Engineer	1.95	hours	\$130.00	\$254	130.0 hours @	0.015 hr/hr =	1.95 hours	•		Engineer rate: 2011 3rd party quote
Clerical	1.95	hours	\$45.00	\$88	130.0 hours @	0.015 hr/hr =	1.95 hours	·		Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$341						
(Subt: Assemb 5.19.14 - 5.19.16)				\$3,524						

5.19 AWTS (i/s form o/w sep) 1 tk	Direct Cost	Total	Basic	\$15,087

5.19 AWTS (i/s form o/w sep) 1 tk			
Total Cost Summary			
Total Cost Sullillary			
Cost Category	Proposed Percent	Proposed 2011	Cost Range
	of Direct Cost	Cost	
Direct Costs/Basic Disposal		\$15,087	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$1,056	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$603	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$905	note: DEC uses 6%
Engineering During Construction	2.00%	\$302	note: DEC uses 2%
General Contractor Profit	6.00%	\$905	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$3,772	
Subt: AWTS (i/s form o/w sep) 1 t		\$18,859	
Plus Contingency	10.00%	\$1,886	CWM and DEC 10%
Tot: AWTS (i/s form o/w sep) 1 tk		\$20,745	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.20 AWTS (rmu-1 tanks) 2 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	n and Quantities fo	r In-house Estima	te		In-house Pricing References
5.20.1 Inventory Verification					•			nin/tank; two persons		
Laborer	2.0	hours	\$39.00		2 tanks @	0.5 hour/tank =	1.0 hours @	2 units/crew =	2.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$78						
(Subt: Assemb 5.20.1 - 5.20.1)				\$78	tanks: T-160, T-16	55				
5.20.2 Onsite Aqueous Treatment					liquid waste strear	n pumped directly fr	om tanks into AW	TS		
Onsite Aqueous Treatment - Tanks	879769.0	gals	\$0.0178	\$15,660	879769 gals					AWTS treatment costs @ \$0.0178
Subt - Onsite Aqueous Treatment		Ü	·	\$15,660						
(Subt: Assemb 5.20.2 - 5.20.2)				\$15,660	onsite treatment	of tanks' waste liquid	ds			
	•									
5.20.3 Steel Tank Demolition					prod'n rate = 200 S	F/hr ; 1 CF debris pe	er 36 sf tank area			
No. of Tanks/Capacity/Area/Weight	2.0	tnks @			879769 gallons:	16978 SF Tanks:	472 CF @	490 Lb/CF =	231089 Lbs	Steel Tanks only; estimate 490#/CF
Laborer		hours	\$39.00	\$9,933	16978 SF @	200 SF/hour	84.9 hours @	3 units/crew =	254.7 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	169.8		\$45.00		16978 SF @	200 SF/hour	84.9 hours @	2 units/crew =	169.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	84.9	hours	\$84.09	\$7,139	16978 SF @	200 SF/hour	84.9 hours @	1 units/crew =	84.9 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	84.9	hours	\$34.40		16978 SF @	200 SF/hour	84.9 hours @	1 units/crew =	84.9 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	84.9	hours	\$2.47	\$210	16978 SF @	200 SF/hour	84.9 hours @	1 units/crew =	84.9 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	84.9	hours	\$30.03	\$2,550	16978 SF @	200 SF/hour	84.9 hours @	1 units/crew =	84.9 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	84.9	hours	\$86.31	\$7,328	16978 SF @	200 SF/hour	84.9 hours @	1 units/crew =	84.9 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	84.9	hours	\$5.41	\$459	16978 SF @	200 SF/hour	84.9 hours @	1 units/crew =	84.9 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$38,180	tank areas based	upon actual tank dir	nensions, or upon	OSWER 9476.00-6, Vo	ol 3, p. 5-5	
					production rate = 2	200 SF/hour (same a	s steel tank demo	lition rate); 1 CF debri	s per 36 SF tank	
5.20.4 FRP Tank Demolition					area					
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	0.0	hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00	\$0	0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.0	hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.0	hours	\$34.40	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0	hours	\$2.47		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.0	hours	\$30.03		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41		0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$0	tank areas based	upon actual tank din	nensions, or upon	OSWER 9476.00-6, Vo	ol 3, p. 5-5	
5.20.5 Tank Piping Demolition					avg prod'n rate = 2	0 LF/hr, for 2"/4" me	etal pipe @ 4#/LF			
Estimated Piping Length	200.0	LF			2 tanks @	100 LF/tank =	200 LF @	4 Lb/LF =	800 Lbs	combined Steel and FRP Tanks' Piping
Laborers	20.0	hours	\$39.00	\$780	200 LF @	20 LF/hour	10.0 hours @	2 units/crew =	20.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41		200 LF @	20 LF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition			·	\$834	in the absence of	facility data, piping o				
r O				Ţ. <b>.</b>		, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,		, ,		

### 5.20 AWTS (rmu-1 tanks) 2 tks

Basic Closure Activities: Direct Costs	ivities: Direct Costs  Estimated Quantity Measure  Unit of Quantity Measure  Unit Price  2011 CWM Extended Basis of Production and Quantities for In-house Estimate Price							In-house Pricing References		
5.20.6 Tank Pump Demolition	1				nrod'n rate - 1 r	oump/hr assume 0.	5 numns/tank			T
Laborers	2.0	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41		1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
weiding Equipment	1.0	Hours	\$5.41	رړ	1.0 pamps @	I pullip/III	1.0 110013 @	1 umis/crew –	1.0 110013	RSW/TIC p. 473 (line item 01 34 33 40 7800)
Subt - All Tanks' Pump Demolition				\$83	pump weight = 2	250# each; in the ab	sense of facility date	a, one pump per two	tanks is estimated	
5.20.7 Load Tank Demo Debris					production rate	= 15 CY/hour; R				
Laborer	1.2	hours	\$39.00	\$47	18.4 CY @	15 CY/hr =	1.2 hours @	1 units/crew	1.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	1.2	hours	\$45.00	\$54	18.4 CY @	15 CY/hr =	1.2 hours @	1 units/crew =	1.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
_oader	1.2	hours	\$30.03	\$36	18.4 CY @	15 CY/hr =	1.2 hours @	1 units/crew =	1.2 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	1.2	hours	\$5.20		18.4 CY @	15 CY/hr =	1.2 hours @	1 units/crew	1.2 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$143	1 CY tank demo	debris = to 972 SF @	1/3rd" thick; and/o	or 432 LF of 3" diam p	pipe; and/or 2 pumps	
5.20.8 Unl'd Stabilize/Encapsulate					production rate containers	= 15 tons/hour = 12	0 tons/day; include	s unloading, shreddin	g, and filling	
PROCESS TONS (incl kiln dust)	118.8	TONS				15% kiln dust = 21.1	9 CY total total tonn	age = 118.8 tons		total tons derived from foregoing assemblies + kiln dust
Laborer		hours	\$39.00	\$616						loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00				rs @ 3 units/crew =	loaded labor rate: loaded labor rate 2011 3rd party quote		
Backhoe (1 CY)	7.9	hours	\$19.18							RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)		hours	\$14.39							RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder		hours	\$329.70				rs @ 1 units/crew =	2004 DEC Rate * Implicit Deflator		
Mixing Pit/Screening/Silo		hours	\$136.29				rs @ 1 units/crew =			2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		2.8 tons	· · · · ·				·
Cement Kiln Dust - Delivery Cost		loads	\$0.00	\$0	2.8 tons @ 20 to	on/load = 0.1 loads				
Cement Kiln Dust - Mat'l&Delv Cost	2.8	tons	\$48.00	\$134		•				CWM actual 2011 costs
Encapsulation Containers (30-CY)		units	\$1,000.00	\$700	21.2 CYs @ 30 C	CY/unit = 0.7 contair	ners			CWM actual 2011 costs
Rolloffs (30-CY)		hours	\$19.02				@ 7.9 hours/rolloff	= 5.6 hours		dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$6,575	1 CY tank demo	debris = to 972 SF @	1/3rd" thick; and/o	or 432 LF of 3" diam p	nipe; and/or 2 pumps	
5.20.9 Offsite T&D - Tank Demo					offsite disposal i	s determined to be	the only disposal or	otion		
Offsite Transportation - Debris	269.5	miles	\$3.25	\$876	21.2 CY @	30 CY/load =	0.7 loads @	385 miles/trip =	269.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	21.2		\$337.50		21.2 CY @	27 CF/CY =	572.3 CF	· ·		DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$8,031		· · · · · · · · · · · · · · · · · · ·				Ĭ
(Subt: Assemb 5.20.3 - 5.20.9)					tank/piping/pu	mp demolition, and	offsite transportati	on & disposal		
						105.05#				
5.20.10 Decon SCA (wash)			400.55	<b>A</b>				nit each; facility expe		
Laborer		hours	\$39.00		1827 SF @	105 SF/hr =	17.4 hours @	1 pers/crew =	17.4 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		1827 SF @	105 SF/hr =	17.4 hours @	1 unit/crew =	17.4 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	17.4	hours	\$3.41		1827 SF @	105 SF/hr =	17.4 hours @	1 unit/crew =	17.4 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$808	SI .					

### 5.20 AWTS (rmu-1 tanks) 2 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	ction and Quantities fo	or In-house Estima	In-house Pricing References		
5.20.11 Decon SCA (rinse)					•	= 105 SF/hr for 1-pers	son crew w/ one ui	nit each; facility expe	rience	
Laborer	17.4	hours	\$39.00	\$679	1827 SF @	105 SF/hr =	17.4 hours @	1 pers/crew =	17.4 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	17.4	hours	\$4.04	\$70	1827 SF @	105 SF/hr =	17.4 hours @	1 unit/crew =	17.4 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	17.4	hours	\$3.41	\$59	1827 SF @	105 SF/hr =	17.4 hours @	1 unit/crew =	17.4 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$808						
5.20.12 Decon Water Samp/Disp					production rate	= 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	913.5	gal	\$0.0313	\$29	1827 SF @	0.5 gal/sf/wa =	913.5 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$186						
5.20.13 PCB Wipe Samples					No TCLP analyse	es necessary according	to site-wide closu	ire plan		
Technician	2.9	hours	\$38.00	\$110	2.9 samp @	0.5 hr/samp =	1.5 hours @	2 pers/crew =	2.9 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0		_				analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	2.9	samp	\$83.33	\$242	1827 SF @	625 SF/samp =	2.9 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$352						
(Subt: Assemb 5.20.10 - 5.20.13)				\$2,154	decontaminati	on & sampling of SCA				

Total Non-Super Labor Hours 529.3

				Level C @ 75%;	Mod Level C @ 25% f	for tot non-supv hr	s for all tasks; HASP @ 2	.5% of non-supv	
5.20.14 PPE Usage/H&S Planning				hrs					
PPE Usage - Level D	0.0 da	ays \$0.00	\$(	529.3 hours @	8 hr/day =	66.2 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	16.5 da	ays \$9.00	\$149	529.3 hours @	8 hr/day =	66.2 days @	25% "ModC" days =	16.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	49.7 da	ays \$25.00	\$1,243	3 529.3 hours @	8 hr/day =	66.2 days @	75% "C" days =	49.7 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	13.2 h	ours \$75.00	\$990	529.3 hours @	2.5% hr/hr =	13.2 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning			\$2,381	l .					
5.20.15 Supervision				2.0 weeks for clo	osure of 2 tanks				
Foreman	80.0 h	ours \$65.00	\$5,200	2.0 weeks @	40 hrs/wk =	80.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0 h	ours \$75.00	\$(	Included in Gen	'l Contractor G&A/H	ome Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision			\$5,200						
5.20.16 Certification				Engineer @ 1.5%	% and Clerical @ 1.5%	6 of total non-supe	rvisory hours for all task	S	
Engineer	7.9 h	ours \$130.00	\$1,027	7 529.3 hours @	0.015 hr/hr =	7.9 hours			Engineer rate: 2011 3rd party quote
Clerical	7.9 h	ours \$45.00	\$356	5 529.3 hours @	0.015 hr/hr =	7.9 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification			\$1,383	3	•				
(Subt: Assemb 5.20.14 - 5.20.16)			\$8,964	1					

5.20 AWTS (rmu-1 tanks) 2 tks	Direct Cost	Total	Basic	\$80,702

5.20 AWTS (rmu-1 tanks) 2 tks			
Total Cost Summary			
Total Cost Summary	+		
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$80,702	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$5,649	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%		note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$4,842	note: DEC uses 6%
Engineering During Construction	2.00%	\$1,614	note: DEC uses 2%
General Contractor Profit	6.00%	\$4,842	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$20,176	
Subt: AWTS (rmu-1 tanks) 2 tks		\$100,878	
Plus Contingency	10.00%	\$10,088	CWM and DEC 10%
Tot: AWTS (rmu-1 tanks) 2 tks		\$110,965	
Tot. Ave 13 (IIIIa-1 tains) 2 ths		7110,303	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.21 AWTS (o/s leachtnkfrm) 4 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate In-house Pricing References
			ı		
5.21.1 Inventory Verification					prod'n rates: 50 drums/hr; 15 min/tanker or rolloff; 30 min/tank; two persons required
Laborer	4.0	hours	\$39.00	\$156	6 4 tanks @ 0.5 hour/tank = 2.0 hours @ 2 units/crew = 4.0 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$156	5
(Subt: Assemb 5.21.1 - 5.21.1)				\$156	6 tanks: T-101, T-102, T-103, and FracTank-3
5.21.2 Onsite Aqueous Treatment					treat unit price = \$0.0453/gal; contents pumped directly from tank into AWTS
Onsite Aqueous Treatment - Tanks	350000.0	gals	\$0.0453		5 350000 gals  AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment	330000.0	guis	Ş0.0 <del>1</del> 33	\$15,855	
(Subt: Assemb 5.21.2 - 5.21.2)					onsite treatment of tanks' waste liquids: T-103 only
5.21.3 Empty Frac Tank 3					prod'n rate = 1,650 gals/hour;
Laborer		hours	\$39.00		Labor included in third party operation of AWTS loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment		hours	\$0.00		Existing equipment part of tank system RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	12.7	hours	\$6.31		2 1000.0 gals @ 1650 gals/hr = 12.7 hours @ 1 units/crew = 12.7 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Frac Tank 3				\$80	)
5.21.4 Transport Tankers Onsite					production rate = 0.5 hours for onsite travel
Road Tractor	1.9	hours	\$32.45	\$62	2 12000.0 gals @ 5500 gals/load = 3.8 loads @ 0.5 hours/trip = 1.9 hours RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0.0	hours	\$45.00	\$0	Labor included in third party operation of AWTS loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)	1.9	hours	\$6.31	\$12	2 21000.0 gals @ 5500 gals/load = 3.8 loads @ 0.5 hours/trip = 1.9 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subtotal - Transport Tankers				\$74	
5.21.5 Empty Tankers into AWTS					prod'n rate = 1,650 gals/hour;
Laborer	0.0	hours	\$39.00	\$0	Labor included in third party operation of AWTS loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00		Existing equipment part of tank system RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	12.7	hours	\$6.31		0 21000.0 gals @ 1650 gals/hr = 12.7 hours @ 1 units/crew = 12.7 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subtotal - Empty Tankers				\$80	
(Subt: Assemb 5.21.3 - 5.21.5)				\$234	1
5.21.6 Onsite Aqueous Treatment					treat unit price = \$0.0453/gal; contents pumped directly from tank into AWTS
Onsite Aqueous Treatment - Tanks	721000.0	nale	\$0.0453		1 721000 gals  AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment	721000.0	gais	ŞU.U433	\$32,661	, , , , , , , , , , , , , , , , , , ,
(Subt: Assemb 5.21.6 - 5.21.6)				1 - 7	onsite treatment of tanks' waste liquids: T-101 and T-102 only

### 5.21 AWTS (o/s leachtnkfrm) 4 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended	Basis of Production	n and Quantities fo	r In-house Estimat	te		In-house Pricing References
	Quantity			Price						
		1	1			CF/h = / / 1.C 01	04.42./024.6./0200	22/2225\.16	r daha: 20 -f	I
5 34 7 Steel Tools Domelities					I -	F/nr (rsm/up 16-01	-0142/0216/0308,	pp. 3-2/3-3,3-5); 1 C	r debris per 36 st	
5.21.7 Steel Tank Demolition	4.0	tnks @			tank area	2220F CF Tanks	622 CF @	490 Lb/CF =	204021 1 hs	Steel Tanks only actimate 4004/CF
No. of Tanks/Capacity/Area/Weight	335.9	hours	\$39.00	¢12.100	1050000 gallons: 22395 SF @	22395 SF Tanks: 200 SF/hour	112.0 hours @	3 units/crew =	304821 Lbs 335.9 hours	Steel Tanks only; estimate 490#/CF
Laborer Equipment Operator (Medium)	224.0	hours	\$45.00	<u> </u>	22395 SF @	200 SF/hour	112.0 hours @	2 units/crew =	224.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	112.0	hours	\$84.09		22395 SF @	200 SF/hour	112.0 hours @	1 units/crew =	112.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	112.0	hours	\$34.40	. ,	22395 SF @	200 SF/hour	112.0 hours @	1 units/crew =	112.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	112.0	hours	\$2.47		22395 SF @	200 SF/hour	112.0 hours @	1 units/crew =	112.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	112.0	hours	\$30.03		22395 SF @	200 SF/hour	112.0 hours @	1 units/crew =	112.0 hours	RSM/HC p. 469 (line item 01 54 33 20 0345)
Yard Crane	112.0	hours	\$86.31		22395 SF @	200 SF/hour	112.0 hours @	1 units/crew =	112.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	112.0	hours	\$5.41	\$606	_	200 SF/hour	112.0 hours @	1 units/crew =	112.0 hours	RSM/HC p. 473 (line item 01 54 33 00 2700)
Subt - Steel Tank Demolition	112.0	Tiours	\$5.41	\$50,364				OSWER 9476.00-6, V		NSW/TIC p. 473 (IIIIe Itelii 01 34 33 40 7800)
Subt - Steel Talik Demonition				330,304	turik üreus buseu	apon actual tank an	nensions, or upon	O3VVLN 9470.00-0, V	υι <i>э, μ. э-э</i>	
					ľ	200 SF/hour (same a	s steel tank demol	ition rate); 1 CF debr	is per 36 SF tank	
5.21.8 FRP Tank Demolition	0.0	t-1 0			area	0 CE T	0.65.6	245 15 /05	0.11-	FDD Touches and a famility and insured as 2454/65
No. of Tanks/Capacity/Area/Weight Laborer	-	tnks @ hours	\$39.00	ćo	0 gallons:	0 SF Tanks: 200 SF/hour	0 CF @ 0.0 hours @	245 Lb/CF = 3 units/crew =	0.0 hours	FRP Tanks only; facility estimates 245#/CF
Equipment Operator (Medium)	-	hours	\$45.00		0 SF @ 0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote loaded labor rate: loaded labor rate 2011 3rd party quote
, , , , ,	0.0		\$45.00		0 SF @		0.0 hours @	1 units/crew =	0.0 hours	1 7 1
Excavator  Metal Shears Attachment	0.0		\$84.09		_	200 SF/hour		•		RSM/HC p. 467 (line item 01 54 33 20 0320) 2004 DEC Rate * Implicit Deflator
Claw Attachment	-	hours	\$34.40		0 SF @ 0 SF @	200 SF/hour 200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours 0.0 hours	·
	-				_	•	0.0 hours @	1 units/crew =		RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader Voyd Crans		hours hours	\$30.03 \$86.31		0 SF @ 0 SF @	200 SF/hour 200 SF/hour	0.0 hours @ 0.0 hours @	1 units/crew = 1 units/crew =	0.0 hours 0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	-		\$86.31		0 SF @	•		•		RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment Subt - FRP Tank Demolition	0.0	hours	\$5.41		tank areas based	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRE Talik Delilolition				ŞU	tunk ureus buseu	L				
5.21.9 Tank Piping Demolition					avg prod'n rate = 2	.0 LF/hr. rsm/up p. 3	-10 (16-01-0621/0	622) for 2"/4" metal	pipe @ 4#/LF	
Estimated Piping Length	400.0	LF			4 tanks @	100 LF/tank =	400 LF @	4 Lb/LF =	1600 Lbs	combined Steel and FRP Tanks' Piping
Laborers	40.0	hours	\$39.00	\$1,560	400 LF @	20 LF/hour	20.0 hours @	2 units/crew =	40.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	20.0	hours	\$5.41	\$108	400 LF @	20 LF/hour	20.0 hours @	1 units/crew =	20.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$1,668	in the absence of	f	rsm/up unit pri	ce = \$2.67/LF for sma	ıller crew	
5.21.10 Tank Pump Demolition					prod'n rate = 1 pur pumps/tank	mp/hr (see RSM/UP	p. 3-11, 16-01-063	4 and 16-01-0636) a	ssume 0.5	
Laborers	4 0	hours	\$39.00	\$156	2.0 pumps @	1 pump/hr	2.0 hours @	2 units/crew =	4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	-	hours	\$5.41	•	2.0 pumps @	1 pump/hr	2.0 hours @	1 units/crew =	2.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition	2.0		Ψ					a, one pump per two		The My Tropic Work (mile Remote 5 1 5 1 10 7 6 6 6)
5.21.11 Load Tank Demo Debris					•	15 CY/hour; RSM/BC				
Laborer		hours	\$39.00		25.0 CY @	15 CY/hr =	1.7 hours @	1 units/crew	1.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	-	hours	\$45.00		25.0 CY @	15 CY/hr =	1.7 hours @	1 units/crew =	1.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader		hours	\$30.03		25.0 CY @	15 CY/hr =	1.7 hours @	1 units/crew =	1.7 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	1.7	hours	\$5.20		25.0 CY @	15 CY/hr =	1.7 hours @	1 units/crew	1.7 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris	1			\$203	1 CY tank demo d	ebris = to 972 SF @ .	1/3rd" thick; and/c	or 432 LF of 3" diam բ	oipe; and/or 2 pumps	

### 5.21 AWTS (o/s leachtnkfrm) 4 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate  In-house Pricing References	
					production rate = 15 tons/hour = 120 tons/day; includes unloading, shredding, and filling	
5.21.12 Unl'd Stabilize/Encapsulate					containers	
PROCESS TONS (incl kiln dust)	157.2	TONS			25.0 CY debr + 15% kiln dust = 28.71 CY total total tonnage = 157.2 tons total tons derived from foregoing assemblies + kiln du	ıst
Laborer	21.0	hours	\$39.00	\$819	157.2 tons @ 15 tons/hr @ 10.5 hours @ 2 units/crew = 21.0 hours loaded labor rate: loaded labor rate 2011 3rd party que	ote
Equipment Operator (Medium)	31.4	hours	\$45.00	\$1,413	157.2 tons @ 15 tons/hr @ 10.5 hours @ 3 units/crew = 31.4 hours loaded labor rate: loaded labor rate 2011 3rd party que	ote
Backhoe (1 CY)	10.5	hours	\$19.18	\$201	157.2 tons @ 15 tons/hr @ 10.5 hours @ 1 units/crew = 10.5 hours RSM/HC p. 467 (line item 01 54 33 20 0460)	
Loader, Wheel (1 CY)	10.5	hours	\$14.39	\$151	157.2 tons @ 15 tons/hr @ 10.5 hours @ 1 units/crew = 10.5 hours RSM/HC p. 468 (line item 01 54 33 20 4610)	
Shredder	10.5	hours	\$329.70	\$3,462	157.2 tons @ 15 tons/hr @ 10.5 hours @ 1 units/crew = 10.5 hours 2004 DEC Rate * Implicit Deflator	
Mixing Pit/Screening/Silo	10.5	hours	\$136.29	\$1,431	157.2 tons @ 15 tons/hr @ 10.5 hours @ 1 units/crew = 10.5 hours 2004 DEC Rate * Implicit Deflator	
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		3.7 tons	
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	3.7 tons @ 20 ton/load = 0.2 loads	
Cement Kiln Dust - Mat'l&Delv Cost	3.7	tons	\$48.00	\$178	CWM actual 2011 costs	
Encapsulation Containers (30-CY)	1.0	units	\$1,000.00	\$1,000	28.7 CYs @ 30 CY/unit = 1.0 containers CWM actual 2011 costs	
Rolloffs (30-CY)	10.0	hours	\$19.02	\$190	28.7 CYs @ 30 CY/unit = 1.0 rolloffs @ 10.5 hours/rolloff = 10.0 hours dumpster RSM/BC p. 42 (02225-730-0800)	
Subt - Stabilize/Encapsulate				\$8,845	1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	
5.21.13 Offsite T&D - Tank Demo					offsite disposal is determined to be the only disposal option	
Offsite Transportation - Debris	385.0	miles	\$3.25	\$1,251	28.7 CY @ 30 CY/load = 1.0 loads @ 385 miles/trip = 385 miles Rate: transporters quote/site experience	
Offsite Disposal - Tank Debris	28.7	CY	\$337.50	\$9,686	28.7 CY @ 27 CF/CY = 775.2 CF DEC 2004 Estimate accounting for inflation	
Subt - Offsite T&D - Tank Demo				\$10,938		
(Subt: Assemb 5.21.7 - 5.21.13)				\$72,184	tank/piping/pump demolition, and offsite transportation & disposal (101, 102, & 103 only)	
5.21.14 Decon SCA (wash)					production rate = 105 SF/hr for 1-person crew w/ one unit each; facility experience	
Laborer	194.7	hours	\$39.00	\$7.593	20446 SF @ 105 SF/hr = 194.7 hours @ 1 pers/crew = 194.7 hours two laborers-1 unit each; rate 2011 3rd party quote	
Pressure Washer	194.7		\$4.04		20446 SF @ 105 SF/hr = 194.7 hours @ 1 unit/crew = 194.7 hours RSM/HC p. 471 (line item 01 54 33 40 5450)	
Vacuum Sweeper	194.7		\$3.41	\$664	20446 SF @ 105 SF/hr = 194.7 hours @ 1 unit/crew = 194.7 hours RSM/HC p. 473 (line item 01 54 33 40 7800)	
Subt - Decon SCA (wash)				\$9,044		
5.21.15 Decon SCA (rinse)					production rate = 105 SF/hr for 1-person crew w/ one unit each; facility experience	
Laborer	194 7	hours	\$39.00	\$7.593	20446 SF @ 105 SF/hr = 194.7 hours @ 1 pers/crew = 194.7 hours two laborers-1 unit each; rate 2011 3rd party quote	
Pressure Washer	194.7		\$4.04		20446 SF @ 105 SF/hr = 194.7 hours @ 1 unit/crew = 194.7 hours RSM/HC p. 471 (line item 01 54 33 40 5450)	
Vacuum Sweeper	194.7		\$3.41		20446 SF @ 105 SF/hr = 194.7 hours @ 1 unit/crew = 194.7 hours RSM/HC p. 473 (line item 01 54 33 40 7800)	
Subt - Decon SCA (rinse)	15		7-112	\$9,044		
5.21.16 Decon Water Samp/Disp					production rate = 0.5 hours/sample for two techs	
SILLILO DECON WALE Jump/ DISP	1 1	hours	\$38.00	\$12	1.1 samp @ 0.5 hr/samp = 0.6 hours @ 2 pers/crew = 1.1 hours rate 2011 3rd party quote	
Technician	1.1	1			1.0 areas @ 1.1 samp/area = 1.1 samples analytical price: average of three quotes	
Technician	1 1	camn	\$105.00			
Technician VOC Analysis (EPA 624) On-site Water Disposal	1.1 10223.0	samp gal	\$105.00 \$0.0313		20446 SF @ 0.5 gal/sf/wa = 10223.0 gallons site waters waste treat price; vol @ 0.05 gal/sf (equip	lit)

### 5.21 AWTS (o/s leachtnkfrm) 4 tks

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
	ī	7				
5.21.17 PCB Wipe Samples					No TCLP analyses necessary according to site-wide closure plan	
Technician	32.7	hours	\$38.00	\$1,243	32.7 samp @ 0.5 hr/samp = 16.35 hours @ 2 pers/crew = 32.7 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0		analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	32.7	samp	\$83.33	\$2,725	20446 SF @ 625 SF/samp = 32.7 samples	analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$3,967		
(Subt: Assemb 5.21.14 - 5.21.17)				\$22,532	decontamination & sampling of SCA (Tanks 101, 102, and 103 only)	
5.21.18 Frac Tank 3 Closure						
Dismantle Tank/Return to Manuf.	1.0	unit	\$6,307.28	\$6,307	21000 gals: included above in 5.21.6	2004 costs * implicit deflator 2004 -2010
Subt - Frac Tank 3 Closure				\$6,307		
(Subt: Assemb 5.21.18 - 5.21.18)				\$6,307	only cost here is for tank dismantling & return ; liquid treatment costs included above in 5.21.6	

Total Non-Super Labor Hours

1086.9

				Level C @ 75%; Mod L	evel C @ 25% f	or tot non-supv hrs	for all tasks; HASP @	2.5% of non-supv	
5.21.19 PPE Usage/H&S Planning				hrs					
PPE Usage - Level D	0.0	days \$0.00	\$0	1086.9 hours @ 8	hr/day =	135.9 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	34.0	days \$9.00	\$306	1086.9 hours @ 8	hr/day =	135.9 days @	25% "Mod C" days	= 34.0 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	101.9	days \$25.00	\$2,548	1086.9 hours @ 8	hr/day =	135.9 days @	75% "C" days =	101.9 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	27.8	hours \$75.00	\$2,085	1086.9 hours @ 2.	.5% hr/hr =	27.8 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning			\$4,939						
5.21.20 Supervision				4.0 weeks for closure	of 4 tanks				
Foreman	160.0	hours \$65.00	\$10,400	4.0 weeks @ 40	hrs/wk =	160.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours \$75.00	\$0	Included in Gen'l Cont	tractor G&A/Ho	ome Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision			\$10,400						
5.21.21 Certification				Engineer @ 1.5% and	Clerical @ 1.5%	of total non-super	visory hours for all ta	sks	
Engineer	16.3	hours \$130.00	\$2,119	1086.9 hours @ 0.	.015 hr/hr =	16.3 hours			Engineer rate: 2011 3rd party quote
Clerical	16.3	hours \$45.00	\$734	1086.9 hours @ 0.	.015 hr/hr =	16.3 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification			\$2,853						
(Subt: Assemb 5.21.19 - 5.21.21)			\$18,191						

5.21 AWTS (o/s leachtnkfrm) 4 tks	Direct Cost	Total	Basic	\$168,121

5.21 AWTS (o/s leachtnkfrm) 4 tks			
Total Cost Summary			
Total Cost Sullillary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$168,121	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%		note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$6,725	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$10,087	note: DEC uses 6%
Engineering During Construction	2.00%	\$3,362	note: DEC uses 2%
General Contractor Profit	6.00%	\$10,087	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$42,030	
		****	
Subt: AWTS (o/s leachtnkfrm) 4 ts		\$210,151	
Plus Contingency	10.00%	\$21.015	CWM and DEC 10%
rius contingency	10.00%	\$21,015	
Tot: AWTS (o/s leachtnkfrm) 4 tks- Basic		\$231,166	
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<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.22.1 Inventory Verification	1				prod'n rates: 50 drums/hr; 15 min/tanker or rolloff; 30 min/tank; two persons required	
Laborer	2	hours	\$39.00	\$78	2 tanks @ 0.5 hour/tank = 1.0 hours @ 2 units/crew = 2.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification			1	\$78		
(Subt: Assemb 5.22.1 - 5.22.1)				\$78	tanks: Mix Pit Tank 1 & Mix Pit Tank 2	
5.22.2 Stabilize Mix Pit Material	1				prod'n rate = 30 tons/hour = 240 tons/day; 1 CF = 50 Lbs; 1 CY = 1,350 Lbs	
PROCESS TONS (incl kiln dust)	156.5	TONS	n/a		40708 gals = 201.56 CY @ 0.675 ton/CY + 15% kiln dust = 156.5 tons	40,708 gals x 0.1337 gals/cf x 0.0374 cy/cf = 201.56 cy
Cement Kiln Dust - Mat'l&Delv Cost	20.4	tons	\$48.00	\$979	136.1 tons @ 15% kiln dust = 20.4 tons	CWM actual 2011 costs
Stabilization Cost	136.1	tons	\$25.00			CWM actual 2011 costs inc. labor & equipment
TCLP Testing - RCRA (EPA 1311)	2	samp	\$348.33		2 tanks @ 1 samp/tnk = 2.0 samples	RSM/UP p. 9-32 (33-02-1702); one sample per tank
Subt - Stab Mix Pit Tank Material		p'	, , , , , ,		stabilize mix pit tank material	- , - · F (
5.22.3 Load Stabilized Material					facility include in stabilization cost	
Laborer	0.0	hours	\$39.00	\$0	Not required	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$50.00	\$0	·	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.0	hours	\$14.39	\$0		RSM/HC p. 468 (line item 01 54 33 20 4610)
Dump Trailer (20 CY)	0.0	hours	\$14.95	\$0		RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Stab Mix Pit Tank Mat'l				\$0		
5.22.4 Offsite T&D - Stab Material						
Offsite Transportation - Solids	3012.6	miles	\$3.25	\$9,791	156.5 tons @ 20 tons/load = 7.8 loads @ 385 miles/trip = 3012.6 mile	Rate: transporters quote/site experience
Offsite Landfill Disposal - Solids	156.5	tons	\$133.00	\$20,815	156.5 tons	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions
Subt - Offsite T&D - Stab Material			,		offsite T&D	eurene market conditions
(Subt: Assemb 5.22.2 - 5.22.4)				\$35,684	onsite stabilization and offsite T&D of mix pit tank material	
	•	•	•			•
5.22.5 Steel Tank Demolition					prod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 12 sf tank area	
No. of Tanks/Capacity/Area/Weight	2.0	tnks @			40708 gallons: 4112 SF Tanks: 343 CF @ 490 Lb/CF = 167907 Lt	Steel Tanks only; facility estimates 490#/CF
Laborer		hours	\$39.00		4112 SF @ 200 SF/hour 20.6 hours @ 3 units/crew = 61.7 hour	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	41.1	hours	\$45.00		4112 SF @ 200 SF/hour 20.6 hours @ 2 units/crew = 41.1 hou	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	20.6		\$84.09		4112 SF @ 200 SF/hour 20.6 hours @ 1 units/crew = 20.6 hour	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	20.6	hours	\$34.40		4112 SF @ 200 SF/hour 20.6 hours @ 1 units/crew = 20.6 hour	2004 DEC Rate * Implicit Deflator
Claw Attachment	20.6	hours	\$2.47	\$51	4112 SF @ 200 SF/hour 20.6 hours @ 1 units/crew = 20.6 hour	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	20.6	hours	\$30.03	\$619	4112 SF @ 200 SF/hour 20.6 hours @ 1 units/crew = 20.6 hour	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	20.6	hours	\$86.31	\$1,778	4112 SF @ 200 SF/hour 20.6 hours @ 1 units/crew = 20.6 hour	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	20.6	hours	\$5.41	\$111	4112 SF @ 200 SF/hour 20.6 hours @ 1 units/crew = 20.6 hour	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$9,256	tank areas based upon actual tank dimensions, or upon OSWER 9476.00-6, Vol 3, p. 5-5	

Basic Closure Activities: Direct Costs	Estimated	Unit of	Unit Price	2011 CWM Extended	Racis of Productio	n and Quantities fo	r In-house Estimate			In-house Pricing References
basic closure Activities. Direct Costs	Quantity	Measure	Oille Price	Price	Basis of Froductio	iii aliu Qualitities it	i ili-ilouse Estilliate	•		in-nouse rinding neterences
				Price	I					
.22.6 FRP Tank Demolition					production rate = 2	200 SF/hour (same a	s steel tank demolit	ion rate); 1 CF debris p	er 36 SF tank area	
Io. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	616 SF Tanks:	17 CF @ 245	Lb/CF = 41	92 Lt	FRP Tanks only; facility estimates 245#/CF
aborer	9.2	hours	\$39.00	\$359	616 SF @	200 SF/hour	3.1 hours @	3 units/crew =	9.2 houi	HASP reg's two: loaded labor rate 2011 3rd party quote
quipment Operator (Medium)	6.2	hours	\$45.00	\$279	616 SF @	200 SF/hour	3.1 hours @	2 units/crew =	6.2 houi	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	3.1	hours	\$84.09	\$261	616 SF @	200 SF/hour	3.1 hours @	1 units/crew =	3.1 houi	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	3.1	hours	\$34.40	\$107	616 SF @	200 SF/hour	3.1 hours @	1 units/crew =	3.1 houi	2004 DEC Rate * Implicit Deflator
Claw Attachment	3.1	hours	\$2.47	\$8	616 SF @	200 SF/hour	3.1 hours @	1 units/crew =	3.1 houi	RSM/HC p. 477 (line item 01 54 33 20 0345)
oader	3.1	hours	\$30.03	\$93	616 SF @	200 SF/hour	3.1 hours @	1 units/crew =	3.1 houi	RSM/HC p. 469 (line item 01 54 33 20 4730)
'ard Crane	3.1	hours	\$86.31	\$268	616 SF @	200 SF/hour	3.1 hours @	1 units/crew =	3.1 houi	RSM/HC p. 474 (line item 01 54 33 60 2700)
Velding Equipment	0.0	hours	\$5.41	\$0	616 SF @	200 SF/hour	3.1 hours @	0 units/crew =	0.0 houi	RSM/HC p. 473 (line item 01 54 33 40 7800)
ubt - FRP Tank Demolition				\$1,373	two tank covers fo	r mix pit tanks				
5.22.7 Tank Piping Demolition										
Estimated Piping Length	0.0	LF	n/a							
aborers	0.0	hours	\$39.00	\$0						
Welding Equipment	0.0	hours	\$5.41	\$0						
Subt - All Tanks' Piping Demolition	0.0	LF @	n/a	\$0	no piping associate	ed with the mix pit t	anks			
.22.8 Tank Pump Demolition			n/a							
aborers	0.0	hours	\$39.00	\$0						
Welding Equipment		hours	\$5.41	\$0						
Subt - All Tanks' Pump Demolition		ea @	n/a			ed with the mix pit	anks			
Tarito Famp Demontion	0.0	cu e	11, 4	70	no pamps associat	ea with the mix pie	dino			
5.22.9 Load Tank Demo Debris					production rate = 1	15 CY/hour: RSM/RC	p. 42 (line item 022	25-730-3080)		
aborer	0.9	hours	\$39.00	\$35	13.3 CY @	15 CY/hr =	0.9 hours @	1 units/crew	0.9 hou	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		13.3 CY @	15 CY/hr =	0.9 hours @	1 units/crew =	0.9 hou	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader		hours	\$30.03		13.3 CY @	15 CY/hr =	0.9 hours @	1 units/crew =	0.9 hou	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)		hours	\$5.20		13.3 CY @	15 CY/hr =	0.9 hours @	1 units/crew	0.9 hou	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris	0.5		Ç3.20		•			debris = to 972 SF @ 1		1.5.1.7.1.6 p. 405 (interterin 01 54 55 20 5400)
2000 Turk Demo Debris		1	<del>                                     </del>	7107	_ J. J.CCI talik det	10 52 7 51 12 1	and I CI THE		y o ciner	
5.22.10 Unl'd Stabilize/Encapsulate		1	<del>                                     </del>		production rate = 1	15 tons/hour = 120 t	ons/day: includes u	nloading, shredding, a	nd filling containers	
PROCESS TONS (incl kiln dust)	88.0	TONS	n/a		13.3 CY debr +	15% kiln dust =	15.32 CY total	total tonnage =	88.0 ton	total tons derived from foregoing assemblies + kiln dust
aborer		hours	\$39.00	\$456	88.0 tons @	15 tons/hr @	5.9 hours @	2 units/crew =	11.7 hour	loaded labor rate: loaded labor rate 2011 3rd party quote
quipment Operator (Medium)		hours	\$45.00		88.0 tons @	15 tons/hr @	5.9 hours @	3 units/crew =	17.6 hour	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)		hours	\$19.18		88.0 tons @	15 tons/hr @	5.9 hours @	1 units/crew =	5.9 hour	RSM/HC p. 467 (line item 01 54 33 20 0460)
oader, Wheel (1 CY)		hours	\$14.39		88.0 tons @	15 tons/hr @	5.9 hours @	1 units/crew =	5.9 hour	RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	5.9		\$329.70		88.0 tons @	15 tons/hr @	5.9 hours @	1 units/crew =	5.9 hour	2004 DEC Rate * Implicit Deflator
Aixing Pit/Screening/Silo		hours	\$136.29	\$804	_	15 tons/hr @	5.9 hours @	1 units/crew =	5.9 hour	2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		2.0 tons	13 (0115) 111 (6	3.3 110413 @	I dilicaj ci c W =	3.3 11001	200 . D 20 Note Implicit Deliator
Cement Kiln Dust - Delivery Cost		loads	\$0.00		2.0 tons @	20 ton/load =	0.1 load:			
Cement Kiln Dust - Mat'l&Delv Cost		tons	\$48.00	\$96		20 1011/1000 -	0.1 loud.			CWM actual 2011 costs
Encapsulation Containers (30-CY)		units	\$1,000.00		15.3 CYs @	30 CY/unit =	0.5 container:			CWM actual 2011 costs
Rolloffs (30-CY)		hours	\$1,000.00		15.3 CYs @	30 CY/unit =	0.5 rolloffs @	5.9 hours/rolloff =	3.0 hour	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate	3.0	nours	715.02					debris = to 972 SF @ 1		αμπρείει ποινή σε μ. 42 (02225-750-0000)
rubt - Stabilize/Elicapsulate				Ş <del>4,</del> 645	I CI SLEET LATIK UEL	113 - 10 324 35 @ 1	unick, allu I CI FKP	ueniis - 10 3/2 3F @ 1	(/ ) (IIICF	

	Estimated	Unit of		2011 CWM		
Basic Closure Activities: Direct Costs	Quantity	Measure	Unit Price	Extended	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
	ζ,			Price		
5.22.11 Offsite T&D - Tank Demo					offsite disposal is determined to be the only disposal option	
Offsite Transportation - Debris	192.5	miles	\$3.25		.5.3 CY @ 30 CY/load = 0.5 loads @ 385 miles/trip = 192.5 mile	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	15.3	CY	\$337.50	\$5,164	5.3 CY @ 27 CF/CY = 413.7 C	DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$5,789		
(Subt: Assemb 5.22.5 - 5.22.11)				\$21,375	ank/piping/pump demolition, and offsite transportation & disposal	
			_			
5.22.12 Decon SCA (wash)				4	production rate = 105 SF/hr for 1-person crew w/ one unit each; facility experience	
Laborer		hours	\$39.00		105 SF/hr = 19.6 hours @ 1 unit/crew = 19.6 hour	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		1056 SF @ 105 SF/hr = 19.6 hours @ 1 unit/crew = 19.6 hour	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	19.6	hours	\$3.41		2056 SF @ 105 SF/hr = 19.6 hours @ 1 unit/crew = 19.6 hour	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$910		
5.22.13 Decon SCA (rinse)					production rate = 105 SF/hr for 1-person crew w/ one unit each; facility experience	
	10.6	hours	\$39.00	¢764	2056 SF @ 105 SF/hr = 19.6 hours @ 1 unit/crew = 19.6 hour	two laborars 1 unit each rate 2011 2rd party quate
Laborer Pressure Washer		hours hours	\$39.00		2056 SF @ 105 SF/hr = 19.6 hours @ 1 unit/crew =	two laborers-1 unit each; rate 2011 3rd party quote  RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		19.56 SF @ 105 SF/hr = 19.6 hours @ 1 unit/crew = 19.6 hour	RSM/HC p. 471 (line item 01 54 33 40 3430)
Subt - Decon SCA (rinse)	19.0	liours	\$5.41	\$910	19.6 HOURS @ 1 UNITYCIEW - 19.6 HOURS	κ3ivi/πc μ. 473 (iiiie iteiii 01 34 33 40 7800)
Subt - Decoil SCA (filise)				3310		
5.22.14 Decon Water Samp/Disp					production rate = 0.5 hours/sample for two techs	
Technician	1.1	hours	\$38.00	\$42	1 samp @ 0.5 hr/samp = 0.6 hours @ 2 pers/crew = 1.1 hour	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00		0 areas @ 1.1 samp/area = 1.1 sample:	analytical price: average of three quotes
On-site Water Disposal	8224	gal	\$0.0313		2.4 gal/sf/wa = 4934 gallons + 1.6 gal/sf/rinse = 3290 gallon	site waters waste treat price ; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose		0.	,	\$415	5.7.7 · · · · · · · · · · · · · · · · · ·	, το στο στο στο στο στο στο στο στο στο
17				•		
5.22.15 PCB Wipe Samples					No TCLP analyses necessary according to site-wide closure plan	
Technician	3.3	hours	\$38.00	\$125	3.3 samp @ 0.5 hr/samp = 1.65 hours @ 2 pers/crew = 3.3 hour	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0	samp	\$446.67	\$0		analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	3.3	samp	\$83.33	\$275	2056 SF @ 625 SF/samp = 3.3 sample:	analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$400		
(Subt: Assemb 5.22.12 - 5.22.15)				\$2,636	lecontamination & sampling of SCA	
Total Non-Super Labor Hours	194.9					
5.22.16 PPE Usage/H&S Planning					evel C @ 75%; Level D @ 25% for tot non-supv hrs for all tasks; HASP @ 2.5% of non-supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0	.94.9 hours @ 8 hr/day = 24.4 days @ 0% "D" days = 0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	6.1	days	\$9.00	\$55	.94.9 hours @ 8 hr/day = 24.4 days @ 25% "Mod C" days = 6.1 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	18.3	days	\$25.00	\$458	.94.9 hours @ 8 hr/day = 24.4 days @ 75% "C" days = 18.3 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	4.9	hours	\$75.00	\$368	.94.9 hours @ 2.5% hr/hr = 4.9 hours	Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$880		
5.22.17 Supervision					0 weeks for closure of 4 tanks	
Foreman	40	hours	\$65.00	\$2,600	0 weeks @ 40 hrs/wk = 40.0 hours	Outside foreman rate: 2011 3rd party quote
Site Project manager	0	hours	\$75.00	\$0	ncluded in Gen'l Contractor G&A/Home Office indirect costs	Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$2,600		

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price		In-house Pricing References
5.22.18 Certification					Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	2.9	hours	\$130.00	\$377	194.9 hours @ 0.015 hr/hr = 2.9 hours	Engineer rate: 2011 3rd party quote
Clerical	2.9	hours	\$45.00	\$131	194.9 hours @ 0.015 hr/hr = 2.9 hours	Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$508		
(Subt: Assemb 5.22.16 - 5.22.18)				\$3,987		

5.22 AWTS (stab mix pit tanks)	Direct Cost	Total	Basic	\$63,760

5.22 AWTS (stab mix pit tanks)			
Total Cost Summary			
,			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$63,760	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$4,463	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$2,550	note: DEC uses 4%
Pre-Construction Design Costs	6.00%		note: DEC uses 6%
Engineering During Construction	2.00%	\$1,275	note: DEC uses 2%
General Contractor Profit	6.00%	\$3,826	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$15,940	
Subt: AWTS (stab mix pit tanks)		\$79,700	
Plus Contingency	10.00%	\$7,970	CWM and DEC 10%
Tot: AWTS (stab mix pit tanks)		\$87,670	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.23 AWTS (stab aqueous tanks)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended	Basis of Production	on and Quantities for	In-house Estimate			In-house Pricing References
	ζ,			Price						
5.23.1 Inventory Verification					prod'n ratos: 100 s	drums/br. 1E min/tan	var ar rallaffi 20 m	in/tank; two persons r	aguirad	
Laborer	2.0	hours	\$39.00	¢70	2 tanks @	0.5 hour/tank =	1.0 hours @	2 units/crew =	•	LIACD was a true classed of labor water 2011 2nd power, quate
	2.0	nours	\$39.00	\$78 \$ <b>78</b>		0.5 Hour/tank =	1.0 nours @	2 units/crew =	2.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification (Subt: Assemb 5.23.1 - 5.23.1)					tanks: TA-1 & TA-	2				
Subt: Assemb 5.23.1 - 5.23.1)				\$78	tanks: IA-1 & IA-	-2				
5.23.2 Empty Tanks TA-1/TA-2					production rate = 1	1,650 gals/hr; RSM/U	Dn Q 171 (line iter	n 22 10 0101\		T
Laborer	0.0	hours	\$39.00	ŚŊ		hird party operation		11 33-13-0101)		HASP reg's two: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00			t part of tank system	JI AW 13			RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)		hours	\$6.31		40000 gals @	1650 gals/hr =	24.2 hours @	1 units/crew =	24.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanks	24.2	110013	30.31	\$153 <b>\$153</b>	,	1030 Rg(2/11) =	44.۷ االالااع ك	1 umis/crew -	24.2 HUUIS	1.31vi/ 1.6 μ. 4/2 (IIIIe Itelii 01 34 33 40 0300)
JUDE - EITIPLY TAITES				\$153						<u> </u>
5.23.3 Transport Tankers Onsite					production rate = 0	0.5 hours for onsite tr	avel			
Road Tractor (4 x 2, 30-ton)	3.6	hours	\$32.45	\$117	40000 gals @	5500 gals/load =	7.3 loads @	0.5 hrs/trip =	3.6 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Priver		hours	\$45.00			third party operation		2.00, 0p	3.00	loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)		hours	\$6.31	·	40000 gals @	5500 gals/load =	7.3 loads @	0.5 hrs/trip =	3.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transport Tankers Onsite	3.0	nours	70.31	\$140		3300 gais/10au -	7.5 lodus @	0.5 m3/mp =	3.0 HOUIS	11.5 μ. τ/2 (mile item 01.54.33.40.0300)
Auto Transport Tankers Offsite				7140						
5.23.4 Empty Tankers					production rate = 0	0.5 hours/sample for	two techs: rate san	ne as facility's		
Laborer	0.0	hours	\$39.00	\$0		third party operation				HASP reg's two: loaded labor rate 2011 3rd party quote
Pumping Equipment		hours	\$0.00			t part of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)		hours	\$6.31		40000 gals @	1650 gals/hr =	24.2 hours @	1 units/crew =	24.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tankers	23.2		Ç0.51	\$153 \$153	. 3000 Bais G	2000 0010/111	<b>_</b> 5015 @	2 0	110413	
(Subt: Assemb 5.23.2 - 5.23.4)	+			\$445						
,				<del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del>						
5.23.5 Onsite Aqueous Treatment					mildly-contaminate	ed liquid wastes				
Onsite Aqueous Treatment - Tanks	40000.0	gals	\$0.0313	\$1.252	40000 gals	1				AWTS site waters waste treat price
Subt - Onsite Aqueous Treatment	1230010	J	7511323	\$1,252						
(Subt: Assemb 5.23.5 - 5.23.5)					onsite treatment	of tanks' waste liquid	5			
· · · · · · · · · · · · · · · · · · ·	ı			Ţ- <b>,</b> =0=		7				
5.23.6 Steel Tank Demolition					prod'n rate = 200 S	SF/hr ; 1 CF debris per	36 sf tank area			
No. of Tanks/Capacity/Area/Weight	2.0	tnks @			40000 gallons:	2112 SF Tanks:	59 CF @	490 Lb/CF =	28747 Lbs	Steel Tanks only; estimate 490#/CF
Laborer		hours	\$39.00	\$1,236	2112 SF @	200 SF/hour	10.6 hours @	3 units/crew =	31.7 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	21.1	hours	\$45.00		2112 SF @	200 SF/hour	10.6 hours @	2 units/crew =	21.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	10.6	hours	\$84.09		2112 SF @	200 SF/hour	10.6 hours @	1 units/crew =	10.6 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	10.6	hours	\$34.40		2112 SF @	200 SF/hour	10.6 hours @	1 units/crew =	10.6 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	10.6	hours	\$2.47		2112 SF @	200 SF/hour	10.6 hours @	1 units/crew =	10.6 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	10.6	hours	\$30.03		2112 SF @	200 SF/hour	10.6 hours @	1 units/crew =	10.6 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	10.6	hours	\$86.31		2112 SF @	200 SF/hour	10.6 hours @	1 units/crew =	10.6 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		2112 SF @	200 SF/hour	10.6 hours @	1 units/crew =	10.6 hours	RSM/HC p. 474 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition	10.0	110013	γJ.41		tank areas based		10.0 Hours @	I ums/crew =	10.0 110013	11.5 m, 11.5 μ. 47.5 (mile item 01.54.33 40.7600)
JUDI - JIECH TAHK DEHIUHUH				۶ <del>4</del> ,/55	turik ureus buseu	ı				

### 5.23 AWTS (stab aqueous tanks)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	and Quantities for	· In-house Estimate	In-house Pricing References		
					production rate = 200	0 SF/hour (same as	s steel tank demolit	ion rate); 1 CF debris p	oer 36 SF tank	
5.23.7 FRP Tank Demolition					area					
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	0.0	hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00	\$0	0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.0	hours	\$84.09	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.0	hours	\$34.40	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0	hours	\$2.47	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.0	hours	\$30.03	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$0	tank areas based ι					
5.23.8 Tank Piping Demolition					avg prod'n rate = 20 I	LF/hr, for 2"/4" m	etal pipe @ 4#/LF			
Estimated Piping Length	200.0	LF			2 tanks @	100 LF/tank =	200 LF @	4 Lb/LF =	800 Lbs	combined Steel and FRP Tanks' Piping
Laborers	20.0	hours	\$39.00	\$780	200 LF @	20 LF/hour	10.0 hours @	2 units/crew =	20.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	10.0	hours	\$5.41	\$54	200 LF @	20 LF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition					in the absence of f	-		•		
5.23.9 Tank Pump Demolition	1				prod'n rate = 1 pump	/hr assume 0.5 pu	mps/tank			
Laborers	2.0	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1.0	hours	\$5.41		1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition								one pump per two tan	ıks is estimated	, , , , , , , , , , , , , , , , , , , ,
5.23.10 Load Tank Demo Debris					production rate = 15	CY/hour; RSM/BC	p. 42 (line item 022	225-730-3080)		
Laborer	0.2	hours	\$39.00	\$8	3.1 CY @	15 CY/hr =	0.2 hours @	1 units/crew	0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.2	hours	\$45.00	\$9	3.1 CY @	15 CY/hr =	0.2 hours @	1 units/crew =	0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.2	hours	\$30.03	\$6	3.1 CY @	15 CY/hr =	0.2 hours @	1 units/crew =	0.2 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.2	hours	\$5.20	\$1	3.1 CY @	15 CY/hr =	0.2 hours @	1 units/crew	0.2 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$24	1 CY tank demo deb	ris = to 972 SF @ 1	/3rd" thick; and/or	432 LF of 3" diam pipe	e; and/or 2 pumps	
								. , ,		

### 5.23 AWTS (stab aqueous tanks)

Basic Closure Activities: Direct Costs	Estimated	Unit of	Unit Price	2011 CWM Extended	Basis of Produc	ction and Quantities for	In-house Estimate			In-house Pricing References
	Quantity	Measure		Price						_
						= 15 tons/hour = 120 to	ons/day; includes u	nloading, shredding, a	nd filling	
5.23.11 Unl'd Stabilize/Encapsulate					containers					
PROCESS TONS (incl kiln dust)		TONS				5% kiln dust = 3.61 CY to				total tons derived from foregoing assemblies + kiln dust
Laborer		hours	\$39.00			tons/hr @ 1.0 hours @				loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00			tons/hr @ 1.0 hours @				loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	1.0	hours	\$19.18			tons/hr @ 1.0 hours @				RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	1.0	hours	\$14.39	\$14	15.4 tons @ 15	tons/hr @ 1.0 hours @	1 units/crew = 1.0	hours		RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	1.0	hours	\$329.70			tons/hr @ 1.0 hours @				2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	1.0	hours	\$136.29			tons/hr @ 1.0 hours @	1 units/crew = 1.0	hours		2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0	0.5 tons					
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	0.5 tons @ 20 t	on/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost	0.5	tons	\$48.00	\$24						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.1	units	\$1,000.00	\$100	3.6 CYs @ 30 C	Y/unit = 0.1 containers				CWM actual 2011 costs
Rolloffs (30-CY)	0.1	hours	\$19.02			Y/unit = 0.1 rolloffs @ 1	.0 hours/rolloff = 0	.1 hours		dumpster RSM/BC p. 42 (02225-730-0800)
,				•			•			
Subt - Stabilize/Encapsulate				\$843	1 CY tank demo	debris = to 972 SF @ 1/	3rd" thick; and/or	132 LF of 3" diam pipe	and/or 2 pumps	
· ·				•			•	, , , , ,	, , ,	
5.23.12 Offsite T&D - Tank Demo					offsite disposal	is determined to be the	only disposal optic	n		
Offsite Transportation - Debris	38.5	miles	\$3.25	\$125	3.6 CY @	30 CY/load =	0.1 loads @	385 miles/trip =	38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	3.6		\$337.50		3.6 CY @	27 CF/CY =	97.4 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo	5.0		ψ337.33	\$1,340		27 0.70.	3711 61			DEC 2004 Estimate decounting for inflation
(Subt: Assemb 5.23.6 - 5.23.12)						ımp demolition, and off	site transportation	& disposal		
,		l		71,555	711 371	, ,,	,	•		ı
5.23.13 Decon SCA (wash)		Ī			production rate	= 105 SF/hr for 1-perso	n crew w/ one unit	each: facility evnerior	200	T
Laborer	23.0	hours	\$39.00	\$807	2411 SF @	105 SF/hr =	23.0 hours @	1 pers/crew =	23.0 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		2411 SF @	105 SF/hr =	23.0 hours @	1 unit/crew =	23.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		2411 SF @	105 SF/hr =	23.0 hours @	1 unit/crew =	23.0 hours	RSM/HC p. 471 (line item 01 54 33 40 3430)
·	25.0	nours	\$5.41	\$1,068	2411 35 @	103 37/111 -	23.0 Hours @	1 unit/crew –	25.0 110015	KSW/HC p. 475 (IIIIe Itelii 01 34 33 40 7800)
Subt - Decon SCA (wash)				\$1,068						
5 22 14 Decem SCA (vince)						- 105 CF/br for 1 norse	n ara/ ananit	anah. fasilitu ayansia		
5.23.14 Decon SCA (rinse)	22.0	h	¢20.00	ć007		= 105 SF/hr for 1-perso				t  -
Laborer		hours	\$39.00		2411 SF @	105 SF/hr =	23.0 hours @	1 pers/crew =	23.0 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		2411 SF @	105 SF/hr =	23.0 hours @	1 unit/crew =	23.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	23.0	hours	\$3.41		2411 SF @	105 SF/hr =	23.0 hours @	1 unit/crew =	23.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$1,068						
5.23.15 Decon Water Samp/Disp					production rate	= 0.5 hours/sample for	two techs			
Technician	1 1	hours	\$38.00	ĊAO	•			2 nors/srow -	1.1 hours	rate 2011 2rd party guete
		hours			1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)		samp	\$105.00		1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal Subt - Decon Water Samp/Dispose	2205.5	gal	\$0.0313		2411 SF @	0.5 gal/sf/wa =	2205.5 gallons			site waters waste treat price ; vol @ 0.05 gal/sf (equip lit)
	1	ı		\$226						

### 5.23 AWTS (stab aqueous tanks)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	Basis of Production and Quantities for In-house Estimate				In-house Pricing References
5.23.16 PCB Wipe Samples					No TCLP analyse	es necessary according t	o site-wide closure	plan		
Technician	3.9	hours	\$38.00	\$148	3.9 samp @	0.5 hr/samp =	1.95 hours @	2 pers/crew =	3.9 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	3.9	samp	\$83.33	\$325	2411 SF @	625 SF/samp =	3.9 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$473						
(Subt: Assemb 5.23.13 - 5.23.16)				\$2,836	decontaminati	ion & sampling of SCA				

Total Non-Super Labor Hours

133.3

					Level C @ 75%;	Mod Level C @ 25% fo	r tot non-supv hrs	for all tasks; HASP @ 2.5	% of non-supv	
5.23.17 PPE Usage/H&S Planning					hrs					
PPE Usage - Level D	0.0	days	\$0.00	\$0	133.3 hours @	8 hr/day =	16.7 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	4.2	days	\$9.00	\$38	133.3 hours @	8 hr/day =	16.7 days @	25% "Mod C" days =	4.2 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	12.5	days	\$25.00	\$313	133.3 hours @	8 hr/day =	16.7 days @	75% "C" days =	12.5 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	3.3	hours	\$75.00	\$248	133.3 hours @	2.5% hr/hr =	3.3 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$598						
5.23.18 Supervision					0.6 weeks super	visory time for closure	of 2 tanks			
Foreman	24.0	hours	\$65.00	\$1,560	0.6 weeks @	40 hrs/wk =	24.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen	'l Contractor G&A/Hor	ne Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$1,560						
5.23.19 Certification					Engineer @ 1.5%	% and Clerical @ 1.5%	of total non-super	visory hours for all tasks		
Engineer	2.0	hours	\$130.00	\$260	133.3 hours @	0.015 hr/hr =	2.0 hours			Engineer rate: 2011 3rd party quote
Clerical	2.0	hours	\$45.00	\$90	133.3 hours @	0.015 hr/hr =	2.0 hours		•	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$350			•		•	
(Subt: Assemb 5.23.17 - 5.23.19)				\$2,508		<u> </u>				

- 1					
	5.23 AWTS (stab aqueous tanks)	Direct Cost	Total	Basic	\$15,002

5.23 AWTS (stab aqueous tanks)			
Total Cost Summary			
Total Cost Summary	+		
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$15,002	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$1,050	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$600	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$900	note: DEC uses 6%
Engineering During Construction	2.00%	\$300	note: DEC uses 2%
General Contractor Profit	6.00%	\$900	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$3,750	
Culta AMITC (ataly a superior talks)		Ć40.7F2	
Subt: AWTS (stab acqueous tnks)		\$18,752	
Plus Contingency	10.00%	\$1,875	CWM and DEC 10%
Tot: AWTS (stab acqueous tanks)		\$20,628	
		<u> </u>	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.24 AWTS (i/s trk wash bld) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Productio	on and Quantities	for In-house Estimate	e		In-house Pricing References
					I II . 50.		1 11 11 11 20	• /•		
5.24.1 Inventory Verification			400.00	400				nin/tank; two persons req		
Laborer	1.0	hours	\$39.00		1 tanks @	0.5 hour/tank =	0.5 hours @	2 units/crew =	1.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$39						
(Subt: Assemb 5.24.1 - 5.24.1)				\$39	tank: T-120					
5.24.2 Empty Tank T-120	I				production rate =	1,650 gals/hr; RSN	M/UP p. 9-171 (33-19	-0101)		
Laborer	0.0	hours	\$39.00	\$0	Labor included in t	hird party operation	on of AWTS	,		HASP reg's two: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00		Existing equipment					RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)		hours	\$6.31		1650 gals @	1650 gals/hr =	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank T-120				\$6						, , , , , , , , , , , , , , , , , , , ,
5.24.3 Transport Tanker Onsite					production rate =	0.5 hours/trip for	onsite traval			
Road Tractor	0.2	hours	\$32.45	ĊG	1650 gals @	5500 gals/load =		0.5 hours/trip =	0.2 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver		hours	\$45.00		Labor included in t	•		0.5 Hours/trip =	0.2 110015	loaded labor rate: loaded labor rate 2011 3rd party quote
		hours	\$45.00	•		= 5500 gals/load		0 E hours /+rin =	0.2 hours	
Tank Trailer (5,500 gals)	0.2	HOUIS	\$0.31		1650 gals @	2200 gais/10ad =	0.3 10aus @	0.5 hours/trip =	0.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Onsite Tanker Transport				\$8						
5.24.4 Empty Tanker							M/UP p. 9-171 (33-19	-0101)		
Laborer	0.0	hours	\$39.00	\$0	Labor included in t	hird party operation	on of AWTS			HASP req's two: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00	\$0	Existing equipment	t part of tank syste	em			RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	1.0	hours	\$6.31	\$6	1650.0 gals @	1650 gals/hr =	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty tanker				\$6						
(Subt: Assemb 5.24.2 - 5.24.4)				\$20						
			,							
5.24.5 Onsite Aqueous Treatment						3/gal; contents pu	mped to tankers labo	or & equip. in Assem. 13.0	0	
Onsite Aqueous Treatment - Tanks	1650.0	gals	\$0.0453		1650 gals					AWTS average cost for all wastewater
Subt - Onsite Aqueous Treatment				\$75						
(Subt: Assemb 5.24.5 - 5.24.5)				\$75	onsite treatment	of tanks' waste liq	uids			
5.24.6 Steel Tank Demolition					prod'n rate = 200	SF/hr ; 1 CF debris	s per 36 sf tank area			
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	490 Lb/CF =	0 Lbs	Steel Tanks only; estimate 490#/CF
Laborer		hours	\$39.00	ŚO	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.0		\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment		hours	\$34.40		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0		\$2.47		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment		hours	\$5.41		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition	0.0	110013	75.41		_	•		OSWER 9476.00-6, Vol 3, 1		110/11/110 p. 473 (mile item 01 34 33 40 7000)
Sast Steel rank bemolition			1	ŞŪ	tarik areas buseu	apon actual tulik t	annensions, or upon c	JULIN JA70.00-0, VOI 3,	v. <i>J</i>	

### 5.24 AWTS (i/s trk wash bld) 1 tnk

				production rate -	- 200 SE/hour (sam	a as stool tank damal	ition rate); 1 CF debris p	or 26 CE tank area	
	tnks @			1650 gallons:	246 SF Tanks:	7 CF @	245 Lb/CF =	1674 Lbs	FRP Tanks only; facility estimates 245#/CF
	hours	\$39.00		46 SF @	200 SF/hour	1.2 hours @	3 units/crew =	3.7 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
	hours	\$45.00		246 SF @	200 SF/hour	1.2 hours @	2 units/crew =	2.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
							· · · · · · · · · · · · · · · · · · ·		RSM/HC p. 467 (line item 01 54 33 20 0320)
							· · · · · · · · · · · · · · · · · · ·		2004 DEC Rate * Implicit Deflator
							•		RSM/HC p. 477 (line item 01 54 33 20 0345)
							,		RSM/HC p. 469 (line item 01 54 33 20 4730)
							•		RSM/HC p. 474 (line item 01 54 33 60 2700)
							•		RSM/HC p. 474 (line item 01 54 33 40 7800)
0.0	nours	75.41					· · · · · · · · · · · · · · · · · · ·		RSW/TIC p. 473 (little Refit 01 34 33 40 7800)
			7542 (	turik ureus buseu	apon actual tank a	annensions, or upon o	3VVLN 3470.00-0, VOI 3,	J. J-J	
			2	avg prod'n rate =	20 LE/hr. for 2"/4"	" metal nine @ 4#/IF			-
100 0	1 F						4 I h/I F =	400 l hs	combined Steel and FRP Tanks' Piping
		\$39.00			•		,		loaded labor rate: loaded labor rate 2011 3rd party quote
					· · · · · · · · · · · · · · · · · · ·		,		RSM/HC p. 473 (line item 01 54 33 40 7800)
5.0	nours	75.41			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	3.0 110013	RSW/TIC p. 473 (little Refit 01 34 33 40 7800)
			3417 /	in the absence of	Jucinity dutu, piping	g assumed to average	100 Li / tulik		
			r	prod'n rate = 1 pi	ump/hr assume 0.5	5 pumps/tank			
1.0	hours	\$39.00		<u> </u>			2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
							,		RSM/HC p. 473 (line item 01 54 33 40 7800)
		, -					· · · · · · · · · · · · · · · · · · ·		
				<u> </u>	,				
			ŗ	production rate =	= 15 CY/hour;				
0.05	hours	\$39.00	\$2 0	0.7 CY @	15 CY/hr =	0.05 hours @	1 units/crew =	0.05 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
0.05	hours	\$45.00	\$2 0	0.7 CY @	15 CY/hr =	0.05 hours @	1 units/crew =	0.05 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
0.05	hours	\$30.03	\$2 0.	).7 CY @	15 CY/hr =	0.05 hours @	1 units/crew =	0.05 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
0.05	hours	\$5.20	\$0 0	0.7 CY @	15 CY/hr =	0.05 hours @	1 units/crew =	0.05 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
			\$6 1	1 CY tank demo a	lebris = to 972 SF @	0 1/3rd" thick; and/or	432 LF of 3" diam pipe;	and/or 2 pumps	
				•				d filling containers	
									total tons derived from foregoing assemblies + kiln dust
									loaded labor rate: loaded labor rate 2011 3rd party quote
									loaded labor rate: loaded labor rate 2011 3rd party quote
									RSM/HC p. 467 (line item 01 54 33 20 0460)
									RSM/HC p. 468 (line item 01 54 33 20 4610)
									2004 DEC Rate * Implicit Deflator
					ıs/hr @ 0.1 hours @	② 1 units/crew = 0.1 h	ours		2004 DEC Rate * Implicit Deflator
				0.1 tons @ 20 ton	/load = 0.0 loads				
		·	\$5						CWM actual 2011 costs
		\$1,000.00		\$27					CWM actual 2011 costs
0.027	hours	\$19.02		\$1 0.8 CYs @ 30 CY/unit = 0.0 rolloffs @ 0.1 hours/rolloff = 0.0 hours					dumpster RSM/BC p. 42 (02225-730-0800)
			\$99 1	\$99 1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps				and/or 2 pumps	
	1.2 1.2 1.2 1.2 1.2 1.2 1.0 0.0 100.0 100.0 5.0 1.0 0.5 0.05 0.0	0.05 hours 0.05 hours  1.2 TONS 0.2 hours 0.1 hours	1.2 hours \$34.40  1.2 hours \$2.47  1.2 hours \$30.03  1.2 hours \$86.31  0.0 hours \$5.41  100.0 LF  10.0 hours \$39.00  5.0 hours \$39.00  0.5 hours \$39.00  0.5 hours \$39.00  0.05 hours \$39.00  0.05 hours \$30.03  0.05 hours \$30.03  0.05 hours \$30.03  0.05 hours \$30.03  0.10 hours \$39.00  1.2 TONS  0.2 hours \$39.00  0.3 hours \$30.03  0.1 hours \$39.00  0.1 hours \$319.18  0.1 hours \$19.18  0.1 hours \$136.29  0.0 tons \$0.00  0.1 tons \$48.00  0.0 units \$48.00  0.0 units \$48.00  0.0 units \$48.00	1.2 hours \$34.40 \$41 .  1.2 hours \$2.47 \$3 .  1.2 hours \$30.03 \$36 .  1.2 hours \$86.31 \$104 .  0.0 hours \$5.41 \$0 .  100.0 LF	1.2 hours \$34.40 \$41 246 SF @ 1.2 hours \$2.47 \$3 246 SF @ 1.2 hours \$30.03 \$36 246 SF @ 1.2 hours \$30.03 \$36 246 SF @ 1.2 hours \$86.31 \$104 246 SF @ 1.2 hours \$86.31 \$104 246 SF @ 1.2 hours \$5.41 \$0 246 SF @ 1.2 hours \$5.41 \$0 246 SF @ 1.2 hours \$5.41 \$0 246 SF @ 1.2 hours \$5.42 hours \$5.42 hours \$5.42 hours \$39.00 \$390 100 LF @ 1.2 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$39.00 \$390 0.5 hours \$390.00 \$390 0.5 hours \$39.00 \$390 0.7 CY @ 1.2 hours \$39.00 \$390 0.7 hours \$390.00	1.2   hours	1.2 hours \$34.40 \$41 246 SF @ 200 SF/hour 1.2 hours @ 1.2 hours \$52.47 \$3 246 SF @ 200 SF/hour 1.2 hours @ 1.2 hours \$30.03 \$36 246 SF @ 200 SF/hour 1.2 hours @ 1.2 hours \$86.31 \$104 246 SF @ 200 SF/hour 1.2 hours @ 1.2 hours @ 1.2 hours \$86.31 \$104 246 SF @ 200 SF/hour 1.2 hours @ 1.2 hours @ 1.2 hours @ 246 SF @ 200 SF/hour 1.2 hours @ 246 SF @ 246 SF @ 246 SF @ 246 SF @ 246 SF @ 246 SF @ 246 SF @ 246 SF @ 246 SF @ 246 SF @	1.2   hours	1.2

### 5.24 AWTS (i/s trk wash bld) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended	Basis of Produ	ction and Quantities	for In-house Estimate	2		In-house Pricing References
	Quantity	Ivicusurc		Price						
5.24.12 Offsite T&D - Tank Demo	ı	1	Ī		offsite dispose	l is determined to be	the anti-disposal ant	ian		
Offsite Transportation - Debris	20.5	miles	\$3.25	Ć12F	0.8 CY @	30 CY/load =	0.0 loads @	385 miles/trip =	38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris		CY	\$337.50		0.8 CY @	27 CF/CY =	22.8 CF	363 IIIIles/ LTIP =	36.3 1111163	
·	0.8	S CY	\$337.50	\$270 <b>\$395</b>	,	27 CF/CY =	22.8 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo (Subt: Assemb 5.24.6 - 5.24.12)						ump demolition, and o	effeita transportation	2. disposal		
(Subt. Assemb 5.24.0 - 5.24.12)				\$1,500	turik/pipirig/pi	amp demontion, and t	ojjsite transportation	& uisposui		
5.24.13 Decon SCA (wash)		1			production rate	e = 105 SF/hr for 1-ne	rson crew w/ one uni	it each; facility experienc	P	
Laborer	1.7	hours	\$39.00	\$66	175 SF @	105 SF/hr =	1.7 hours @	1 pers/crew =	1.7 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		175 SF @	105 SF/hr =	1.7 hours @	1 unit/crew =	1.7 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper		hours	\$3.41		175 SF @	105 SF/hr =	1.7 hours @	1 unit/crew =	1.7 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)	1.7	ours	ψ3.12	\$79		100 017	117 110 010 0	1 amy orew	217 110010	nonymo pr mo (mie tem 013 133 10 7000)
5.24.14 Decon SCA (rinse)		1			•	e = 105 SF/hr for 1-pe	·			
Laborer		hours	\$39.00		175 SF @	105 SF/hr =	1.7 hours @	1 pers/crew =	1.7 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	1.7	hours	\$4.04		175 SF @	105 SF/hr =	1.7 hours @	1 unit/crew =	1.7 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	1.7	hours	\$3.41	\$6	175 SF @	105 SF/hr =	1.7 hours @	1 unit/crew =	1.7 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$79						
5.24.15 Decon Water Samp/Disp					production rat	e = 0.5 hours/sample	for two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
OC Analysis (EPA 624)		samp	\$105.00		1.0 areas @	1.1 samp/area =		ļ <b>,</b>		analytical price: average of three quotes
On-site Water Disposal		gal	\$0.0313		175 SF @	2.4 gal/sf/wa =	87.5 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose		1 84.	70.000	\$160	_	282., 2.,	21.10 84			and matter matter a sampling , the Company of Columb my
				7-00						
5.24.16 PCB Wipe Samples					No TCLP analys	es necessary accordin	g to site-wide closure	e plan		
Technician	0.3	hours	\$38.00	\$11	0.3 samp @	0.5 hr/samp =	0.15 hours @	2 pers/crew =	0.3 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	0.3	samp	\$83.33		175 SF @	625 SF/samp =	0.3 samples	•		analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$36						
(Subt: Assemb 5.24.13 - 5.24.16)				\$354	decontaminat	ion & sampling of SCA				

Total Non-Super Labor Hours

23.5

5.24.17 PPE Usage/H&S Planning				Level	@ 75%; Mod Level (	C @ 25% for tot non-supv	hrs for all tasks; HASP @ 2.5%	of non-supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0 23.5 hc	rs @ 8 hr/day	y = 2.9 days @	0% "D" days =	1.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.7	days	\$9.00	\$6 23.5 hc	rs @ 8 hr/day	y = 2.9 days @	25% "Mod C" days =	0.7 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	2.2	days	\$25.00	\$55 23.5 hc	rs @ 8 hr/day	y = 2.9 days @	75% "C" days =	2.2 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.6	hours	\$75.00	\$45 23.5 hc	rs @ 2.5% hr/	hr = 0.6 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$106					
5.24.18 Supervision				0.2 we	s supervisory time f	for closure of 1 tanks			
Foreman	8.0	hours	\$65.00	\$520 0.2 we	s @ 40 hrs/w	vk = 8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0 Include	in Gen'l Contractor	r G&A/Home Office indire	ct costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520		•			

### 5.24 AWTS (i/s trk wash bld) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Basis of Price	of Production and Quantities for In-house Estimate	In-house Pricing References
				T = .		
5.24.19 Certification				Engin	eer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	0.4	hours	\$130.00	\$52 23.5 ho	ours @ 0.015 hr/hr = 0.4 hours	Engineer rate: 2011 3rd party quote
Clerical	0.4	hours	\$45.00	\$18 23.5 ho	ours @ 0.015 hr/hr = 0.4 hours	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$70		
(Subt: Assemb 5.24.17 - 5.24.19)				\$696		
	•		•	•		
5.24 AWTS (i/s trk wash bld) 1 tnk	Direct Cost	Total	Basic	\$2,685		

5.24 AWTS (i/s trk wash bld) 1 tnk			
Total Cost Summary			
Total cost sullillary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$2,685	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$188	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$107	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$161	note: DEC uses 6%
Engineering During Construction	2.00%	\$54	note: DEC uses 2%
General Contractor Profit	6.00%	\$161	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$671	
Subt: AWTS (i/s trk wash bld) 1 tk		\$3,356	
Plus Contingency	10.00%	\$336	CWM and DEC 10%
Tot: AWTS (i/s trk wash bld) 1 tks		\$3,692	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.25 AWTS (i/s A wst awt bld) 2 tk

Basic Closure Activities Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate					In-house Pricing References
5.25.1 Inventory Verification					prod'n rates: 100	drums/hr; 15 min/tan	ker or rolloff; 30 mir	/tank; two persons re	quired	
Laborer	2.0	hours	\$39.00	\$78	2 tanks @	0.5 hour/tank =	1.0 hours @	2 units/crew =	2.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$78						
(Subt: Assemb 5.25.1 - 5.25.1)				\$78	tanks: T-8001 &	T-8002				
5.25.2 Onsite Aqueous Treatment					liquid wastes pur	mped directly from tan	ks into AWTS			
Onsite Aqueous Treatment - Tanks	5550.0	gals	\$0.1526	\$847	5550 gals					AWTS cost for groundwater
Subt - Onsite Aqueous Treatment				\$847						
(Subt: Assemb 5.25.2 - 5.25.2)				\$847	onsite treatmer	t of tanks' waste liquid	ls			
5.25.3 Steel Tank Demolition					prod'n rate = 200	) SF/hr ; 1 CF debris pe	r 36 sf tank area			
No. of Tanks/Capacity/Area/Weight	1.0	tnks @		n/a	5000 gallons:	427 SF Tanks:	12 CF @	490 Lb/CF =	5812 Lbs	Steel Tanks only; estimate 490#/CF
aborer	6.4	hours	\$39.00		427 SF @	200 SF/hour	2.1 hours @	3 units/crew =	6.4 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	4.3	hours	\$45.00		427 SF @	200 SF/hour	2.1 hours @	2 units/crew =	4.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	2.1	hours	\$84.09		427 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	2.1	hours	\$34.40		427 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	2.1	hours	\$2.47		427 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
_oader	2.1	hours	\$30.03		427 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
/ard Crane	2.1	hours	\$86.31			200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	2.1	hours	\$5.41		427 SF @	200 SF/hour	2.1 hours @	1 units/crew =	2.1 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$953		d upon actual tank din				. , . , . ,
5.25.4 FRP Tank Demolition					production rate :	= 200 SF/hour (same as	s steel tank demolition	n rate); 1 CF debris pe	r 36 SF tank area	
No. of Tanks/Capacity/Area/Weight	1.0	tnks @			550 gallons:	85 SF Tanks:	2 CF @	245 Lb/CF =	578 Lbs	FRP Tanks only; facility estimates 245#/CF
aborer	1.3	hours	\$39.00		85 SF @	200 SF/hour	0.4 hours @	3 units/crew =	1.3 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.9	hours	\$45.00		85 SF @	200 SF/hour	0.4 hours @	2 units/crew =	0.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.4	hours	\$84.09		85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.4	hours	\$34.40		85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.4	hours	\$2.47		85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.4	hours	\$30.03		85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
/ard Crane	0.4	hours	\$86.31	\$35	85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	85 SF @	200 SF/hour	0.4 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$186	tank areas base	d upon actual tank dim	nensions, or upon OS	WER 9476.00-6, Vol 3,	p. 5-5	
5.25.5 Tank Piping Demolition					avg prod'n rate =	: 20 LF/hr, rsm/up p. 3-		2) for 2"/4" metal pipe	@ 4#/LF	
Estimated Piping Length	200.0	LF		n/a	2 tanks @	100 LF/tank =	200 LF @	4 Lb/LF =	800 Lbs	combined Steel and FRP Tanks' Piping
Laborers	20.0	hours	\$39.00	\$780	200 LF @	20 LF/hour	10.0 hours @	2 units/crew =	20.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	10.0	hours	\$5.41	\$54	200 LF @	20 LF/hour	10.0 hours @	1 units/crew =	10.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$834	in the absence of	of facility data, piping a	assumed to average 1	100 l F/tank		

### 5.25 AWTS (i/s A wst awt bld) 2 tk

Basic Closure Activities Direct Costs	asic Closure Activities Direct Costs    Estimated Quantity							In-house Pricing References		
5.25.6 Tank Pump Demolition					nrod'n rate – 1 r	numn/hr/see RSM/IID	n 3-11 16-01-0634 a	and 16-01-0636) assum	ne 0.5 numns/tank	
Laborers	2.0	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1.0	hours	\$5.41		1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition			757.12					ne pump per two tank		
5.25.7 Load Tank Demo Debris					•	= 15 CY/hour; RSM/BC	•	<u>'</u>		
Laborer	0.1	hours	\$39.00		1.5 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.1	hours	\$45.00		1.5 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.1	hours	\$30.03		1.5 CY @	15 CY/hr =	0.1 hours @	1 units/crew =	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.1	hours	\$5.20		1.5 CY @	15 CY/hr =	0.1 hours @	1 units/crew	0.1 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$12	1 CY tank demo	debris = to 972 SF @ 1	1/3rd" thick; and/or 43	32 LF of 3" diam pipe; o	and/or 2 pumps	
5.25.8 Unl'd Stabilize/Encapsulate					production rate	= 15 tons/hour = 120	tons/day; includes un	loading, shredding, an	d filling containers	
PROCESS TONS (incl kiln dust)	3.9	TONS			1.5 CY debr +	15% kiln dust =	1.71 CY total	total tonnage =	3.9 tons	total tons derived from foregoing assemblies + kiln dust
Laborer	0.5	hours	\$39.00	\$20	3.9 tons @	15 tons/hr @	0.3 hours @	2 units/crew =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.8	hours	\$45.00	\$36	3.9 tons @	15 tons/hr @	0.3 hours @	3 units/crew =	0.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.3	hours	\$19.18	\$6	3.9 tons @	15 tons/hr @	0.3 hours @	1 units/crew =	0.3 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.3	hours	\$14.39	\$4	3.9 tons @	15 tons/hr @	0.3 hours @	1 units/crew =	0.3 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.3	hours	\$329.70	\$99	3.9 tons @	15 tons/hr @	0.3 hours @	1 units/crew =	0.3 hours	2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.3	hours	\$136.29		3.9 tons @	15 tons/hr @	0.3 hours @	1 units/crew =	0.3 hours	2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00		0.2 tons					
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00		0.2 tons @	20 ton/load =	0.0 loads			
Cement Kiln Dust - Mat'l&Delv Cost	0.2	tons	\$48.00	\$10						CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.1	units	\$1,000.00	\$100	1.7 CYs @	30 CY/unit =	0.1 containers			CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	1.7 CYs @	30 CY/unit =	0.1 rolloffs @	0.3 hours/rolloff =	0.0 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$315	1 CY tank demo	debris = to 972 SF @	1/3rd" thick; and/or 4	132 LF of 3" diam pipe;	and/or 2 pumps	
5.25.9 Offsite T&D - Tank Demo						s determined to be th				
Offsite Transportation - Debris	38.5	miles	\$3.25		1.7 CY @	30 CY/load =	0.1 loads @	385 miles/trip =	38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	1.7	CY	\$337.50		1.7 CY @	27 CF/CY =	46.3 CF			DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$699						
(Subt: Assemb 5.25.3 - 5.25.9)				\$3,082	tank/piping/pu	mp demolition, and o <u>f</u>	ffsite transportation &	disposal		
5.25.10 Decon SCA (wash)								each; facility experienc		
Laborer	5.6	hours	\$39.00		592 SF @	105 SF/hr =	5.6 hours @	1 pers/crew =	5.6 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	5.6	hours	\$4.04		592 SF @	105 SF/hr =	5.6 hours @	1 unit/crew =	5.6 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	5.6	hours	\$3.41		592 SF @	105 SF/hr =	5.6 hours @	1 unit/crew =	5.6 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$260						

### 5.25 AWTS (i/s A wst awt bld) 2 tk

Basic Closure Activities Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price		Basis of Produc	tion and Quantities	In-house Pricing References		
					•					
5.25.11 Decon SCA (rinse)					production rate =	= 105 SF/hr for 1-persor	n crew w/ one unit e	each; facility experienc	е	
Laborer	5.6	hours	\$39.00	\$218	592 SF @	105 SF/hr =	5.6 hours @	1 pers/crew =	5.6 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	5.6	hours	\$4.04	\$23	592 SF @	105 SF/hr =	5.6 hours @	1 unit/crew =	5.6 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	5.6	hours	\$3.41	\$19	592 SF @	105 SF/hr =	5.6 hours @	1 unit/crew =	5.6 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$260						
5.25.12 Decon Water Samp/Disp					production rate =	= 0.5 hours/sample for	two techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116	1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	296.0	gal	\$0.0313	\$9	592 SF @	0.5 gal/sf/wa =	296 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$167						
5.25.13 PCB Wipe Samples					No TCLP analyses	s necessary according to	o site-wide closure p	olan		
Technician	0.9	hours	\$38.00	\$34	0.9 samp @	0.5 hr/samp =	0.45 hours @	2 pers/crew =	0.9 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	0.9	samp	\$83.33	\$75	592 SF @	625 SF/samp =	0.9 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$109						
(Subt: Assemb 5.25.10 - 5.25.13)				\$796	decontaminatio	n & sampling of SCA				

Total Non-Super Labor Hours

51.6

5.25.14 PPE Usage/H&S Planning			1	Level C @ 75%;	Mod Level C @ 25% fo	or tot non-supv hrs fo	or all tasks; HASP @ 2.5% o	f non-supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0 63.0 hours @	8 hr/day =	7.9 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	2.0	days	\$9.00	\$18 63.0 hours @	8 hr/day =	7.9 days @	25% "Mod C" days =	2.0 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	5.9	days	\$25.00	\$148 63.0 hours @	8 hr/day =	7.9 days @	75% "C" days =	5.9 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.6	hours	\$75.00	\$120 63.0 hours @	2.5% hr/hr =	1.6 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$286					
5.25.15 Supervision				0.2 weeks supe	rvisory time for closur	e of 2 tanks			
Foreman	8.0	hours	\$65.00	\$520 0.2 weeks @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0 Included in Ge	n'l Contractor G&A/Ho	me Office indirect co	sts		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision		_		\$520					
5.25.16 Certification				Engineer @ 1.5	% and Clerical @ 1.5%	of total non-supervis	sory hours for all tasks		
Engineer	0.9	hours	\$130.00	\$117 63.0 hours @	0.015 hr/hr =	0.9 hours			Engineer rate: 2011 3rd party quote
Clerical	0.9	hours	\$45.00	\$41 63.0 hours @	0.015 hr/hr =	0.9 hours	•		Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$158			•		
(Subt: Assemb 5.25.14 - 5.25.16)				\$963			•		

5.25 AWTS (i/s A wst awt bld) 2 tk Direct Cost Total Basic \$5,766

5.25 AWTS (i/s A wst awt bld)	2 tk		
Total Cost Summary			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost	Cost Range
Direct Costs		\$5,766	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$404	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$231	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$346	note: DEC uses 6%
Engineering During Construction	2.00%	\$115	note: DEC uses 2%
General Contractor Profit	6.00%	\$346	Note DEC adds 6%
Indirect Costs	25.00%	\$1,442	
Subt: AWTS (i/s A wes awt) 2 tks		\$7,208	
Plus Contingency	10.00%	\$721	CWM and DEC 10%
Tot: AWTS (i/s A west awt) 2 tnks		\$7,928	

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.26 AWTS (i/s A south SLF3) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	on and Quantities for In-	house Estimate			In-house Pricing References
5.26.1 Inventory Verification					nrod'n rates: 100	drums/hr; 15 min/tanker	or rolloff: 30 min/ta	ank: two nersons requi	ired	
Laborer	1.0	hours	\$39.00	\$39	1 tanks @	0.5 hour/tank =	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification	1.0	Hours	\$33.00	\$39		0.5 Hour talk =	0.5 110013 @	Z dilits/cicw =	1.0 110013	louded labor rate. louded labor rate 2011 5rd party quote
(Subt: Assemb 5.26.1 - 5.26.1)					tank: T-8004					
(3000: 7030:110 3:20:1 3:20:1)	<u> </u>			Ç	turn. 1 0004					
5.26.2 Empty Tank T-8004					production rate =	1,650 gals/hour; RSM/UF	P p. 9-171 (line item	33-19-0101)		
Laborer	0.0	hours	\$39.00	\$0	Labor included in	third party operation of A	AWTS			loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00	\$0	Existing equipme	nt part of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.3	hours	\$6.31	\$2	550 gals @	1650 gals/hr =	0.3 hours @	1 units/crew =	0.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank				\$2		-				
2. 2. Transport Tanker Orath					mun di inti	0 F h a	transpart			
5.26.3 Transport Tanker Onsite			622 :-	40		0.5 hours/trip for onsite	<u> </u>	0.51 /::	0.4.1	DCAA/I/O 472/II: 11 04 54 22 40 7440)
Tractor		hours	\$32.45		550 SF @	5500 gals/load =	0.1 loads @	0.5 hours/trip =	0.1 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Oriver		hours	\$45.00			third party operation of A		0.51 // /	0.4.1	loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)	0.1	hours	\$6.31		550 SF @	5500 gals/load =	0.1 loads @	0.5 hours/trip =	0.1 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Onsite Tanker Transport				\$4						
5.26.4 Empty Tanker					production rate =	1,650 gals/hour; RSM/UF	P p. 9-171 (line item	33-19-0101)		
Laborer	0.0	hours	\$39.00	\$0		third party operation of A		,		loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00			nt part of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.3	hours	\$6.31		550.0 gals @	1650 gals/hr =	0.3 hours @	1 units/crew =	0.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanker				\$2		<i>J</i> ,		•		
(Subt: Assemb 5.26.2 - 5.26.4)				\$8						
5.26.5 Onsite Aqueous Treatment					•	sferred to AWTS by tanke	ers			
Onsite Aqueous Treatment - Tanks	550.0	gals	\$0.1526		550 gals					AWTS cost for groundwater
Subt - Onsite Aqueous Treatment				\$84						
(Subt: Assemb 5.26.5 - 5.26.5)				\$84	onsite treatmen	t of tanks' waste liquids				
5.26.6 Steel Tank Demolition					prod'n rate = 200	SF/hr (rsm/up 16-01-014	.2/0216/0308, pp. 3-	2/3-3,3-5); 1 CF debris	s per 36 sf tank area	
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	490 Lb/CF =	0 Lbs	Steel Tanks only; estimate 490#/CF
Laborer	0.0	hours	\$39.00		0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00		0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.0	hours	\$84.09		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.0	hours	\$34.40		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0	hours	\$2.47	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.0	hours	\$30.03		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41		0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition				\$0	\$0 tank areas based upon actual tank dimensions, or upon OSWER 9476.00-6, Vol 3, p. 5-5				5-5	
								· · ·		

### 5.26 AWTS (i/s A south SLF3) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
5.26.7 FRP Tank Demolition					production rate =	200 SF/hour (same as	steel tank demolitior	n rate); 1 CF debris per 3	6 SF tank area	
No. of Tanks/Capacity/Area/Weight	1.0	tnks @			550 gallons:	85 SF Tanks:	2 CF @	245 Lb/CF =	578 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	1.3	hours	\$39.00	\$51	85 SF @	200 SF/hour	0.4 hours @	3 units/crew =	1.3 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.9	hours	\$45.00	\$41	85 SF @	200 SF/hour	0.4 hours @	2 units/crew =	0.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.4	hours	\$84.09	\$34	85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.4	hours	\$34.40	\$14	85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.4	hours	\$2.47	\$1	85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.4	hours	\$30.03	\$12	85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.4	hours	\$86.31	\$35	85 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	85 SF @	200 SF/hour	0.4 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$186	tank areas base	d ирс				
						•				
5.26.8 Tank Piping Demolition					avg prod'n rate =	20 LF/hr, rsm/up p. 3-1	10 (16-01-0621/0622	) for 2"/4" metal pipe @	4#/LF	
Estimated Piping Length	100.0	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	combined Steel and FRP Tanks' Piping
Laborers	10.0	hours	\$39.00	\$390	100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5.0	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$417	in the absence o	f faci				
						// / DCM///D	2.44.45.04.0524	145.04.0525)	2.5 // 1	
5.26.9 Tank Pump Demolition	1.0		¢20.00	620			•	nd 16-01-0636) assume		
Laborers		hours	\$39.00		0.5 pumps @	1 pump/hr	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	0.5	hours	\$5.41		0.5 pumps @	1 pump/hr	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$42	pump weight = .	250# each; in the absen	se of facility data, on	e pump per two tanks is	s estimated	
5.26.10 Load Tank Demo Debris					production rate =	15 C no separate facil	lity estimate - part of	total demo cost		
Laborer	0.0	hours	\$39.00	\$0	0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00		0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.0	hours	\$30.03	\$0	0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)		hours	\$5.20	\$0	0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris					\$0 1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps				d/or 2 pumps	
							, ,	,	,	

### 5.26 AWTS (i/s A south SLF3) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price	Basis of Produc	tion and Quantities for Ir	n-house Estimate	In-house Pricing References		
						47			CIII.	
5.26.11 Unl'd Stabilize/Encapsulate	0.6	TONG				= 15 tons/hour = 120 ton		And the second of the second o		
PROCESS TONS (incl kiln dust)		TONS	¢20.00	Ć 4		5% kiln dust = 0.65 CY tota				total tons derived from foregoing assemblies + kiln dust
Laborer		hours	\$39.00			ons/hr @ 0.0 hours @ 2 u				loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00							loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)		hours	\$19.18							RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)		hours	\$14.39							RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder		hours	\$329.70		0.6 tons @ 15 tons/hr @ 0.0 hours @ 1 units/crew = 0.0 hours 0.6 tons @ 15 tons/hr @ 0.0 hours @ 1 units/crew = 0.0 hours					2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo		hours	\$136.29		0.6 tons @ 15 tons/hr @ 0.0 hours @ 1 units/crew = 0.0 hours 0.1 tons					2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost		tons	\$0.00		0.1 tons 0.1 tons @ 20 ton/load = 0.0 loads					
Cement Kiln Dust - Delivery Cost		loads	\$0.00		U.1 tons @ 20 t	on/load = 0.0 loads				
Cement Kiln Dust - Mat'l&Delv Cost		tons	\$48.00	\$5		.,				CWM actual 2011 costs
Encapsulation Containers (30-CY)		units	\$1,000.00			//unit = 0.0 containers				CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02			//unit = 0.0 rolloffs @ 0.0				dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$13	1 CY tank demo	o debris = to 972 SF @ 1/3	Brd" thick; and/or 43	32 LF of 3" diam pipe; a	nd/or 2 pumps	
5.26.12 Offsite T&D - Tank Demo					offsite disposal i	s determined to be the o	nly disposal option			+
Offsite Transportation - Debris	38.5	miles	\$3.25	\$125	0.7 CY @	30 CY/load =	0.0 loads @	385 miles/trip =	38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	0.7	CY	\$337.50	\$236	0.7 CY @	27 CF/CY =	17.7 CF	·		DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$361		•				
(Subt: Assemb 5.26.6 - 5.26.12)				\$1,019	tank/piping/pu	mp demolition, and offsit	te transportation & a	dispı		
5.26.13 Decon SCA (wash)	<u> </u>	1	1		nraduction rata	= 105 SF/hr for 1-person	crow w/ one unit on	ach, facility avacrions		1
Laborer	1.0	hours	\$39.00	¢74	204 SF @	105 SF/hr =	1.9 hours @	1 pers/crew =	1.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer		hours	\$4.04		204 SF @	105 SF/hr =	1.9 hours @	1 unit/crew =	1.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
		hours	\$3.41		204 SF @	105 SF/hr =	1.9 hours @	1 unit/crew =	1.9 hours	RSM/HC p. 471 (line item 01 54 33 40 3430)
Vacuum Sweeper	1.9	nours	\$3.41	\$88 \$88	204 SF @	105 3F/11f =	1.9 hours @	1 unit/crew =	1.9 Hours	RSW/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (wash)				\$88						
5.26.14 Decon SCA (rinse)						= 105 SF/hr for 1-person				
Laborer		hours	\$39.00		204 SF @	105 SF/hr =	1.9 hours @	1 pers/crew =	1.9 hours	two laborers-1 unit each; rate 2011 3rd party quote
Pressure Washer	1.9	hours	\$4.04		204 SF @	105 SF/hr =	1.9 hours @	1 unit/crew =	1.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	1.9	hours	\$3.41		204 SF @	105 SF/hr =	1.9 hours @	1 unit/crew =	1.9 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon SCA (rinse)				\$88						
5.26.15 Decon Water Samp/Disp	-	<del>                                     </del>			production rate	= 0.5 hours/sample for tv	vo techs			
Technician	1.1	hours	\$38.00	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)		samp	\$105.00		1.0 areas @	1.1 samp/area =	1.1 samples	r/		analytical price: average of three quotes
On-site Water Disposal	102.0	<u> </u>	\$0.0313		204 SF @	0.5 gal/sf/wa =	102 gallons			site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose	102.0	0m.	70.0015	\$160		0.0 60., 0.,	0			
Sast Becom Water Samp, Bispose				Ş100						

### 5.26 AWTS (i/s A south SLF3) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price		on and Quantities for I	n-house Estimate	In-house Pricing References		
5.26.16 PCB Wipe Samples					No TCLP analyses	necessary according to	site-wide closure pla	n		
Technician	0.3	hours	\$38.00		0.3 samp @	0.5 hr/samp =	0.15 hours @	2 pers/crew =	0.3 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	0.0	samp	\$446.67	\$0						analytical price: average of three quotes
PCB Analysis (SW 8080)	0.3	samp	\$83.33	\$25	204 SF @	625 SF/samp =	0.3 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$36					•	
(Subt: Assemb 5.26.13 - 5.26.16)				\$373	decontamination	a & sampling of SCA				

Total Non-Super Labor Hours

19.6

5.26.17 PPE Usage/H&S Planning					Level C @ 75%; M	od Level C @ 25% for	tot non-supv hrs for	all tasks; HASP @ 2.5% o	f non-supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0	19.6 hours @	8 hr/day =	2.5 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.6	days	\$9.00	\$5	19.6 hours @	8 hr/day =	2.5 days @	25% "Mod C" days	= 0.6 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.9	days	\$25.00	\$48	19.6 hours @	8 hr/day =	2.5 days @	75% "C" days =	1.9 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.5	hours	\$75.00	\$38	19.6 hours @	2.5% hr/hr =	0.5 hours		•	Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$90						
5.26.18 Supervision					0.1 weeks supervi	sory time for closure	of 1 tank			
Foreman	4.0	hours	\$65.00	\$260	0.1 weeks @	40 hrs/wk =	4.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	Included in Gen'l	Contractor G&A/Hom	e Office indirect cos	ts		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260						
5.26.19 Certification					Engineer @ 1.5%	and Clerical @ 1.5% o	f total non-supervisc	ory hours for all tasks		
Engineer	0.3	hours	\$130.00	\$39	19.6 hours @	0.015 hr/hr =	0.3 hours		•	Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	19.6 hours @	0.015 hr/hr =	0.3 hours		•	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$53						
(Subt: Assemb 5.26.17 - 5.26.19)				\$403				_		

5.26 AWTS (i/s A south SLF3) 1 tk	Direct Cost	Total	Basic	\$1,926

5.26 AWTS (i/s A south SLF3) 1 tk			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$1,926	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$135	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$77	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$116	note: DEC uses 6%
Engineering During Construction	2.00%	\$39	note: DEC uses 2%
General Contractor Profit	6.00%	\$116	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$482	
Subt: AWTS (i/s A sou SLF 3) 1 tk		\$2,408	
Plus Contingency	10.00%	\$241	CWM and DEC 10%
Tot: AWTS (i/s A sou SLF 3) 1 tnk		\$2,649	
·			

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.27 AWTS (i/s A sou SLF10) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	on and Quantities for In	-house Estimate			In-house Pricing References
	•									
5.27.1 Inventory Verification					prod'n rates: 100	drums/hr; 15 min/tanke	r or rolloff; 30 min/t	ank; two persons requ	uired	
Laborer	1.0	hours	\$39.00	\$39	1 tanks @	0.5 hour/tank =	0.5 hours @	2 units/crew =	1.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$39						
(Subt: Assemb 5.27.1 - 5.27.1)				\$39	tank: T-8005					
	•	•								
5.27.2 Empty Tank T-8005					production rate =	1,650 gals/hour; RSM/U	P p. 9-171 (line item	n 33-19-0101)		
Laborer	0.0	hours	\$39.00	\$0		third party operation of		,		loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00			t part of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.2	hours	\$6.31		300 gals @	1650 gals/hr =	0.2 hours @	1 units/crew =	0.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank				\$1	<u> </u>	,		•		
				· · ·						
5.27.3 Transport Tanker Onsite					production rate =	0.5 hours/trip for onsite	travel			
Tractor	0.03	hours	\$32.45	\$1	300 gals @	5500 gals/load =	0.05 loads @	0.5 hours/load =	0.03 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver		hours	\$45.00		0 0	third party operation of		•		loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)		hours	\$6.31		300 gals @	5500 gals/load =	0.05 loads @	0.5 hours/load =	0.03 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transport Tanker Onsite				\$1	<u> </u>	<u> </u>		•		
		1								
5.27.4 Empty Tanker		1			production rate =	1,650 gals/hour; RSM/U	P p. 9-171 (line item	n 33-19-0101)		
Laborer	0.0	hours	\$39.00	\$0		third party operation of		loaded labor rate: loaded labor rate 2011 3rd party quote		
Pumping Equipment		hours	\$0.00			t part of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.2	hours	\$6.31		300 gals @	1650 gals/hr =	0.2 hours @	1 units/crew =	0.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanker				\$1	<u> </u>	<u> </u>		•		
(Subt: Assemb 5.27.2 - 5.27.4)				\$4						
				-						•
5.27.5 Onsite Aqueous Treatment					liquid wastes trans	sferred to AWTS by tank	ers			
Onsite Aqueous Treatment - Tanks	300.0	gals	\$0.1526	\$46	300 gals	, , , , , , , , , , , , , , , , , , , ,				AWTS cost for groundwater
Subt - Onsite Aqueous Treatment		1		\$46	<u>U</u>					
(Subt: Assemb 5.27.5 - 5.27.5)		1			onsite treatment	of tanks' waste liquids				
· · · · · · · · · · · · · · · · · · ·		•				•				•
										T
5.27.6 Steel Tank Demolition					prod'n rate = 200	SF/hr (rsm/up 16-01-014	12/0216/0308, pp. 3	3-2/3-3,3-5); 1 CF debr	is per 36 sf tank area	
	1.0	tnks @			300 gallons:	102 SF Tanks:	3 CF @	490 Lb/CF =	1388 Lbs	Steel Tanks only; estimate 490#/CF
No. of Tanks/Capacity/Area/Weight				ć.co	102 SF @	200 SF/hour	0.5 hours @	3 units/crew =	1.5 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
		hours	\$39.00	5591						
Laborer	1.5								1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laborer Equipment Operator (Medium)	1.5 1.0	hours	\$45.00	\$45	102 SF @	200 SF/hour	0.5 hours @	2 units/crew =	1.0 hours 0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote RSM/HC p. 467 (line item 01 54 33 20 0320)
Laborer Equipment Operator (Medium) Excavator	1.5 1.0 0.5	hours hours	\$45.00 \$84.09	\$45 \$42	102 SF @ 102 SF @	200 SF/hour 200 SF/hour	0.5 hours @ 0.5 hours @	2 units/crew = 1 units/crew =	0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment	1.5 1.0 0.5 0.5	hours hours hours	\$45.00 \$84.09 \$34.40	\$45 \$42 \$17	102 SF @ 102 SF @ 102 SF @	200 SF/hour 200 SF/hour 200 SF/hour	0.5 hours @ 0.5 hours @ 0.5 hours @	2 units/crew = 1 units/crew = 1 units/crew =	0.5 hours 0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320) 2004 DEC Rate * Implicit Deflator
No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment Claw Attachment Loader	1.5 1.0 0.5 0.5 0.5	hours hours hours	\$45.00 \$84.09 \$34.40 \$2.47	\$45 \$42 \$17 \$1	102 SF @ 102 SF @ 102 SF @ 102 SF @	200 SF/hour 200 SF/hour 200 SF/hour 200 SF/hour	0.5 hours @ 0.5 hours @ 0.5 hours @ 0.5 hours @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =	0.5 hours 0.5 hours 0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320) 2004 DEC Rate * Implicit Deflator RSM/HC p. 477 (line item 01 54 33 20 0345)
Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment Claw Attachment Loader	1.5 1.0 0.5 0.5 0.5 0.5	hours hours hours hours	\$45.00 \$84.09 \$34.40 \$2.47 \$30.03	\$45 \$42 \$17 \$1 \$15	102 SF @ 102 SF @ 102 SF @ 102 SF @ 102 SF @	200 SF/hour 200 SF/hour 200 SF/hour 200 SF/hour 200 SF/hour	0.5 hours @ 0.5 hours @ 0.5 hours @ 0.5 hours @ 0.5 hours @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =	0.5 hours 0.5 hours 0.5 hours 0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320) 2004 DEC Rate * Implicit Deflator RSM/HC p. 477 (line item 01 54 33 20 0345) RSM/HC p. 469 (line item 01 54 33 20 4730)
Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment Claw Attachment	1.5 1.0 0.5 0.5 0.5 0.5 0.5	hours hours hours	\$45.00 \$84.09 \$34.40 \$2.47	\$45 \$42 \$17 \$1 \$15 \$43	102 SF @ 102 SF @ 102 SF @ 102 SF @	200 SF/hour 200 SF/hour 200 SF/hour 200 SF/hour	0.5 hours @ 0.5 hours @ 0.5 hours @ 0.5 hours @	2 units/crew = 1 units/crew = 1 units/crew = 1 units/crew =	0.5 hours 0.5 hours 0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320) 2004 DEC Rate * Implicit Deflator RSM/HC p. 477 (line item 01 54 33 20 0345)

### 5.27 AWTS (i/s A sou SLF10) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
				,						
5.27.7 FRP Tank Demolition					production rate =	= 200 SF/hour (same as	steel tank demolitio	n rate); 1 CF debris pei	r 36 SF tank area	
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	0.0	hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00	\$0	0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.0	hours	\$84.09	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.0	hours	\$34.40	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0	hours	\$2.47	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.0	hours	\$30.03	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$0	tank areas base	d upon actual tank dim	ensions, or upon OSV	WER 9476.00-6, Vol 3,	p. 5-5	
						·	·			
5.27.8 Tank Piping Demolition					avg prod'n rate =	20 LF/hr, rsm/up p. 3-	10 (16-01-0621/0622	) for 2"/4" metal pipe	@ 4#/LF	
Estimated Piping Length	100.0	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	combined Steel and FRP Tanks' Piping
Laborers	10.0	hours	\$39.00	\$390	100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5.0	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$417	in the absence o	of facility data, piping a	ssumed to average 1	00 LF/tank		
							-			
5.27.9 Tank Pump Demolition					prod'n rate = 1 p	ump/hr (see RSM/UP p	. 3-11, 16-01-0634 aı	nd 16-01-0636) assum	e 0.5 pumps/tank	
Laborers	1.0	hours	\$39.00	\$39	0.5 pumps @	1 pump/hr	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	0.5	hours	\$5.41	\$3	0.5 pumps @	1 pump/hr	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$42	pump weight = .	250# each; in the abser	se of facility data, or	ne pump per two tanks	is estimated	
•						·				
5.27.10 Load Tank Demo Debris					production rate =	= 15 CY/hour; RSM/BC ¡	o. 42 (line item 0222!	5-730-3080)		
Laborer	0.0	hours	\$39.00	\$0	0.59 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00	\$0	0.59 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.0	hours	\$30.03	\$0	0.59 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.0	hours	\$5.20	\$0	0.59 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$0	\$0 1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps					
						<u> </u>		, , , , ,		

### 5.27 AWTS (i/s A sou SLF10) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.27.11 Unl'd Stabilize/Encapsulate					production rate = 15 tons/hour = 120 tons/day; includes unloading, shredding, and filling containers	
PROCESS TONS (incl kiln dust)	1.0	TONS			0.6 CY debr + 15% kiln dust = 0.67 CY total total tonnage = 1.0 tons	total tons derived from foregoing assemblies + kiln dust
Laborer	0.1	hours	\$39.00		1.0 tons @ 15 tons/hr @ 0.1 hours @ 2 units/crew = 0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.2	hours	\$45.00	\$9	1.0 tons @ 15 tons/hr @ 0.1 hours @ 3 units/crew = 0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.1	hours	\$19.18	\$2	1.0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.1	hours	\$14.39	\$1	1.0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.1	hours	\$329.70		1.0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.1	hours	\$136.29		1.0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00		0.1 tons	
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	0.1 tons @ 20 ton/load = 0.0 loads	
Cement Kiln Dust - Mat'l&Delv Cost	0.1	tons	\$48.00	\$5		CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.0	units	\$1,000.00		0.7 CYs @ 30 CY/unit = 0.0 containers	CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	0.7 CYs @ 30 CY/unit = 0.0 rolloffs @ 0.1 hours/rolloff = 0.0 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$68	1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	
5.27.12 Offsite T&D - Tank Demo					offsite disposal is determined to be the only disposal option	+
Offsite Transportation - Debris	38.5	miles	\$3.25	\$125	0.7 CY @ 30 CY/load = 0.1 loads @ 385 miles/trip = 38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	0.7	CY	\$337.50	\$236	0.7 CY @ 27 CF/CY = 18.2 CF	DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$361		
(Subt: Assemb 5.27.6 - 5.27.12)				\$1,113	tank/piping/pump demolition, and offsite transportation & disposal	
5.27.13 Decon SCA (wash)		1			not applicable - secondary containmnent demolished with primary tank	
Subt - Decon SCA (wash)				\$0		
5.27.14 Decon SCA (rinse)						
Subt - Decon SCA (rinse)				\$0		
5.27.15 Decon Water Samp/Disp						
Subt - Decon Water Samp/Dispose				\$0		
5.27.16 PCB Wipe Samples						
Subt - PCB Wipe/Destruct Samp				\$0		
(Subt: Assemb 5.27.13 - 5.27.16)				50	decontamination & sampling of SCA	

5.27.17 PPE Usage/H&S Planning				Level C @ 75%; N	/lod Level C @ 25% for	tot non-supv hrs for	r all tasks; HASP @ 2.5% of non-sup	pv hrs
PPE Usage - Level D	0.0	days	\$0.00	\$0 14.8 hours @	8 hr/day =	1.8 days @	0% "D" days = 0.0 days	s Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.5	days	\$9.00	\$5 14.8 hours @	8 hr/day =	1.8 days @	25% "Mod C" days = 0.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.3	days	\$25.00	\$33 14.8 hours @	8 hr/day =	1.8 days @	75% "C" days = 1.3 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.4	hours	\$75.00	\$30 14.8 hours @	2.5% hr/hr =	0.4 hours		Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$67				
							·	

### 5.27 AWTS (i/s A sou SLF10) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.27.18 Supervision					0.1 weeks supervisory time for closure of 1 tank	
Foreman	4.0	hours	\$65.00	\$260	0.1 weeks @ 40 hrs/wk = 4.0 hours	Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen'l Contractor G&A/Home Office indirect costs	Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260		
5.27.19 Certification					Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	0.2	hours	\$130.00	\$26	14.8 hours @ 0.015 hr/hr = 0.2 hours	Engineer rate: 2011 3rd party quote
Clerical	0.2	hours	\$45.00	\$9	14.8 hours @ 0.015 hr/hr = 0.2 hours	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$35		
(Subt: Assemb 5.27.17 - 5.27.19)				\$362		

5.27 AWTS (i/s A sou SLF10) 1 tnk			
Total Cost Summary			
Cont Catalogue	Duran and	Durana	Leathern.
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$1,563	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$109	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$63	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$94	note: DEC uses 6%
Engineering During Construction	2.00%	\$31	note: DEC uses 2%
General Contractor Profit	6.00%	\$94	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$391	
Subt: AWTS (i/s A sou SLF10) 1 tk		\$1,954	
Plus Contingency	10.00%	\$195	CWM and DEC 10%
Tot: AWTS (i/s A sou SLF10) 1 tnk		\$2,149	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.28 AWTS (i/s A eastSLF12) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production a	nd Quantities for I	n-house Estimate			In-house Pricing References
5.28.1 Inventory Verification					prod'n rates: 50 drum	s/hr; 15 min/tanker	r or rolloff; 30 min/ta	ank; two persons requir	red	
Laborer	1.0	hours	\$39.00	\$39	1 tanks @	0.5 hour/tank =	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification			,	\$39		,				, , , , , , , , , , , , , , , , , , , ,
(Subt: Assemb 5.28.1 - 5.28.1)					tank: T-8006					
5.28.2 Empty Tank T-8006					production rate = 1,65			n 33-19-0101)		
Laborer		hours	\$39.00		Labor included in third		f AWTS			loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment		hours	\$0.00		Existing equipment pa					RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.2	hours	\$6.31			1650 gals/hr =	0.2 hours @	1 units/crew =	0.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank				\$1						
5.28.3 Transport Tanker Onsite					production rate = 0.5	hours/trip for onsit	e travel			
Tractor	0.03	hours	\$32.45	\$1		5500 gals/load =	0.05 loads @	0.5 hours/load =	0.03 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver		hours	\$45.00		Labor included in third			3.55 3/1000	5.000010	loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)		hours	\$6.31			5500 gals/load =	0.05 loads @	0.5 hours/load =	0.03 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Tanker Transport	0.03	110013	70.31	\$0 \$1		5550 <u>B</u> ai3/10au -	5.05 loads @	5.5 Hours/10au -	0.05 110013	1300) 113 p. 772 (iiile itelii 01 34 33 40 0300)
·										
5.28.4 Empty Tanker					production rate = 1,65			n 33-19-0101)		
Laborer	0.0	hours	\$39.00	\$0	Labor included in third	d party operation of	f AWTS			loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00	\$0	Existing equipment pa	art of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.2	hours	\$6.31	\$1	300 gals @	1650 gals/hr =	0.2 hours @	1 units/crew =	0.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanker				\$1						
(Subt: Assemb 5.28.2 - 5.28.4)				\$4						
5.28.5 Onsite Aqueous Treatment	ı	Ī			liquid wastes transferi	red to AWTS by tan	kers			T
Onsite Aqueous Treatment - Tanks	300.0	gals	\$0.1526	\$46	300 gals	ica to Avvis by tail	inci 3			AWTS cost for groundwater
Subt - Onsite Aqueous Treatment	300.0	85.10	Ç0.1320	\$46	00.0					<u>B</u> . <u>Gamanacci</u>
(Subt: Assemb 5.28.5 - 5.28.5)					onsite treatment of t	anks' waste liquids				
5.20 C Charl Taul Daniel Side					200 CE //		142/0246/0200	2 2/2 2 2 5), 4 65	and 20 of table	
5.28.6 Steel Tank Demolition No. of Tanks/Capacity/Area/Weight	1.0	tnks @				nr (rsm/up 16-01-01 102 SF Tanks:	142/0216/0308, pp. : 3 CF @	3-2/3-3,3-5); 1 CF debri 490 Lb/CF =	1388 Lbs	Steel Tanks only; estimate 490#/CF
Laborer		hours	\$39.00	¢50		200 SF/hour	0.5 hours @	3 units/crew =	1.5 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00			200 SF/hour	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)  Excavator		hours	\$45.00			200 SF/hour	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
		hours	\$84.09			200 SF/hour 200 SF/hour		•		
Metal Shears Attachment			\$34.40 \$2.47				0.5 hours @	1 units/crew =	0.5 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment		hours				200 SF/hour	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader		hours	\$30.03			200 SF/hour	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane		hours	\$86.31			200 SF/hour	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.5	hours	\$5.41		102 SF @	200 SF/hour	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Steel Tank Demolition										

### 5.28 AWTS (i/s A eastSLF12) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	tion and Quantities fo	r In-house Estimate			In-house Pricing References
5.28.7 FRP Tank Demolition					production rate	= 200 SF/hour (same a	s steel tank demoliti	on rate); 1 CF debris per	36 SF tank area	
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			0 gallons:	0 SF Tanks:	0 CF @	245 Lb/CF =	0 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	0.0	hours	\$39.00	\$0	0 SF @	200 SF/hour	0.0 hours @	3 units/crew =	0.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00	\$0	0 SF @	200 SF/hour	0.0 hours @	2 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.0	hours	\$84.09	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.0	hours	\$34.40	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0	hours	\$2.47	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.0	hours	\$30.03	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.0	hours	\$86.31	\$0	0 SF @	200 SF/hour	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	0 SF @	200 SF/hour	0.0 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$0	tank areas base	ed uţ				
5.28.8 Tank Piping Demolition	1				avg prod'n rate	= 20 LF/hr, rsm/up p. 3	-10 (16-01-0621/062	22) for 2"/4" metal pipe	@ 4#/LF	
Estimated Piping Length	100.0	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	combined Steel and FRP Tanks' Piping
Laborers	10.0	hours	\$39.00	\$390	100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5.0	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$417	in the absence	of fa				
5.28.9 Tank Pump Demolition					prod'n rate = 1 r	numn/hr (see RSM/UP	n. 3-11. 16-01-0634	and 16-01-0636) assume	0.5 numns/tank	
Laborers	1.0	hours	\$39.00	\$39	0.5 pumps @	1 pump/hr	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment		hours	\$5.41		0.5 pumps @	1 pump/hr	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition								one pump per two tanks	is estimated	7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
				•	r - r - y -	,				
5.28.10 Load Tank Demo Debris		<u> </u>			production rate	= 15 CY/hour; RSM/BC	p. 42 (line item 022)	25-730-3080)		
Laborer	0.0	hours	\$39.00	\$0	0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.0	hours	\$30.03	\$0	0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.0	hours	\$5.20	\$0	0.6 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$0	1 CY tank demo	o debris = to 972 SF @ .	1/3rd" thick; and/or	432 LF of 3" diam pipe; a	nd/or 2 pumps	
Sast Load Talik Delilo Debilo				<b>30</b>	1 CT turk derric	, ucbiis - 10 372 3F @ .	1,514 tiller, and/or	-32 Li Oj 3 didili pipe, t	na, or 2 pullips	

### 5.28 AWTS (i/s A eastSLF12) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	asis of Production and Quantities for In-house Estimate	-house Pricing References
		Τ	T			
5.28.11 Unl'd Stabilize/Encapsulate					oduction rate = 15 tons/hour = 120 tons/day; includes unloading, shredding, and filling containers	
PROCESS TONS (incl kiln dust)	1.0	TONS			6 CY debr + 15% kiln dust = 0.67 CY total total tonnage = 1.0 tons	otal tons derived from foregoing assemblies + kiln dust
Laborer	0.1	hours	\$39.00	\$4	0 tons @ 15 tons/hr @ 0.1 hours @ 2 units/crew = 0.1 hours	aded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.2	hours	\$45.00	\$9	0 tons @ 15 tons/hr @ 0.1 hours @ 3 units/crew = 0.2 hours	aded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.1	hours	\$19.18	\$2	0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	SM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.1	hours	\$14.39	\$1	0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	SM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.1	hours	\$329.70	\$33	0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours 20	004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.1	hours	\$136.29	\$14	0 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours 20	004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0	1 tons	
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	.1 tons @ 20 ton/load = 0.0 loads	
Cement Kiln Dust - Mat'l&Delv Cost	0.1	tons	\$48.00	\$5	C	WM actual 2011 costs
Encapsulation Containers (30-CY)	0.0	units	\$1,000.00	\$0	.7 CYs @ 30 CY/unit = 0.0 containers	WM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	.7 CYs @ 30 CY/unit = 0.0 rolloffs @ 0.1 hours/rolloff = 0.0 hours	umpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$68	CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	<u> </u>
5.28.12 Offsite T&D - Tank Demo					fsite disposal is determined to be the only disposal option	
Offsite Transportation - Debris	38.5	miles	\$3.25	\$125	.7 CY @ 30 CY/load = 0.0 loads @ 385 miles/trip = 38.5 miles Ri	ate: transporters quote/site experience
Offsite Disposal - Tank Debris	0.7	Υ	\$337.50	\$236	.7 CY @ 27 CF/CY = 18.2 CF D	EC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$361		
(Subt: Assemb 5.28.6 - 5.28.12)				\$1,113	ank/piping/pump demolition, and offsite transportation & disposal	
5.28.13 Decon SCA (wash)					ot applicable - secondary containmnent demolished with primary tank	
Subt - Decon SCA (wash)				\$0		
5.28.14 Decon SCA (rinse)						
Subt - Decon SCA (rinse)				\$0		
5.28.15 Decon Water Samp/Disp						
Subt - Decon Water Samp/Dispose				\$0		
5.28.16 PCB Wipe Samples						
Subt - PCB Wipe/Destruct Samp				\$0		
(Subt: Assemb 5.28.13 - 5.28.16)				ŚO	lecontamination & sampling of SCA	

Total Non-Super Labor Hours

14.8

5.28.17 PPE Usage/H&S Planning					Level C @ 75%; N	1od Level C @ 25% fo	r tot non-supv hrs f	or all tasks; HASP @ 2.5% o	f non-supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0	14.8 hours @	8 hr/day =	1.8 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.5	days	\$9.00	\$5	14.8 hours @	8 hr/day =	1.8 days @	25% "Mod C" days =	0.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.3	days	\$25.00	\$33	14.8 hours @	8 hr/day =	1.8 days @	75% "C" days =	1.3 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.4	hours	\$75.00	\$30	14.8 hours @	2.5% hr/hr =	0.4 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$67						

### 5.28 AWTS (i/s A eastSLF12) 1 tnk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
	_	1	1	1		
5.28.18 Supervision					0.1 weeks supervisory time for closure of 1 tank	
Foreman	4.0	hours	\$65.00	\$260	0.1 weeks @ 40 hrs/wk = 4.0 hours	Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen'l Contractor G&A/Home Office indirect costs	Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260		
5.28.19 Certification					Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	0.2	hours	\$130.00	\$26	14.8 hours @ 0.015 hr/hr = 0.2 hours	Engineer rate: 2011 3rd party quote
Clerical	0.2	hours	\$45.00	\$9	14.8 hours @ 0.015 hr/hr = 0.2 hours	Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$35		
(Subt: Assemb 5.28.17 - 5.28.19)				\$362		

5.28 AWTS (i/s A eastSLF12) 1 tnk			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost	Cost	
Direct Costs/Basic Disposal		\$1,563	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$109	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$63	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$94	note: DEC uses 6%
Engineering During Construction	2.00%		note: DEC uses 2%
General Contractor Profit	6.00%	\$94	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$391	
Subt: AWTS (i/s A eastSLF12) 1 tk		\$1,954	
Plus Contingency	10.00%	\$195	CWM and DEC 10%
Tot: AWTS (i/s A eastSLF12) 1 tnk		\$2,149	
Tourist to (your castors 12) I thin		72,143	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.29 AWTS (i/s A sou PCBwh) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estim	ate		In-house Pricing References
		1	1		H + 50 L // 45 : // L H (6.00	. /		
5.29.1 Inventory Verification	1.0		¢20.00	<b>ć</b> 20	rod'n rates: 50 drums/hr; 15 min/tanker or rolloff; 30		4.01	HACD I I I I I I I I I I I I I I I I I I I
Laborer	1.0	hours	\$39.00		tanks @ 0.5 hour/tank = 0.5 ho	urs @ 2 units/crew =	1.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$39				
(Subt: Assemb 5.29.1 - 5.29.1)				\$39	tank: T-8007			
5.29.2 Empty Tank T-8007					roduction rate = 1,650 gals/hour; RSM/UP p. 9-171 (lir	ne item 33-19-0101)		
Laborer	0.0	hours	\$39.00		abor included in third party operation of AWTS	,		loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00		xisting equipment part of tank system			RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.3		\$6.31		600 gals @ 1650 gals/hr = 0.3 hours (	a 1 units/crew =	0.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank	0.5		Ç0.51	\$2	2000 Bally 0.5 Hours (	2 4	0.0	1.2.1.4.1.2 p. 1.2 (1.1.6.1.6.1.6.2.3.1.3.1.6.3.3.6.4)
5 20 2 Onethe Tember Temes					we direction water = 0.5 hours /thin for a resident and			
5.29.3 Onsite Tanker Transport		ļ	622.15		roduction rate = 0.5 hours/trip for onsite transport	0.51 //:	0.051	DCA4/UC 472/U: :: 04.54.22.40.7440)
Tractor		hours	\$32.45		500 gals @ 5500 gals/load = 0.1 loads @	0.5 hrs/trip =	0.05 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Oriver	0.0		\$45.00		abor included in third party operation of AWTS			loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)	0.05	hours	\$6.31		500 gals @ 5500 gals/load = 0.1 loads @	0.5 hrs/trip =	0.05 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Onsite Tanker Transport				\$2				
5.29.4 Empty Tanker					roduction rate = 1,650 gals/hour; RSM/UP p. 9-171 (lir	ne item 33-19-0101)		
Laborer	0.0	hours	\$39.00		abor included in third party operation of AWTS	loaded labor rate: loaded labor rate 2011 3rd party quote		
Pumping Equipment	0.0	hours	\$0.00	\$0	xisting equipment part of tank system	RSM/UP p. 9-171 (line item 33-19-0108)		
Tank Trailer (5,500 gals)	0.3	hours	\$6.31		500 gals @ 1650 gals/hr = 0.3 hours (	a 1 units/crew =	0.3 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanker			70.02	\$2	222 823, 11		0.0	
(Subt: Assemb 5.29.2 - 5.29.4)				\$6				
5.29.5 Onsite Aqueous Treatment	=00.0	<b>.</b>	40.4500		quid wastes transferred to AWTS by tankers			1.1.170
Onsite Aqueous Treatment - Tanks	500.0	gals	\$0.1526		00 gals			AWTS cost for groundwater
Subt - Onsite Aqueous Treatment				\$76				
(Subt: Assemb 5.29.5 - 5.29.5)				\$76	onsite treatment of tanks' waste liquids			
5.29.6 Steel SCA Demolition					rod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308	3, pp. 3-2/3-3,3-5); 1 CF debris pe	er 36 sf sc area	
No. of Tanks/Capacity/Area/Weight	0.0	tnks @			gallons: 90 SF SCA: 3 CF @	490 Lb/CF =	1225 Lbs	Steel Tanks only; estimate 490#/CF
Laborer	1.4	hours	\$39.00	\$55	00 SF @ 200 SF/hour 0.5 hours (	@ 3 units/crew =	1.4 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.9		\$45.00	\$41	0 SF @ 200 SF/hour 0.5 hours (		0.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.5	hours	\$84.09	\$42	0 SF @ 200 SF/hour 0.5 hours (		0.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.5		\$34.40		00 SF @ 200 SF/hour 0.5 hours (		0.5 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.5		\$2.47		0 SF @ 200 SF/hour 0.5 hours (		0.5 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.5		\$30.03		0 SF @ 200 SF/hour 0.5 hours (	• •	0.5 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.5		\$86.31		00 SF @ 200 SF/hour 0.5 hours (		0.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.5		\$5.41		0.5 F @ 200 SF/hour 0.5 hours (	·	0.5 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Subt - Steel SCA Demolition	0.5	ilouis	\$5.41		tank areas based upon steel tank plus steel secondary	•	0.5 110015	Noisilitic b. 473 (iiile iteili 01 34 33 40 7000)
SUDI - STEEL SCA DELLIQUITION	I	I	1	\$216	turik ureus buseu upori steel tank plus steel secondary	נטוונטווווופוונ טופס		İ

### 5.29 AWTS (i/s A sou PCBwh) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	ction and Quantities for	In-house Estimate			In-house Pricing References
5.29.7 FRP Tank Demolition					production rate	= 200 SF/hour (same as	steel tank demolition	rate); 1 CF debris per 36 S	F tank area	
No. of Tanks/Capacity/Area/Weight	1.0	tnks @			500 gallons:	84 SF Tanks:	2 CF @	245 Lb/CF =	572 Lbs	FRP Tanks only; facility estimates 245#/CF
Laborer	1.3	hours	\$39.00	\$51	84 SF @	200 SF/hour	0.4 hours @	3 units/crew =	1.3 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.8	hours	\$45.00	\$36	84 SF @	200 SF/hour	0.4 hours @	2 units/crew =	0.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.4	hours	\$84.09	\$34	84 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.4	hours	\$34.40	\$14	84 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.4	hours	\$2.47	\$1	84 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.4	hours	\$30.03	\$12	84 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.4	hours	\$86.31	\$35	84 SF @	200 SF/hour	0.4 hours @	1 units/crew =	0.4 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	84 SF @	200 SF/hour	0.4 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$182	tank areas bas	ed upon actual tank dim	ensions, or upon OSW	ER 9476.00-6, Vol 3, p. 5-5	i	
5.29.8 Tank Piping Demolition					avg prod'n rate	= 20 LF/hr, rsm/up p. 3-2	10 (16-01-0621/0622)			
Estimated Piping Length	100.0	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	combined Steel and FRP Tanks' Piping
Laborers	10.0	hours	\$39.00	\$390	100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5.0	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$417	in the absence	of facility data, piping as	ssumed to average 100	O LF/tank		
5.29.9 Tank Pump Demolition					prod'n rate = 1	pump/hr (see RSM/UP p	. 3-11, 16-01-0634 and	d 16-01-0636) assume 0.5	pumps/tank	
Laborers	1.0	hours	\$39.00	\$39	0.5 pumps @	1 pump/hr	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	0.5	hours	\$5.41	\$3	0.5 pumps @	1 pump/hr	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$42	pump weight =	= 250# each; in the absen	se of facility data, one	pump per two tanks is es	timated	
5.29.10 Load Tank Demo Debris					production rate	= 15 CY/hour; RSM/BC p	o. 42 (line item 02225-	730-3080)		
Laborer	0.04	hours	\$39.00	\$2	0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00		0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader		hours	\$30.03		0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)		hours	\$5.20		0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris	0.04		75.20					2 LF of 3" diam pipe; and/a		1.6.1., 1.0 p. 1.05 (interterin 02.54.55.20.5400)
Sast 2000 falls believe beblie	+			73	2 07 tank acm	2 422.13 10 372 37 60 17	J. a. tillen, alla, of 432	. =. 0, 5 alam pipe, ana/c	= pairips	

### 5.29 AWTS (i/s A sou PCBwh) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.29.11 Unl'd Stabilize/Encapsulate					production rate = 15 tons/hour = 120 tons/day; includes unloading, shredding, and filling containers	
PROCESS TONS (incl kiln dust)	1.3	TONS			0.7 CY debr + 15% kiln dust = 0.76 CY total total tonnage = 1.3 tons	total tons derived from foregoing assemblies + kiln dust
Laborer	0.2	hours	\$39.00	\$8	1.3 tons @ 15 tons/hr @ 0.1 hours @ 2 units/crew = 0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.3	hours	\$45.00	\$14	1.3 tons @ 15 tons/hr @ 0.1 hours @ 3 units/crew = 0.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.1	hours	\$19.18	\$2	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.1	hours	\$14.39	\$1	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.1	hours	\$329.70	\$33	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.1	hours	\$136.29	\$14	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0	0.1 tons	
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	0.1 tons @ 20 ton/load = 0.0 loads	
Cement Kiln Dust - Mat'l&Delv Cost	0.1	tons	\$48.00	\$5		CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.02	units	\$1,000.00	\$20	0.8 CYs @ 30 CY/unit = 0.02 containers	CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	0.8 CYs @ 30 CY/unit = 0.0 rolloffs @ 0.1 hours/rolloff = 0.0 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$96	1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	
5.29.12 Offsite T&D - Tank Demo					offsite disposal is determined to be the only disposal option	
Offsite Transportation - Debris	38.5	miles	\$3.25	\$125	0.8 CY @ 30 CY/load = 0.0 loads @ 385 miles/trip = 38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	0.8	CY	\$337.50	\$270	0.8 CY @ 27 CF/CY = 20.5 CF	DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$395		
(Subt: Assemb 5.29.6 - 5.29.12)				\$1,353	tank/piping/pump demolition, and offsite transportation & disposal	
5.29.13 Decon SCA (wash)			1		not applicable - secondary containmnent demolished with primary tank	
Subt - Decon SCA (wash)				\$0	not applicable - secondary containment demonstred with primary tank	
Subt - Decoil SCA (Wash)				ŞU		
5.29.14 Decon SCA (rinse)			i i			
Subt - Decon SCA (rinse)				\$0		
5.29.15 Decon Water Samp/Disp						
Subt - Decon Water Samp/Dispose				\$0		
5.29.16 PCB Wipe Samples						
Subt - PCB Wipe/Destruct Samp				\$0		
(Subt: Assemb 5.29.13 - 5.29.16)			<u> </u>	\$0	decontamination & sampling of SCA	

Total Non-Super Labor Hours

17.0

### 5.29 AWTS (i/s A sou PCBwh) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
5.29.17 PPE Usage/H&S Planning					Level C @ 75%; N	Mod Level C @ 25% for	tot non-supv hrs for al	I tasks; HASP @ 2.5% of non-	supv hrs	
PPE Usage - Level D		days	\$0.00	\$0	17.0 hours @	8 hr/day =	2.1 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.5	days	\$9.00	\$5	17.0 hours @	8 hr/day =	2.1 days @	25% "Mod C" days =	0.5 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.6	days	\$25.00	\$40	17.0 hours @	8 hr/day =	2.1 days @	75% "C" days =	1.6 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.5	hours	\$75.00	\$38	17.0 hours @	2.5% hr/hr =	0.5 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$82						
5.29.18 Supervision					0.1 weeks superv	risory time for closure c	of 1 tank			
Foreman	4.0	hours	\$65.00	\$260	0.1 weeks @	40 hrs/wk =	4.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen'	Contractor G&A/Home	e Office indirect costs			Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260						
5.29.19 Certification					Engineer @ 1.5%	and Clerical @ 1.5% of	f total non-supervisory	hours for all tasks		
Engineer	0.3	hours	\$130.00	\$39	17.0 hours @	0.015 hr/hr =	0.3 hours			Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	17.0 hours @	0.015 hr/hr =	0.3 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$53						
(Subt: Assemb 5.29.17 - 5.29.19)				\$395						

5.29 AWTS (i/s A sou PCBwh) 1 tk	Direct Cost	Total	Basic	\$1,869
5.25 / 1.11 / 5 (1, 5 / 1.55 d. 1. 52 11.1.) = 1.1.				71,000

5.29 AWTS (i/s A sou PCBwh) 1 tk			
Total Cost Summary			
Total Cost Summary			
Cost Category	Proposed Percent of Direct	Proposed 2011 Cost	Cost Range
	Cost		
Direct Costs/Basic Disposal		\$1,869	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$131	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$75	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$112	note: DEC uses 6%
Engineering During Construction	2.00%	\$37	note: DEC uses 2%
General Contractor Profit	6.00%	\$112	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$467	
Subt: AWTS (i/s A sou PCBwh) 1 t		\$2,336	
DI O II	40.000/	<b>\$224</b>	CULA I DEC 400/
Plus Contingency	10.00%	\$234	CWM and DEC 10%
Tot: AWTS (i/s A sou PCBwh) 1 tk		\$2,569	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.30 AWTS (i/s TO Build) 1 tk

	Estimated	Unit of		2011 CWM		
Basic Closure Activities: Direct Costs	Quantity	Measure	Unit Price	Extended	Basis of Production and Quantities for In-house Estimate In-house Pricing References	
	ζ,			Price		
	1	1			<del>_</del>	
5.30.1 Inventory Verification					prod'n rates: 50 drums/hr; 15 min/tanker or rolloff; 30 min/tank; two persons required	
Laborer	1.0	hours	\$39.00	,	1 tanks @ 0.5 hour/tank = 0.5 hours @ 2 units/crew = 1.0 hours HASP req's two: loaded laboration	or rate 2011 3rd party quote
Subtotal - Inventory Verification				\$39		
(Subt: Assemb 5.30.1 - 5.30.1)				\$39	tank: T-8009	
5.30.2 Empty Tank T-8007					production rate = 1,650 gals/hour; RSM/UP p. 9-171 (line item 33-19-0101)	
Laborer	0.0	hours	\$39.00	\$0	abor included in third party operation of AWTS loaded labor rate: loaded lab	or rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00	\$0	Existing equipment part of tank system RSM/UP p. 9-171 (line item 3	3-19-0108)
Tank Trailer (5,500 gals)	0.3	hours	\$6.31	\$2	525 gals @ 1650 gals/hr = 0.3 hours @ 1 units/crew = 0.3 hours RSM/HC p. 472 (line item 01	54 33 40 6900)
Subt - Empty Tank				\$2		
•						
5.30.3 Onsite Tanker Transport					production rate = 0.5 hours/trip for onsite transport	
Tractor	0.05	hours	\$32.45		525 gals @ 5500 gals/load = 0.1 loads @ 0.5 hrs/trip = 0.05 hours RSM/HC p. 472 (line item 01	54 33 40 7410)
Driver	0.0	hours	\$45.00	\$0	abor included in third party operation of AWTS loaded lab	or rate 2011 3rd party quote
Tank Trailer (5,500 gals)	0.05		\$6.31		525 gals @ 5500 gals/load = 0.1 loads @ 0.5 hrs/trip = 0.05 hours RSM/HC p. 472 (line item 01	. , ,
Subt - Onsite Tanker Transport			, ,	\$2	7,7,7	
				*-		
5.30.4 Empty Tanker					oroduction rate = 1,650 gals/hour; RSM/UP p. 9-171 (line item 33-19-0101)	
Laborer	0.0	hours	\$39.00			or rate 2011 3rd party quote
Pumping Equipment	0.0		\$0.00		Existing equipment part of tank system RSM/UP p. 9-171 (line item 3	
Tank Trailer (5,500 gals)		hours	\$6.31		525 gals @ 1650 gals/hr = 0.3 hours @ 1 units/crew = 0.3 hours RSM/HC p. 472 (line item 01	
Subt - Empty Tanker	0.5	nours	Ç0.51	\$2	San garage 1000 garagem 0.5 mouth ge 1 arms/ erem 0.5 mouth ge 1.72 (mile item 0.1	34 33 40 0300)
(Subt: Assemb 5.30.2 - 5.30.4)				\$6		
(				70		
5.30.5 Onsite Aqueous Treatment		l .			iquid wastes transferred to AWTS by tankers	
Onsite Aqueous Treatment - Tanks	525.0	gals	\$0.1526		525 gals AWTS cost for groundwater	
Subt - Onsite Aqueous Treatment	323.0	gais	JU.1J2U		525 gais AW15 Cost for groundwater	
				ĊON		
· · · · · · · · · · · · · · · · · · ·				\$80	onsite treatment of tanks' waste liquids	
(Subt: Assemb 5.30.5 - 5.30.5)					onsite treatment of tanks' waste liquids	
· · · · · · · · · · · · · · · · · · ·	<u> </u>				onsite treatment of tanks' waste liquids	
(Subt: Assemb 5.30.5 - 5.30.5)				\$80		
(Subt: Assemb 5.30.5 - 5.30.5)  5.30.6 Steel SCA Demolition		take @		\$80	prod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area	at only actimate 490#/CE
(Subt: Assemb 5.30.5 - 5.30.5)  5.30.6 Steel SCA Demolition  No. of Tanks/Capacity/Area/Weight	0.0	•	¢20.00	\$80	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment	
(Subt: Assemb 5.30.5 - 5.30.5)  5.30.6 Steel SCA Demolition  No. of Tanks/Capacity/Area/Weight Laborer	1.5	hours	\$39.00	<b>\$80</b> \$80	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment 95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded lab	or rate 2011 3rd party quote
(Subt: Assemb 5.30.5 - 5.30.5)  5.30.6 Steel SCA Demolition  No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium)	1.5 1.0	hours hours	\$45.00	\$80 \$59 \$45	brod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment 95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded labor 95.5 SF @ 200 SF/hour 0.5 hours @ 2 units/crew = 1.0 hours loaded labor rate: loaded labor	or rate 2011 3rd party quote bor rate 2011 3rd party quote
5.30.6 Steel SCA Demolition No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium) Excavator	1.5 1.0 0.5	hours hours	\$45.00 \$84.09	\$80 \$59 \$45 \$42	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment  95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 2 units/crew = 1.0 hours loaded labor rate: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 467 (line item 01	or rate 2011 3rd party quote bor rate 2011 3rd party quote 54 33 20 0320)
5.30.6 Steel SCA Demolition No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment	1.5 1.0 0.5 0.5	hours hours hours	\$45.00 \$84.09 \$34.40	\$59 \$45 \$42 \$17	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment  95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 2 units/crew = 1.0 hours loaded labor rate: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 467 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  2004 DEC Rate * Implicit Def	or rate 2011 3rd party quote bor rate 2011 3rd party quote 54 33 20 0320) lator
5.30.6 Steel SCA Demolition No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment Claw Attachment	1.5 1.0 0.5 0.5 0.5	hours hours hours hours hours	\$45.00 \$84.09 \$34.40 \$2.47	\$80 \$59 \$45 \$42 \$17 \$1	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containmen  95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded lab  95.5 SF @ 200 SF/hour 0.5 hours @ 2 units/crew = 1.0 hours loaded labor rate: loaded la  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 467 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours 2004 DEC Rate * Implicit Def  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 477 (line item 01	or rate 2011 3rd party quote bor rate 2011 3rd party quote 54 33 20 0320) lator 54 33 20 0345)
5.30.6 Steel SCA Demolition  No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment Claw Attachment Loader	1.5 1.0 0.5 0.5 0.5 0.5	hours hours hours hours hours	\$45.00 \$84.09 \$34.40 \$2.47 \$30.03	\$59 \$45 \$42 \$17 \$1 \$15	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment  95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded label  95.5 SF @ 200 SF/hour 0.5 hours @ 2 units/crew = 1.0 hours loaded labor rate: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 467 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours 2004 DEC Rate * Implicit Def  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 477 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 477 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 469 (line item 01	or rate 2011 3rd party quote bor rate 2011 3rd party quote 54 33 20 0320) lator 54 33 20 0345) 54 33 20 4730)
5.30.6 Steel SCA Demolition  No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment Claw Attachment Loader Yard Crane	1.5 1.0 0.5 0.5 0.5 0.5 0.5	hours hours hours hours hours hours	\$45.00 \$84.09 \$34.40 \$2.47 \$30.03 \$86.31	\$59 \$45 \$42 \$17 \$1 \$15 \$43	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment  95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 2 units/crew = 1.0 hours loaded labor rate: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 467 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours	or rate 2011 3rd party quote bor rate 2011 3rd party quote 54 33 20 0320) lator 54 33 20 0345) 54 33 20 4730) 54 33 60 2700)
5.30.6 Steel SCA Demolition  No. of Tanks/Capacity/Area/Weight Laborer Equipment Operator (Medium) Excavator Metal Shears Attachment Claw Attachment Loader	1.5 1.0 0.5 0.5 0.5 0.5	hours hours hours hours hours hours	\$45.00 \$84.09 \$34.40 \$2.47 \$30.03	\$59 \$45 \$42 \$17 \$1 \$15 \$43 \$3	orod'n rate = 200 SF/hr (rsm/up 16-01-0142/0216/0308, pp. 3-2/3-3,3-5); 1 CF debris per 36 sf sc area  0 gallons: 95.5 SF SCA: 3 CF @ 490 Lb/CF = 1300 Lbs Steel Secondary containment  95.5 SF @ 200 SF/hour 0.5 hours @ 3 units/crew = 1.5 hours HASP req's two: loaded label  95.5 SF @ 200 SF/hour 0.5 hours @ 2 units/crew = 1.0 hours loaded labor rate: loaded labor  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 467 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours 2004 DEC Rate * Implicit Def  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 477 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 477 (line item 01  95.5 SF @ 200 SF/hour 0.5 hours @ 1 units/crew = 0.5 hours RSM/HC p. 469 (line item 01	or rate 2011 3rd party quote bor rate 2011 3rd party quote 54 33 20 0320) lator 54 33 20 0345) 54 33 20 4730) 54 33 60 2700)

### 5.30 AWTS (i/s TO Build) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produ	ction and Quantities for	In-house Estimate			In-house Pricing References
5.30.7 HDPE Tank Demolition					production rate	= 200 SF/hour (same as	steel tank demolition	rate); 1 CF debris per 36 S	F tank area	
No. of Tanks/Capacity/Area/Weight	1.0	tnks @			525 gallons:	88 SF Tanks:	2.5 CF @	245 Lb/CF =	612.5 <i>Lbs</i>	HDPE Tanks only; estimates 245#/CF
Laborer	1.3	hours	\$39.00	\$51	88 SF @	200 SF/hour	0.44 hours @	3 units/crew =	1.3 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.9	hours	\$45.00	\$41	88 SF @	200 SF/hour	0.44 hours @	2 units/crew =	0.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	0.4	hours	\$84.09	\$34	88 SF @	200 SF/hour	0.44 hours @	1 units/crew =	0.4 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.4	hours	\$34.40	\$14	88 SF @	200 SF/hour	0.44 hours @	1 units/crew =	0.4 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.4	hours	\$2.47	\$1	88 SF @	200 SF/hour	0.44 hours @	1 units/crew =	0.4 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.4	hours	\$30.03	\$12	88 SF @	200 SF/hour	0.44 hours @	1 units/crew =	0.4 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	0.4	hours	\$86.31	\$35	88 SF @	200 SF/hour	0.44 hours @	1 units/crew =	0.4 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	88 SF @	200 SF/hour	0.44 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - FRP Tank Demolition				\$186	tank areas bas	ed upon actual tank din	nensions, or upon OSWI	ER 9476.00-6, Vol 3, p. 5-5	5	
5.30.8 Tank Piping Demolition					avg prod'n rate	= 20 LF/hr, rsm/up p. 3-	10 (16-01-0621/0622)	for 2"/4" metal pipe @ 4#	ŧ/LF	
Estimated Piping Length	100.0	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	HDPE Tanks' Piping
Laborers	10.0	hours	\$39.00	\$390	100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5.0	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$417	piping assumed	to average 100 LF/tank		·		,
5.30.9 Tank Pump Demolition					prod'n rate = 1	numn/hr (see RSM/UP r	o. 3-11, 16-01-0634 and	16-01-0636) assume 1.0	numps/tank	
Laborers	2.0	hours	\$39.00	\$78	1.0 pumps @	1 pump/hr	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	1.0		\$5.41		1.0 pumps @	1 pump/hr	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition			75112			= 250# each; one pump p				,, p ( (
				7	panip neight					
5.30.10 Load Tank Demo Debris					production rate	= 15 CY/hour; RSM/BC	p. 42 (line item 02225-	730-3080)		
Laborer	0.04	hours	\$39.00	\$2	0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.04		\$45.00		0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader		hours	\$30.03		0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew =	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)		hours	\$5.20		0.66 CY @	15 CY/hr =	0.0 hours @	1 units/crew	0.0 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris	0.0-1		Ç3.20					LF of 3" diam pipe; and/o		1.5.1, 1.5 (iii.e item 62 5 1 55 2 5 1 55)
Sast 2000 fails being bening			1	73	2 07 tank acm	0 400.10 10 572 51 60 1	, 5. a tillen, alla, 01 432	2. 0, 5 alam pipe, ana, c	<b>-</b> pamps	

### 5.30 AWTS (i/s TO Build) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
		1	_			
5.30.11 Unl'd Stabilize/Encapsulate					production rate = 15 tons/hour = 120 tons/day; includes unloading, shredding, and filling containers	
PROCESS TONS (incl kiln dust)	1.3	TONS			0.7 CY debr + 15% kiln dust = 0.76 CY total total tonnage = 1.3 tons	total tons derived from foregoing assemblies + kiln dust
Laborer	0.2	hours	\$39.00		1.3 tons @ 15 tons/hr @ 0.1 hours @ 2 units/crew = 0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.3	hours	\$45.00		1.3 tons @ 15 tons/hr @ 0.1 hours @ 3 units/crew = 0.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)	0.1	hours	\$19.18		1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)	0.1	hours	\$14.39	\$1	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.1	hours	\$329.70		1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo	0.1	hours	\$136.29		1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00		0.1 tons	
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00	\$0	0.1 tons @ 20 ton/load = 0.0 loads	
Cement Kiln Dust - Mat'l&Delv Cost	0.1	tons	\$48.00	\$5		CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.0	units	\$1,000.00	\$0	0.8 CYs @ 30 CY/unit = 0.0 containers	CWM actual 2011 costs
Rolloffs (30-CY)	0.0	hours	\$19.02	\$0	0.8 CYs @ 30 CY/unit = 0.0 rolloffs @ 0.1 hours/rolloff = 0.0 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$76	1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	
5.30.12 Offsite T&D - Tank Demo					offsite disposal is determined to be the only disposal option	
Offsite Transportation - Debris	38.5	miles	\$3.25	\$125	0.8 CY @ 30 CY/load = 0.0 loads @ 385 miles/trip = 38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	0.8	CY	\$337.50	\$270	0.8 CY @ 27 CF/CY = 20.5 CF	DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$395		
(Subt: Assemb 5.30.6 - 5.30.12)				\$1,387	tank/piping/pump demolition, and offsite transportation & disposal	
5.30.13 Decon SCA (wash)	<u> </u>	1	<u> </u>		not applicable - secondary containmnent demolished with primary tank	1
Subt - Decon SCA (wash)				\$0	not applicable. Secondary contaminment demonstred with primary tank	
Subt Decon Sex (wash)			1	30		
5.30.14 Decon SCA (rinse)						
Subt - Decon SCA (rinse)				\$0		
5.30.15 Decon Water Samp/Disp						
Subt - Decon Water Samp/Dispose				\$0		
5.30.16 PCB Wipe Samples						
Subt - PCB Wipe/Destruct Samp				\$0		
(Subt: Assemb 5.30.13 - 5.30.16)		1			decontamination & sampling of SCA	

Total Non-Super Labor Hours

18.3

### 5.30 AWTS (i/s TO Build) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	tion and Quantities for	In-house Estimate			In-house Pricing References
5.30.17 PPE Usage/H&S Planning					Level C @ 75%; I	Mod Level C @ 25% for	tot non-supv hrs for all	I tasks; HASP @ 2.5% of non-	supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0	18.2 hours @	8 hr/day =	2.3 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	0.6	days	\$9.00	\$5	18.2 hours @	8 hr/day =	2.3 days @	25% "Mod C" days =	0.6 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	1.7	days	\$25.00	\$43	18.2 hours @	8 hr/day =	2.3 days @	75% "C" days =	1.7 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.5	hours	\$75.00	\$38	18.2 hours @	2.5% hr/hr =	0.5 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$85						
5.30.18 Supervision					0.1 weeks super	visory time for closure o	of 1 tank			
Foreman	4.0	hours	\$65.00	\$260	0.1 weeks @	40 hrs/wk =	4.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen	'l Contractor G&A/Home	e Office indirect costs			Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$260						
5.30.19 Certification					Engineer @ 1.5%	and Clerical @ 1.5% of	total non-supervisory	hours for all tasks		
Engineer	0.3	hours	\$130.00	\$39	18.2 hours @	0.015 hr/hr =	0.3 hours			Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	18.2 hours @	0.015 hr/hr =	0.3 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$53						
(Subt: Assemb 5.30.17 - 5.30.19)				\$398						

5.30 AWTS (i/s TO Build) 1 tk			
Total Cost Summary			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost	Cost Range
Direct Costs/Basic Disposal		\$1,910	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$134	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$76	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$115	note: DEC uses 6%
Engineering During Construction	2.00%		note: DEC uses 2%
General Contractor Profit	6.00%	\$115	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$478	
Subt: AWTS (i/s A TO Build) 1 t		\$2,388	
Plus Contingency	10.00%	\$239	CWM and DEC 10%
Tot: AWTS (i/s A TO Build) 1 tk		\$2,626	
TOL. AVV 13 (I/S A TO BUIIU) I LK		\$2,020	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 5.31 AWTS (i/s A sou Full Trailer) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and	d Quantities for In-h	ouse Estimate			In-house Pricing References
5.31.1 Inventory Verification					prod'n rates: 50 drums/	hr: 15 min/tanker or	rolloff: 30 min/tank:	two persons required		
Laborer	1.0	hours	\$39.00	\$39	1 tanks @	0.5 hour/tank =	0.5 hours @	2 units/crew =	1.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification			700.00	\$39	0		0.00 0			
(Subt: Assemb 5.31.1 - 5.30.1)				\$39	tank: T-8010					
5.31.2 Empty Tank T-8007					production rate = 1,650	gals/hour; RSM/UP	p. 9-171 (line item 33	3-19-0101)		
Laborer	0.0	hours	\$39.00	\$0	Labor included in third	party operation of A	NTS			loaded labor rate: loaded labor rate 2011 3rd party quote
Pumping Equipment	0.0	hours	\$0.00	\$0	Existing equipment part	of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.6	hours	\$6.31				0.6 hours @	1 units/crew =	0.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank				\$4						
24.2 Ourite Tealing Teague	4									
5.31.3 Onsite Tanker Transport	0.1	hours	622.45	ća	production rate = 0.5 ho			0 F hus/tuin -	0.1 hours	DCM/UC n 472 (line item 01 54 22 40 7410)
Tractor		hours	\$32.45		<u> </u>	<u> </u>	0.2 loads @	0.5 hrs/trip =	0.1 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Oriver		hours	\$45.00		Labor included in third	<i>'</i> '		0 F hus/tuin -	0.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Tank Trailer (5,500 gals)	0.1	hours	\$6.31		1000 gals @ 5	500 gals/load =	0.2 loads @	0.5 hrs/trip =	0.1 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Onsite Tanker Transport	+	-		\$4						
5.31.4 Empty Tanker					production rate = 1,650	gals/hour; RSM/UP	p. 9-171 (line item 33	3-19-0101)		
Laborer	0.0	hours	\$39.00	\$0	Labor included in third	party operation of A	loaded labor rate: loaded labor rate 2011 3rd party quote			
Pumping Equipment	0.0	hours	\$0.00	\$0	Existing equipment part	of tank system				RSM/UP p. 9-171 (line item 33-19-0108)
Tank Trailer (5,500 gals)	0.6	hours	\$6.31	\$4	1000 gals @ 1	650 gals/hr =	0.6 hours @	1 units/crew =	0.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanker				\$4						
(Subt: Assemb 5.31.2 - 5.31.4)				\$11						
5.31.5 Onsite Aqueous Treatment		1	1		liquid wastes transferre	d to ANAITC buttonless				
Onsite Aqueous Treatment  Onsite Aqueous Treatment - Tanks	1000.0	gale	\$0.1526		1000 gals	d to AW 13 by tanker	5			AWTS cost for groundwater
Subt - Onsite Aqueous Treatment	1000.0	gais	\$0.1526	\$153 <b>\$153</b>	ŭ					AW 13 cost for groundwater
Subt - Offsite Aqueous Treatment (Subt: Assemb 5.31.5 - 5.31.5)		-			onsite treatment of tai	nke' waste liquids				
3ubt. A35tilla 3.31.3 3.31.3)		1		<b>7133</b>	onsite treatment of tar	iks waste ilquius				
5.31.6 Steel SCA Demolition					prod'n rate = 200 SF/hr	(rsm/up 16-01-0142)	/0216/0308, pp. 3-2/	3-3,3-5); 1 CF debris per	36 sf sc area	
No. of Tanks/Capacity/Area/Weight	0.0	tnks @					3 CF @	490 Lb/CF =	1225 Lbs	Steel Tanks only; estimate 490#/CF
_aborer	0.0	hours	\$39.00	\$0			0.5 hours @	3 units/crew =	0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00				0.5 hours @	2 units/crew =	0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
xcavator	0.0	hours	\$84.09				0.5 hours @	1 units/crew =	0 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	0.0	hours	\$34.40			00 SF/hour	0.5 hours @	1 units/crew =	0 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	0.0	hours	\$2.47				0.5 hours @	1 units/crew =	0 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
∟oader	0.0	hours	\$30.03			00 SF/hour	0.5 hours @	1 units/crew =	0 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
	0.0	hours	\$86.31	\$0			0.5 hours @	1 units/crew =	0 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Yard Crane							0 = 1	4 1. /	0.1	DCA 4 (110 472 (1) 1) 04 5 4 22 40 7000)
Yard Crane Welding Equipment	0.0	hours	\$5.41	\$0	0 SF @ 2	00 SF/hour	0.5 hours @	1 units/crew =	0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)

### 5.31 AWTS (i/s A sou Full Trailer) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Produc	ction and Quantities for	In-house Estimate			In-house Pricing References
5.31.7 HDPE Tank Demolition					production rate	= 200 SF/hour (same as	steel tank demolition r	ate); 1 CF debris per 36 S	- tank area	168 SF Tank & 178 SF Secondary Containment
No. of Tanks/Capacity/Area/Weight	1.0	tnks @			1000 gallons:	346 SF Tanks:	9.6 <i>CF @</i>	245 Lb/CF =	2354 Lbs	HDPE Tanks & HDPLE Secondary Containment
Laborer		hours	\$39.00	\$203	346 SF @	200 SF/hour	1.7 hours @	3 units/crew =	5.2 hours	HASP req's two: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	3.5	hours	\$45.00	\$158	346 SF @	200 SF/hour	1.7 hours @	2 units/crew =	3.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	1.7	hours	\$84.09	\$143	346 SF @	200 SF/hour	1.7 hours @	1 units/crew =	1.7 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Metal Shears Attachment	1.7	hours	\$34.40	\$58	346 SF @	200 SF/hour	1.7 hours @	1 units/crew =	1.7 hours	2004 DEC Rate * Implicit Deflator
Claw Attachment	1.7	hours	\$2.47	\$4	346 SF @	200 SF/hour	1.7 hours @	1 units/crew =	1.7 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	1.7	hours	\$30.03	\$51	346 SF @	200 SF/hour	1.7 hours @	1 units/crew =	1.7 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane	1.7	hours	\$86.31	\$147	346 SF @	200 SF/hour	1.7 hours @	1 units/crew =	1.7 hours	RSM/HC p. 474 (line item 01 54 33 60 2700)
Welding Equipment	0.0	hours	\$5.41	\$0	346 SF @	200 SF/hour	1.7 hours @	0 units/crew =	0.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - HDPE Tank Demolition				\$764	tank areas bas	ed upon actual tank dim	ensions, or upon OSWE	R 9476.00-6, Vol 3, p. 5-5		
5.31.8 Tank Piping Demolition					avg prod'n rate	= 20 LF/hr, rsm/up p. 3-:	10 (16-01-0621/0622) f	or 2"/4" metal pipe @ 4#	/LF	
Estimated Piping Length	100.0	LF			1 tanks @	100 LF/tank =	100 LF @	4 Lb/LF =	400 Lbs	combined Steel and HDPE Tanks' Piping
Laborers	10.0	hours	\$39.00	\$390	100 LF @	20 LF/hour	5.0 hours @	2 units/crew =	10.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	5.0	hours	\$5.41	\$27	100 LF @	20 LF/hour	5.0 hours @	1 units/crew =	5.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Piping Demolition				\$417	piping assumed	to average 100 LF/tank				
5.31.9 Tank Pump Demolition					prod'n rate = 1 ¡	oump/hr (see RSM/UP p	. 3-11, 16-01-0634 and	16-01-0636) assume 0.5	oumps/tank	
Laborers	1.0	hours	\$39.00	\$39	0.5 pumps @	1 pump/hr	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Welding Equipment	0.5	hours	\$5.41	\$3	0.5 pumps @	1 pump/hr	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - All Tanks' Pump Demolition				\$42	pump weight =	250# each; one pump p	er tank is estimated			
5.31.10 Load Tank Demo Debris					production rate	= 15 CY/hour; RSM/BC p	o. 42 (line item 02225-7	30-3080)		
Laborer	0.06	hours	\$39.00	\$2	1.0 CY @	15 CY/hr =	0.06 hours @	1 units/crew	0.06 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.06	hours	\$45.00	\$3	1.0 CY @	15 CY/hr =	0.06 hours @	1 units/crew =	0.06 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader	0.06	hours	\$30.03	\$2	1.0 CY @	15 CY/hr =	0.06 hours @	1 units/crew =	0.06 hours	RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.06	hours	\$5.20	\$0	1.0 CY @	15 CY/hr =	0.06 hours @	1 units/crew	0.06 hours	RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Load Tank Demo Debris				\$7	1 CY tank demo	o debris = to 972 SF @ 1,	/3rd" thick; and/or 432	LF of 3" diam pipe; and/o	r 2 pumps	

### 5.31 AWTS (i/s A sou Full Trailer) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
5.31.11 Unl'd Stabilize/Encapsulate					production rate = 15 tons/hour = 120 tons/day; includes unloading, shredding, and filling containers	
PROCESS TONS (incl kiln dust)	1.3	TONS			1.0 CY debr + 15% kiln dust = 1.15 CY total total tonnage = 1.9 tons	total tons derived from foregoing assemblies + kiln dust
Laborer		hours	\$39.00		1.9 tons @ 15 tons/hr @ 0.1 hours @ 2 units/crew = 0.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.3	hours	\$45.00		1.3 tons @ 15 tons/hr @ 0.1 hours @ 3 units/crew = 0.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Backhoe (1 CY)		hours	\$19.18	\$2	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 467 (line item 01 54 33 20 0460)
Loader, Wheel (1 CY)		hours	\$14.39	\$1	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Shredder	0.1	hours	\$329.70	\$33	1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Mixing Pit/Screening/Silo		hours	\$136.29		1.3 tons @ 15 tons/hr @ 0.1 hours @ 1 units/crew = 0.1 hours	2004 DEC Rate * Implicit Deflator
Cement Kiln Dust - Mat'l Cost	0.0	tons	\$0.00	\$0	0.3 tons	
Cement Kiln Dust - Delivery Cost	0.0	loads	\$0.00		0.3 tons @ 20 ton/load = 0.0 loads	
Cement Kiln Dust - Mat'l&Delv Cost	0.3	tons	\$48.00	\$14		CWM actual 2011 costs
Encapsulation Containers (30-CY)	0.03	units	\$1,000.00	\$30	1.15 CYs @ 30 CY/unit = 0.03 containers	CWM actual 2011 costs
Rolloffs (30-CY)	0.03	hours	\$19.02	\$1	1.15 CYs @ 30 CY/unit = 0.04 rolloffs @ 0.1 hours/rolloff = 0.03 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Stabilize/Encapsulate				\$116	1 CY tank demo debris = to 972 SF @ 1/3rd" thick; and/or 432 LF of 3" diam pipe; and/or 2 pumps	
5.31.12 Offsite T&D - Tank Demo					offsite disposal is determined to be the only disposal option	
Offsite Transportation - Debris	38.5	miles	\$3.25	\$125	1.15 CY @ 30 CY/load = 0.03 loads @ 385 miles/trip = 38.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Tank Debris	1.15	CY	\$337.50	\$388	1.15 CY @ 27 CF/CY = 31.1 CF	DEC 2004 Estimate accounting for inflation
Subt - Offsite T&D - Tank Demo				\$513		
(Subt: Assemb 5.31.6 - 5.31.12)				\$1,859	tank/piping/pump demolition, and offsite transportation & disposal	
5.31.13 Decon SCA (wash)					not applicable - secondary containmnent demolished with primary tank	
Subt - Decon SCA (wash)				\$0		
5.31.14 Decon SCA (rinse)						
Subt - Decon SCA (rinse)				\$0		
5.31.15 Decon Water Samp/Disp						
Subt - Decon Water Samp/Dispose				\$0		
5.31.16 PCB Wipe Samples						
Subt - PCB Wipe/Destruct Samp				\$0		
(Subt: Assemb 5.31.13 - 5.31.16)				\$0	decontamination & sampling of SCA	

Total Non-Super Labor Hours

21.3

### 5.31 AWTS (i/s A sou Full Trailer) 1 tk

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	on and Quantities for	In-house Estimate	In-house Pricing References		
	•	,			1					
5.31.17 PPE Usage/H&S Planning					Level C @ 75%; Mo	od Level C @ 25% for t	tot non-supv hrs for all	tasks; HASP @ 2.5% of non-	supv hrs	
PPE Usage - Level D	0.0	days	\$0.00	\$0	21.3 hours @	8 hr/day =	2.7 days @	0% "D" days =	0.0 days	Standard Work Clothes - Site Experience
	0.7	days	\$9.00	\$6	21.3 hours @	8 hr/day =	2.7 days @	25% "Mod C" days =	0.7 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	2.0	days	\$25.00	\$50	21.3 hours @	8 hr/day =	2.7 days @	75% "C" days =	2.0 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.5	hours	\$75.00	\$38	21.3 hours @	2.5% hr/hr =	0.5 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$94						
5.31.18 Supervision					0.2 weeks supervis	ory time for closure o	of 1 tank			
Foreman	8.0	hours	\$65.00	\$520	0.2 weeks @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project manager	0.0	hours	\$75.00	\$0	Included in Gen'l (	Contractor G&A/Home	e Office indirect costs			Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520						
5.31.19 Certification						nd Clerical @ 1.5% of	total non-supervisory	hours for all tasks		
Engineer	0.3	hours	\$130.00	\$39	21.3 hours @	0.015 hr/hr =	0.3 hours			Engineer rate: 2011 3rd party quote
Clerical	0.3	hours	\$45.00	\$14	21.3 hours @	0.015 hr/hr =	0.3 hours			Clerical rate: 2011 3rd party quote
Subtotal -Certification				\$53		·	·			
(Subt: Assemb 5.31.17 - 5.31.19)				\$666						

5.31 AWTS (i/s A sou Full Trailer) 1 tk			
Total Cost Summary			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011	
	of Direct	Cost	
	Cost		
Direct Costs/Basic Disposal		\$2,728	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$191	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$109	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$164	note: DEC uses 6%
Engineering During Construction	2.00%		note: DEC uses 2%
General Contractor Profit	6.00%	\$164	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$682	
Subt: AWTS (i/s A sou Full Trailer) 1 t		\$3,411	
Plus Contingency	10.00%	\$341	CWM and DEC 10%
Tot: AWTS (i/s A sou Full Trailer) 1 tk		\$3,752	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Produ	ction and Quantities	for In-house Estimate	In-house Pricing References		
6.1 Inventory Verification						•	•		d estimate volume; two p	ersons required	
Laborer	3.0	hours	\$39.00	\$117			hr/pond = 1.5 hours (	② 2 units/crew = 3.0 l	hours		HASP req's two: loaded labor rate 2011 3rd party quote
Subtotal - Inventory Verification				\$117			of service and empty				
(Subt: Assemblies 6.1 thru 6.1)				\$117	\$117	inventory of li	quid volumes in Ponds	1/2, 3, and 8 at closu	ıre		
6.2 Ponds' Sampling & Analysis						production rate	e = 2.0 hours per comp	posite sample for a th	ree-person crew		
Batch Sampling Events						2 events @	3 samp/evnt=	6 samples	•		sampling & analysis prior to pond discharge
Technician	36.0	hours	\$38.00	\$1,368	\$1,368	6 samps @	2.0 hrs/samp =	12.0 hours @	3 units/crew =	36.0 hours	technician rate: rate 2011 3rd party quote
Sampling Equipment		hours	\$25.00	\$300	\$300	6 samps @	2.0 hrs/samp =	12.0 hours @	1 units/crew =	12.0 hours	boat, samplers, meters, etc.
Sampling Supplies	6.0	samp	\$25.00	\$150	\$150	6 samples	•	-			bottles, shipping supplies
pH	6.0	samp	\$10.67	\$64	\$64	6 samples					analytical price: average of three quotes
Specific Conductance		samp	\$13.33	\$80		6 samples					analytical price: average of three quotes
Temperature		samp	-	\$0		6 samples	obtained using fie	ld equipment			Obtained using field equipment
Dissolved Oxygen	6.0	samp	-	\$0	\$0	6 samples	obtained using fie	<u> </u>			Obtained using field equipment
Total Dissolved solids (TDS)		samp	\$15.00	\$90		6 samples					analytical price: average of three quotes
TDVS (total dissolved volatile solids)		samp	\$23.33	\$140		6 samples					analytical price: average of three quotes
Alkalinity as CaCO3		samp	\$15.33			6 samples					analytical price: average of three quotes
TOC	6.0	samp	\$31.67	\$190	\$190	6 samples					analytical price: average of three quotes
Ca/Mg Hardness (200.7)		samp	\$24.33	\$146		6 samples					analytical price: average of three quotes
Total Suspended Solids (TSS)		samp	\$13.33	\$80		6 samples					analytical price: average of three quotes
Settleable Solids		samp	\$13.33	\$80		6 samples					analytical price: average of three quotes
Ammonia (NH3)		samp	\$22.67			6 samples					analytical price: average of three quotes
Phosphorous		samp	\$20.00	\$120		6 samples					analytical price: average of three quotes
TON (TKN-NH3)		samp	\$41.67	\$250		6 samples					analytical price: average of three quotes
Cyanide		samp	\$35.00	\$210		6 samples					analytical price: average of three quotes
Sulfates		samp	\$21.00	\$126		6 samples					analytical price: average of three quotes
Sulfides		samp	\$25.00	\$150		6 samples					analytical price: average of three quotes
Surfactants (MBAS)		samp	\$28.33			6 samples					analytical price: average of three quotes
BOD-5		samp	\$30.00	\$170		6 samples					analytical price: average of three quotes
Fluoride		samp	\$19.33	\$116		6 samples					analytical price: average of three quotes
Chlorine		samp	\$19.33	\$116		6 samples					analytical price: average of three quotes
Residual Chlorine		samp	\$15.00	\$90		6 samples					analytical price: average of three quotes
NO2		samp	\$13.00	\$126		6 samples					analytical price: average of three quotes
NO3		) samp	\$19.33	\$120		6 samples					analytical price: average of three quotes
VOCs (624)		samp	\$105.00	\$630		6 samples					analytical price: average of three quotes
Semi-volatile organics (625)		samp	\$208.33			6 samples					analytical price: average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))		samp	\$208.33			6 samples					analytical price: average of three quotes analytical price: average of three quotes
Oil & Grease (1631)		samp	\$21.67			6 samples					analytical price: average of three quotes
total Phenols		samp	\$26.67	\$150		6 samples					analytical price: average of three quotes
Priority Pollutant Metals (200.7) *		samp	\$188.00			6 samples					analytical price: average of three quotes analytical price: average of three quotes
Mercury (245.1)		samp	\$188.00	\$1,128 \$150		6 samples					analytical price: average of three quotes analytical price: average of three quotes
Mercury (1631B)		samp	\$25.00	\$150		6 samples					,
, ,											analytical price: average of three quotes
Acute Toxicity/Bioassy	2.0	samp	\$3,800.00	\$7,600		2 samples	banaa (bat-t1:	inima namanita - 0 - 1	husia (Fee Dan -l O 1		One quote: actual cost for 2010
Subt - Ponds' Sampling & Analysis		-	1	\$17,204	\$17,204	two pona disc	riurges (batches) requ	ırıng sampling & anal	lysis (Fac Pond 8 empty)		Fac Pond 8 out of service empty

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal  Basis of Production and Quantities for In-house Estimate  In-house Pricing References
6.3 S&A Certification & Report			40.00	4.0	one event per year for divers to check discharge pipe; two 40-hour predischarge qualification reports
Divers (Sr. Technicians)		hours	\$0.00	\$0	·
SCBA Gear (2 units)		hours	\$0.00	\$0	
Laborer (Surface Support)		hours	\$0.00	\$0	' l
Underwater Inspection		each	\$4,000.00	\$4,000	\$4,000   \$4,000 per event @ 1 event per year Based on 2010 site rate of \$3,500
Engineer (Report)	80.0	hours	\$130.00	\$10,400	\$10,400 2 events @ 40 hrs/event = 80.0 hours @ 1 units/crew = 80.0 hours Eng Rate: rate 2011 3rd party quote
Subt - S&A Cert'n & Report (Subt: Assemblies 6.2 thru 6.3)				\$14,400 \$31.604	\$14,400 diver(s) to check discharge pipe; also engineer's predischarge qualification report  \$31,604 Fac Pond 8 out of service empty
(Subt. Assemblies 6.2 tillu 6.5)				\$31,604	\$31,604
6.4 Empty (Pump) FAC Pond 1/2					prod'n rate = 960,000 gals/day = 60,000 gals/hr = 1,000 gals/min per facility est @ 16 hrs/day O&M
FAC Pond 1/2 Inventory in Gallons	25600000	gals	n/a		426.7 total hours reg'd to pump Fac Pond 1/2 = 25,600,000 gallons
AWTS Tech'n (8-hr day shift/straight time)		day hrs	\$65.00	\$13,865	\$13,865 426.7 tot hrs @ 50% (day shift) = 213.3 hours @ 1 units/crew = 213.3 hours technician rate: rate 2011 3rd party quote
AWTS Tech'n (8-hr night shift/straight time)		nite hrs	\$65.00	\$13,865	\$13,865 426.7 tot hrs @ 50% (night shift) = 213.3 hours @ 1 units/crew = 213.3 hours technician rate: rate 2011 3rd party quote
AWTS Supervisor (day shift only)		day hrs	\$85.00	\$0	
Maintenance (day shift only)	128.0	day hrs	\$45.00	\$5,760	\$5,760 426.7 tot hrs @ 30% (total hrs) = 128.0 hours @ 1 units/crew = 128.0 hours maintenance rate: rate 2011 3rd party quote
Tech/Sampler (day shift only)	42.7	day hrs	\$38.00	\$1,623	\$1,623 426.7 tot hrs @ 10% (total hrs) = 42.7 hours @ 1 units/crew = 42.7 hours technician rate: rate 2011 3rd party quote
Engineer (day shift only)		day hrs	\$90.00	\$0	\$0 Engineer included in 6.25 below
Settleable Solids	106.7	samp	\$13.33	\$1,422	\$1,422 426.7 hours @ 1.0 sample per 4.0 hours = 106.7 samples  analytical price: average of three quotes
Dissolved Oxygen		samp	-	\$0	
Sulfide (total)		samp	\$25.00	\$133	\$133 426.7 hours @ 1.0 sample per 80.0 hours = 5.3 samples  analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)		total hrs	\$12.34	\$5,265	\$5,265 426.7 tot hrs @ 100% total time = 426.7 hours @ 1 units/crew = 426.7 hours RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)	1280000.0	foot-hrs	\$0.0110	\$14,080	\$14,080 426.7 tot hrs @ 100% total time = 426.7 hours @ 3000 LF/crew = 1280000 foot-hrs RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2			·	\$56,012	\$56,012 transfer contents of FAC Pond 1/2 to discharge pipe to Niagara River (3,000 ft)
6.5 Treat FAC Pond 3 Contents					FAC Pond 3 contents already have been treated; no further treatment required.
Treat FAC Pond 3 Contents		gals	\$0.00	\$0	\$0 used unit price of \$0.00/gal as no treatment is required
Subt - Treat FAC Pond 3 Contents				\$0	\$0 no treatment required for FAC Pond 3 contents prior to discharge
6.6 Tranfer (Pump) FAC Pond 8					prod'n rate = 960,000 gals/day = 60,000 gals/hr = 1,000 gals/min per facility est @ 16 hrs/day O&M  Avg 28.8 inches precipitaiton per year
FAC Pond 8 Inventory in Gallons	5430480.0	gals	n/a		302,500 SF @ 2.4 FT/year = 726,000 CF @ 7.48 gal/CF = 5,430,480 gallons Fac Pond 8 = 5,430,480 gallons
AWTS Tech'n (8-hr day shift/straight time)		day hrs	\$65.00	\$2,945	\$2,945 90.5 tot hrs @ 50% (day shift) = 45.25 hours @ 1 units/crew = 45.3 hours technician rate: rate 2011 3rd party quote
AWTS Tech'n (8-hr night shift/straight time)	45.3	nite hrs	\$65.00	\$2,945	\$2,945 90.5 tot hrs @ 50% (night shift) = 45.25 hours @ 1 units/crew = 45.3 hours technician rate: rate 2011 3rd party quote
AWTS Supervisor (day shift only)	0.0	day hrs	\$85.00	\$0	
Maintenance (day shift only)	27.2	day hrs	\$39.00	\$1,061	\$1,061 90.5 tot hrs @ 30% (total hrs) = 27.2 hours @ 1 units/crew = 27.2 hours maintenance rate: rate 2011 3rd party quote
Tech/Sampler (day shift only)		day hrs	\$38.00	\$0	
Engineer (day shift only)	0.0	day hrs	\$90.00	\$0	
Settleable Solids	0.0	samp	\$13.33	\$0	
Dissolved Oxygen		samp	-	\$0	
Sulfide (total)		samp	\$25.00	\$0	
Discharge Pump (6"/1,000 gal/min)	90.5	total hrs	\$12.34	\$1,117	\$1,117 90.5 tot hrs @ 100% total time = 90.5 hours @ 1 units/crew = 90.5 hours RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3000 LF)	271500.0	foot-hrs	\$0.0110	\$2,987	\$2,987 90.5 tot hrs @ 100% total time = 90.5 hours @ 3000 LF/crew = 271500 foot-hrs RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 8				\$11,053	\$11,053 Transfer FAC Pond 8 stormwater to FAC Ponds 1/2 prior to sampling FAC Ponds 1/2

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities	for In-house Estimate			In-house Pricing References
6.7 Empty (Pump) FAC Pond 3						prod'n rato - 06	0 000 gals/day = 60	000 gals/hr = 1,000 gals	/min nor facility act @	16 hrs/day 08.M	
FAC Pond 8 Inventory in Gallons	48210000.0	aals	n/a			prod irrate = 30	0,000 gais/ uay = 00,	000 gais/111 - 1,000 gais	/min per racinty est @	10 III 3/ day Okivi	FAC Pond 3: 48,210,000 gals
AWTS Tech'n (8-hr day shift/straight time)		day hrs	\$65.00	\$26,117	\$26 117	803.5 tot hrs @	50% (day shift) =	401 8 hours @	1 units/crew =	401.8 hours	technician rate: rate 2011 3rd party quote
AWTS Tech'n (8-hr night shift/straight time)		nite hrs	\$65.00	\$26,117			50% (day shirt)		1 units/crew =	401.8 hours	technician rate: rate 2011 3rd party quote
AWTS Supervisor (day shift only)	401.0	day hrs	\$85.00	\$0		Supervisor include		401.0110413 @	1 units/crew	401.0110013	teenmetan rate. rate 2011 Sta party quote
Maintenance (day shift only)	241.5	day hrs	\$39.00	\$9,419			30% (total hrs) =	241.1 hours @	1 units/crew =	241.5 hours	maintenance rate: rate 2011 3rd party quote
Tech/Sampler (day shift only)		day hrs	\$38.00	\$3,055			10% (total hrs) =	80.4 hours @	1 units/crew =	80.4 hours	technician rate: rate 2011 3rd party quote
Engineer (day shift only)		day hrs	\$90.00	\$0		Engineer include		0011110410 @	1 4	0011110415	teaminan raterrate 2011 sta party quote
Settleable Solids	200.9	samp	\$13.33	\$2,678				ours = 200.9 samples			analytical price: average of three quotes
Dissolved Oxygen		samp	-	\$0				nours = 10.0 samples	Field Measureme	nt	analytical price: average of three quotes
Sulfide (total)		samp	\$25.00	\$250				nours = 10.0 samples			analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)	803.5	hours	\$12.34	\$9,915				3.5 hours @ 1 units/crev	v = 1954.5 hours		RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/0 LF)g p ( )	0.0	foot-hrs	\$0.0110	\$0	\$0	803.5 hours @ 10	00% total time = 803	3.5 hours @ 0 LF/crew =	0 hours		RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 3				\$77,551	\$77,551	\$77,551 transfer contents of FAC Pond 3 to Niagara River					
(Subt: Assemblies 6.4 thru 6.7)				\$144,616	\$144,616	144,616					
	•	•			•	•					•
6.8 Soil/Sed S&A - FAC Pond 1/2											
FAC Pond 1/2 Area in SF	187500.0	SF	n/a			18.8 areas =	19 grids:	38 metals	2 hazardous	17 organ	Fac Pond 1/2 = 187,500 SF; grids @ 100' x 100'
Technician	114.0	hours	\$38.00	\$4,332	\$4,332	57 samps @	1 hrs/samp =	57.0 hours @	2 units/crew =	114.0 hours	technician rate: rate 2011 3rd party quote
Sampling Supplies	57.0	samp	\$10.00	\$570	\$570	57 samples	•				bottles, shipping supplies
USEPA 40CFR Part 264 Append IX	2.0	samp	\$1,226.67	\$2,453	\$2,453	2 samples					analytical price: average of three quotes
Priority Poll'nt Organics (semi-VOC)	17.0	samp	\$615.00	\$10,455	\$10,455	17 samples					analytical price: average of three quotes
Priority Pollutant Metals	38.0	samp	\$158.33	\$6,017	\$6,017	38 samples					analytical price: average of three quotes
Subtotal - Soil/Sed S&A - FAC 1/2				\$23,827	\$23,827	sampling and a	nalyses of FAC Pond	1/2 soils and sediments			
COC-11/C-1 COA FAC D-11/12											
6.9 Soil/Sed S&A - FAC Pond 3 FAC Pond 3 Area in SF	495000.0	C.F.	n/a			42.4	42	26 metals	2 hazardous	11	5 P d 2
			, .	¢2.064	\$2.064	12.4 areas =	13 grids:			11 organ	Fac Pond 3 = 495,000 SF; grids @ 200' x 200'
Technician Sampling Supplies		hours samp	\$38.00 \$10.00	\$2,964 \$390		39 samps @ 39 samps @	1 hrs/samp =	39.0 hours @	2 units/crew =	78.0 hours	technician rate: rate 2011 3rd party quote bottles, shipping supplies
USEPA 40CFR Part 264 Append IX		samp	\$10.00	\$390		2 samples					analytical price: average of three quotes
Priority Poll'nt Organics (semi-VOC)		samp	\$615.00	\$6,765		11 samples					analytical price: average of three quotes
Priority Politic Organics (semi-voc) Priority Pollutant Metals		samp	\$158.33	\$4,117		26 samples					analytical price: average of three quotes
Subtotal - Soil/Sed S&A - FAC 3	20.0	Junip	7130.33	\$16,689			nalyses of FAC Pond	3 soils and sediments			analysical price, average of times quotes
Substitute Sony Sed South Tries		t		710,003	Ç10,003	sampling and al	.a.,ses of the tolla	5 555 and Scannelles			
	Fac Pond 8 Sa	mpling and	Analysis per	formed in 200	5. Report						
6.10 Soil/Sed S&A - FAC Pond 8	submitted No	vember 20	09.		-	No COCs above b	ackground				
FAC Pond 8 Area in SF	302500.0	SF	n/a			7.6 areas =	8 grids:	16 metals	2 hazardous	6 organ	Fac Pond 8 = 302,500 SF; grids @ 200' x 200'
Technician	0.0	hours	\$38.00	\$0	\$0	24 samps @	1 hrs/samp =	24.0 hours @	2 units/crew =	48.0 hours	technician rate: rate 2011 3rd party quote
Sampling Supplies	0.0	samp	\$10.00	\$0	\$0	24 samps @	•		·		bottles, shipping supplies
USEPA 40CFR Part 264 Append IX	0.0	samp	\$1,226.67	\$0		2 samples					analytical price: average of three quotes
Priority Poll'nt Organics (semi-VOC)	0.0	samp	\$615.00	\$0	\$0	6 samples					analytical price: average of three quotes
Priority Pollutant Metals	0.0	samp	\$158.33	\$0		16 samples					analytical price: average of three quotes
Subtotal - Soil/Sed S&A - FAC 8				\$0	\$0	sampling and a	nalyses of FAC Pond	8 soils and sediments			·
(Subt: Assemblies 6.8 thru 6.10)				\$40,516				sediments from FAC Pon	ds 1/2, 3, and 8		

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities	for In-house Estimate			In-house Pricing References
6.11 Excavate Soil/Sed - FAC 1/2					T			udes loading & tranport t	o stabilization:site expe	erience	
FAC Pond 1/2 Area in SF x 0.5' dp	187500.0		n/a	4	4	93750 CF =	3472 CY				
Laborer		hours	\$39.00	\$1,353		3472.2 CY @	100 CY/hr =	34.7 hours @	1 units/crew =	34.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00	\$1,562		3472.2 CY @	100 CY/hr =	34.7 hours @	1 units/crew =	34.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09	\$2,918		3472.2 CY @	100 CY/hr =	34.7 hours @	1 units/crew =	34.7 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Driver		hours	\$45.00	\$1,562		3472.2 CY @	100 CY/hr =	34.7 hours @	1 units/crew =	34.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Dump Truck (12-ton load)	34.7	hours	\$24.78	\$860		3472.2 CY @	100 CY/hr =	34.7 hours @	1 units/crew =	34.7 hours	RSM/HC p. 469 (line item 01 54 33 20 5250)
Subt - Excavate Soil/Sed - FAC 1/2				\$8,254	\$8,254	excavate soils a	nd sediments from	FAC Pond 1/2			
6.12 Stabilize FAC Pond 1/2						•		800 tons/day; includes lo	• '	andfill	
PROCESS TONS (incl kiln dust)		TONS	n/a			3472 CY @	1.35 ton/CY +	15% kiln dust =	5390.6 tons		1 CY = 2,700# (1.35 ton) @ 100# per CF
Dump Truck (12-ton load)		hours	24.78			5390.6 tons @	100 tons/hr @	53.9 hours @	1 units/crew =	53.9 hours	RSM/HC p. 469 (line item 01 54 33 20 5250)
Cement Kiln Dust - Mat'l&Delv Cost		tons	\$48.00	\$33,749	\$33,749		3472 CY @	1.35 ton/CY @	15% kiln dust =	703.1 tons	CWM actual 2011 costs
Stabilization Cost	4687.2		\$25.00	\$117,180		3472 CY @	1.35 ton/CY =	4687.2 tons			CWM actual 2011 costs inc. labor & equipment
TCLP (Metals/VOCs/Semi-VOCs)	1.3	each	\$446.67	\$581		53.9 hours @	1 test/40 hr =	1.3 tests			analytical price: average of three quotes
Subt - Stabilize FAC Pond 1/2				\$152,845	\$152,845	stabilize soils ar	d sediments from F	FAC Pond 1/2			
6.13 Transp FAC 1/2: Offsite Disp							= 0.5 hours/rolloff				
Offsite Transportation - Solids	103757.5	miles	\$3.25	. ,			20 tons/load =	269.5 loads @	385 miles/trip =	103757.5 miles	Rate: transporters quote/site experience
Subt - FAC 1/2 to Offsite Landfill				\$337,212	\$0	transport soils &	& sediments from F	AC Pond 1/2 to offsite la	ndfill		
6.13a Transp/Unload FAC 1/2: Onsite Disp						production rate	= 0.5 hours for ons	site travel			
Driver	224.6	hours	\$45.00	\$0	\$10,107	5390.6 tons @	12 tons/load =	449.2 loads @	0.5 hours/trip =	224.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Dump Truck (12-ton load)	224.6	hours	\$24.78	\$0		5390.6 tons @	12 tons/load =	449.2 loads @	0.5 hours/trip =	224.6 hours	RSM/HC p. 469 (line item 01 54 33 20 5250)
Subt - FAC 1/2 to Onsite Landfill				\$0	\$15,673	onsite disposal o	stabilized sedimen	nt	, ,		
6.14 Offsite FAC 1/2 Disposal						if onsite landfill	capacity not availab	ole			
Offsite Disposal - FAC 1/2 Soil/Sed	5390.6	tons	\$133.00	\$716,950	Śn	5390.6 tons					HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based
Subt - Offsite Landfill Disposal	3390.0	LUIIS	Ç133.00	\$716,950 \$ <b>716,950</b>			of sails & sediment	s from FAC Pond 1/2			on current market conditions
(Subt: Assemblies 6.11 thru 6.14)				\$1,215,261				for FAC Pond 1/2 soils & :	sediments		
6.15 Excavate Soil/Sed - FAC 3			1		T			udes loading & tranport	to stabilization:site exp	erience	
FAC Pond 3 Area in SF x 0.5' dp	495500.0		n/a			247750 CF =	9176 CY				
Laborer		hours	\$39.00	\$3,580		9175.9 CY @	100 CY/hr=	91.8 hours @	1 units/crew=	91.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00	\$4,131		9175.9 CY @	100 CY/hr =	91.8 hours @	1 units/crew =	91.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator		hours	\$84.09	\$7,719		9175.9 CY @	100 CY/hr =	91.8 hours @	1 units/crew =	91.8 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Driver		hours	\$45.00	\$4,131		9175.9 CY @	100 CY/hr =	91.8 hours @	1 units/crew =	91.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Dump Truck (12-ton load)	91.8	hours	\$24.78	\$2,275		9175.9 CY @	100 CY/hr =	91.8 hours @	1 units/crew =	91.8 hours	RSM/HC p. 469 (line item 01 54 33 20 5250)
Subt - Excavate Soil/Sed - FAC 3	1	1		\$21,836	\$21,836	excavate soils a	nd sediments from	FAC Pond 3			

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities for In-house Estimate In-house Pricing References
6.16 Stabilize FAC Pond 3						production rate = 100 tons/hour = 800 tons/day; includes loading for transport to landfill
PROCESS TONS (incl kiln dust)	14245.6	TONS	n/a			9176 CY @ 1.35 ton/CY + 15% kiln dust = 14245.6 tons 1 CY = 2,700# (1.35 ton) @ 100# per CF
Dump Truck (12-ton load)		hours	24.78	\$3,531	\$3 531	14245.6 tons @ 100 tons/hr @ 142.5 hours @ 1 units/crew = 142.5 hours RSM/HC p. 469 (line item 01 54 33 20 5250)
Cement Kiln Dust - Mat'l&Delv Cost	1858.1		\$48.00	\$89,189	\$89.189	
Stabilization Cost	12387.6		\$25.00	\$309,690	, ,	9176 CY @ 1.35 ton/CY = 12387.6 CWM actual 2011 costs inc. labor & equipment
TCLP (Metals/VOCs/Semi-VOCs)		each	\$446.67	\$5,315		474.9 hours @ 1 test/40 hr = 11.9 tests analytical price: average of three quotes
Subt - Stabilize FAC Pond 3	11.5	Cucii	ψ 1.0.0 <i>7</i>	\$407,725		stabilize soils and sediments from FAC Pond 3
6.17 Transp FAC 3: Offsite Disp						production rate = 0.5 hours/rolloff for on-site travel
Offsite Transportation - Solids	274235.5	miles	\$3.25			14245.6 tons @ 20 tons/load = 712.3 loads @ 1385 hours/trip = 274,235.5 miles Rate: transporters quote/site experience
Subt - FAC 3 to Offsite Landfill				\$891,265	\$0	transport soils & sediments from FAC Pond 3 to offsite landfill
6.17a Transp/Unload FAC 3: Onsite Disp						production rate = 0.5 hours for onsite travel
Driver		hours	\$45.00	\$0		2 14245.6 tons @ 12 tons/load = 1187.1 loads @ 0.5 hours/trip = 593.6 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Dump Truck (12-ton load)	593.6	hours	\$24.78	\$0		14245.6 tons @ 12 tons/load = 1187.1 loads @ 0.5 hours/trip = 593.6 hours RSM/HC p. 469 (line item 01 54 33 20 5250)
Subt - FAC 3 to Onsite Landfill				\$0	\$41,421	onsite disposal of stabilized sediment
6.18 Offsite FAC 3 Disposal						in-house estimate = \$0 for on-site disposal
Disposal - FAC 3 Soil/Sediments	14245.6	tons	\$133.00	\$1,894,665	\$0	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing bas on current market conditions
Subt - Offsite Landfill Disposal				\$1,894,665	\$0	offsite disposal of soils & sediments from FAC Pond 3
(Subt: Assemblies 6.15 thru 6.18)				\$3,215,492	\$470,983	excavation, stabilization, and T&D for FAC Pond 3 soils & sediments
6.19 Backfill/Grade - FAC 1/2						production rate = 200 CY/hour, site experience w/ 2 dozers; 11,000 CY onsite soil/clay available from berms
FAC Pond 1/2 Backfill Volume	31250.0	CY	n/a			31250 CY minus 11000 CY onsite = 20250 CY borrow
Laborer	156.3	hours	\$39.00	\$6,094	\$6,094	31250 CY @ 200 CY/hr= 156.25 hours @ 1 units/crew= 156.25 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	312.5	hours	\$45.00	\$14,063	\$14,063	31250 CY @ 200 CY/hr= 156.25 hours @ 2 units/crew = 312.5 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Dozer (200 hp)	312.5	hours	\$56.38	\$17,619		31250 CY @ 200 CY/hr= 156.25 hours @ 2 units/crew = 312.5 hours RSM/HC p. 468 (line item 01 54 33 20 4260)
Offsite Borrow - Material & Delivery Cost	20250.0	CY	\$11.00	\$222,750		20250 CY 3rd party quote for RMU-1 final cover construction Assb. 14.0
Subt - Backfill/Grade - FAC 1/2				\$260,525	\$260,525	backfill and grade FAC Pond 1/2
6.20 Backfill/Grade - FAC 3						production rate = 200 CY/hour, site experience w/ 2 dozers
FAC Pond 3 Backfill Volume	137500.0		n/a			137500 CY minus 0 CY onsite = 137500 CY borrow
Laborer		hours	\$39.00	\$26,813		137500 CY @ 200 CY/hr = 687.5 hours @ 1 units/crew = 687.5 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	1375.0		\$45.00	\$61,875		137500 CY @ 200 CY/hr = 687.5 hours @ 2 units/crew = 1375.0 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Dozer (200 hp)	1375.0		\$56.38	\$77,523		137500 CY @ 200 CY/hr = 687.5 hours @ 2 units/crew = 1375.0 hours RSM/HC p. 468 (line item 01 54 33 20 4260)
Offsite Borrow - Material & Delivery Cost	137500.0	CY	\$11.00	\$1,512,500		137500 CY 3rd party quote for RMU-1 final cover construction Assb. 14.0
Subt - Backfill/Grade - FAC 3		I	1	\$1,678,710	\$1,678,710	backfill and grade FAC Pond 3

#### 6.0 Fac Ponds

Subtotal - Supervision

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	
						production rate = 200 CY/hour, site experience w/ 2 dozers; 30,556 CY onsite soil/clay available from
6.21 Backfill/Grade - FAC 8						berms
FAC Pond 8 Backfill Volume	84027.0		n/a			84027 CY minus 30556 CY onsite = 53471 CY borrow
aborer		hours	\$39.00	\$16,384		4 84027 CY @ 200 CY/hr = 420.1 hours @ 1 units/crew = 420.1 hours   loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)		hours	\$45.00	\$37,814		4 84027 CY @ 200 CY/hr = 420.1 hours @ 2 units/crew = 840.3 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Dozer (200 hp)		hours	\$56.38	\$47,376		6 84027 CY @ 200 CY/hr = 420.1 hours @ 2 units/crew = 840.3 hours RSM/HC p. 468 (line item 01 54 33 20 4260)
Offsite Borrow - Material & Delivery Cost	53471.0	CY	\$11.00	\$588,181	\$588,181	
Subt - Backfill/Grade - FAC 8				\$689,755		5 backfill and grade FAC Pond 8
(Subt: Assemblies 6.19 thru 6.21)				\$2,628,990	\$2,628,990	backfill and grade FAC Ponds 1/2, 3, and 8
6.22 Seed/Fertilize FAC 1/2 3 & 8						soil prep prod' rate = 33K sf/day (0.75 ac/day); seed/fert prod'n rate = 80K sf/day (1.8 ac/day)
FAC Pond 1/2 Surface Area	309.3	MSF	n/a			7.1 acres
FAC Pond 3 Surface Area	575.0		n/a			13.2 acres
FAC Pond 8 Surface Area		MSF	n/a			6.6 acres
Soil Preparation		MSF	\$0.00	\$0	\$0	0 Not necessary
Seeding & Fertilizing	1171.8		\$73.97	\$86,678		8 1172 MSF 2004 DEC Rate * Implicit Deflator
Subt - Seed/Fert FACs 1/2, 3, & 8	1171.0	14151	ψ, 3.3,	\$86,678		8 seeding and fertilizing FAC Ponds 1/2, 3, and 8
(Subt: Assemblies 6.22 thru 6.22)				\$86,678	\$86,678	
6.23 GW Well Monitoring						production = 0.5 hours/sample for two techs
Technician	30.0	hours	\$38.00	\$1,140	\$1,140	0 30.0 samp @ 0.5 hrs/samp = 15.0 hours @ 2 units/crew = 30.0 hours technician rate: loaded labor rate 2011 3rd party quote
Sampling Supplies	30.0	samp	\$25.00	\$750	\$750	0 30.0 samples bottles, shipping supplies
VOC Analysis (EPA 624)	30.0	samp	\$105.00	\$3,150	\$3,150	0 30.0 points @ 1.0 samps/pt = 30.0 samples analytical price: average of three quotes
						monitoring of twelve monitoring wells (plus three QA blanks/duplicates) - two events during one year
Subt - GW Well Monitoring				\$5,040	\$5,040	0 closure
(Subt: Assemblies 6.23 thru 6.23)				\$5,040	\$5,040	0
Total Non-Super hours	7091.0	1				
6.24 PPE Usage & H&S Planning						Level C @ 0%; Level Mod C @ 25%; Level D @ 75% for tot non-supv hrs for all tasks; HASP @ 2.5% of non-supv hrs
PPE Usage - Level D	650.4	days	\$0.00	\$0	\$0	0 6937.2 hours @ 8 hr/day = 867.2 days @ 75% "D" days = 650.4 days Standard Work Clothes - Site Experience
PPE Usage - Mod Level C		days	\$9.00			1 6937.2 hours @ 8 hr/day = 867.2 days @ 25% "C" days = 216.8 days 25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C		days	\$25.00			0 6937.2 hours @ 8 hr/day = 867.2 days @ 0% "C" days = 0.0 days 0% of non-supv hrs in Level C (price: \$25/day)
Health & Safety Officer	173.4	hours	\$75.00	\$13,005	\$13,005	5 6937.2 hours @ 2.5% hr/hr = 173.4 hours Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$14,956	\$14,956	
6.25 Supervision						26 weeks for closure of FAC Ponds
Foreman		hours	\$65.00			0 26 weeks @ 40 hrs/wk = 1040.0 hours Foreman rate 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00			O Included in Gen'l Contractor G&A/Home Office indirect costs loaded labor rate: loaded labor rate 2011 3rd party quote
				467.600	467.600	

\$67,600

\$67,600

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
6.26 Certification						Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory labor hours for all tasks	
Engineer	104.0	hours	\$130.00	\$13,520	\$13,520	6937.2 hours @ 0.015 hr/hr = 104.0 hours	Engineer rate: 2011 3rd party quote
Clerical	104.0	hours	\$45.00	\$4,680	\$4,680	6937.2 hours @ 0.015 hr/hr = 104.0 hours	Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$18,200	\$18,200		
(Subt: Assemblies 6.24 thru 6.26)				\$100,756	\$100,756	supervision, health & safety, and certification	

6.0 Fac Ponds			
Total Cost Summary			
Cost Category	Proposed	Proposed	Cost Range
	Percent	2011 Cost	
	of Direct	OffSite	
	Cost	Disposal	
Direct Costs/Basic Disposal		\$7,469,069	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$522,835	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$298,763	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$448,144	note: DEC uses 6%
Engineering During Construction	2.00%	\$149,381	note: DEC uses 2%
General Contractor Profit	6.00%	\$448,144	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$1,867,267	
Subt: Fac Ponds		\$9,336,337	
Plus Contingency	10.00%	\$933,634	CWM and DEC 10%
Tot: Fac Ponds		\$10,269,970	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 7.0 CSA 29 (Truck Wash Bldg)

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Produ	iction and Quantities f	or In-house Estimat	In-house Pricing References		
7.1 Inventory Verification		1	ī			nuadin sata. 15	main /mallaff, tura mana	no no avino d			1
7.1 Inventory Verification	1.5	haus	\$39.00	ĆE0	Ć.E.O.	3 rolloffs @	min/rolloff; two perso 0.25 hr/rolloff =		2 units/crew =	1	looded labou voter looded labou vote 2011 2nd nover cureto
Laborer Subtotal - Inventory Verification	1.5	hours	\$39.00	\$59 <b>\$59</b>			0.25 11/1011011 =	0.8 hours @	z units/crew =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
(Subt: Assemblies 7.1 - 7.1)				\$59 \$59			ventory of CSA 29				
(Subt. Assemblies 7.1 7.1)				وود	ودد	conducting in	ventory of CSA 25				
						prod'n rate = 0	.5 hrs for onsite travel;	three 30-CY (16 tor	n) solids' rolloffs parked	lat	
7.2 Transp ROs to onsite L'dfill						CSA 29 = 48 to	ns				
Road Tractor (4 x 2, 30-ton)	1.5	hours	\$32.45	\$49	\$49	90 CY @	30 CY/load =	3.0 loads @	0.5 hrs/trip =	1.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	1.5	hours	\$45.00	\$68	\$68	90 CY @	30 CY/load =	3.0 loads @	0.5 hrs/trip =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Rolloff (30 CY)	1.5	hours	\$19.02	\$29		90 CY @	30 CY/load =	3.0 loads @	0.5 hrs/trip =	1.5 hours	dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Transp Rolloffs to Landfill				\$145	\$145						
7.3 Unload Solids Rolloffs						Not Applicabl	e: included in 7.2 above	e			
Laborer	0.0	hours	\$39.00	\$0	\$0	' '					loaded labor rate: loaded labor rate 2011 3rd party quote
Loader (small)	0.0	hours	\$14.39	\$0	\$0						RSM/HC p. 468 (line item 01 54 33 20 4610)
Rolloff (30 CY)	0.0	hours	\$19.02	\$0	\$0						dumpster RSM/BC p. 42 (02225-730-0800)
Subt - Unload Rolloffs Onsite				\$0							
7.4 Offsite Solids T&D						accumos off s	ite land disposal; 1 CY =	- 1065 Lbs:			
Offsite Transport'n - Rolloff Solids	1155.0	miles	\$3.25	\$3,754	ŚŊ	90 CY @	30 CY/load =	3.0 loads @	385 miles/trip =	1155 miles	Rate: transporters quote/site experience
Charle Transport ii Rollon Solids	1155.0	Hilles	Ş3. <u>2</u> 3	75,754	ÇÜ	30 01 @	30 C1/10dd -	3.0 loads @	303 Hilles/ Hip =	1155 IIIIC3	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based
Offsite Disposal - Rolloff Solids	48.0	tons	\$90.00	\$4,320	Śn	90 CY @	0.5333 tons/CY =	48.0 tons			on current market conditions
Subt - Offsite Rolloff Solids T&D	.0.0	101.5	ψ50.00	\$8,074	\$0		0.0000 (0.10) 0.1	1010 (0110			on current market conditions
(Subt: Assemblies 7.2 - 7.4)				\$8,218			l of 90 CY (48 tons)				
	ı		,				107.07 ()	,			
7.5 Decon CSA 29 (wash)	12.0	h	ć20.00	ĆE 42	ĆE 42	•		· · · · · · · · · · · · · · · · · · ·	it each; facility experier		leaded by a set of a ded by a set of 2011 2nd and a set of a set
Laborer Prossure Washer	13.9	hours	\$39.00	\$542		1462 SF @	105 SF/hr =	13.9 hours @	1 pers/crew =	13.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	13.9 13.9	hours	\$4.04 \$3.41	\$56 \$47		1462 SF @ 1462 SF @	105 SF/hr = 105 SF/hr =	13.9 hours @ 13.9 hours @	1 unit/crew =	13.9 hours 13.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper Subt - Decon CSA 29 (wash)	13.9	hours	Ş <b>5.</b> 41	\$47 <b>\$646</b>			103 25/111 =	13.3 HOUIS @	1 unit/crew =	13.3 (1001)	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decoil CSA 23 (WdSII)				Ş040	Ş <del>04</del> 6						
7.6 Decon CSA 29 (rinse)						production rat	e = 105 SF/hr for 1-pers	son crew w/ one un	it each; facility experier	nce	
Laborer	13.9	hours	\$39.00	\$542	\$542	1462 SF @	105 SF/hr =	13.9 hours @	1 pers/crew =	13.9 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	13.9	hours	\$4.04	\$56		1462 SF @	105 SF/hr =	13.9 hours @	1 unit/crew =	13.9 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	13.9	hours	\$3.41	\$47	\$47	1462 SF @	105 SF/hr =	13.9 hours @	1 unit/crew =	13.9 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon CSA 29 (rinse)				\$646	\$646						
7.7 Decon Water Samp/Disp						production rat	e = 0.5 hours/sample fo	or two techs			
Technician	1.1	hours	\$38.00	\$42	\$42	1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116		1.0 areas @	1.1 samp/area =	1.1 samples	* *		analytical price: average of three quotes
On-site Water Disposal	2924.0	gal	\$0.0313	\$92		1462 SF @	1.0 gal/sf/wa =	1462 gallons +	1.0 gal/sf/rinse =	1462 gallons	site waters waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose		,		\$249	\$249		<u> </u>	<u> </u>	<u> </u>	<u> </u>	

#### 7.0 CSA 29 (Truck Wash Bldg)

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production	asis of Production and Quantities for In-house Estimate				In-house Pricing References
7.8 PCB Wipe Samples			1			production rate = 0	5 hours/sample fo	r two techs			T
Technician	3.4	hours	\$38.00	\$129	\$129		0.5 hr/samp =	1.7 hours @	2 pers/crew =	3.4 hours	technician rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	1.1	samp	\$446.67	\$491			1.1 samp/area =	1.1 samples	12.2.7.2.2		analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	2.3	samp	\$83.33	\$192			625 SF/samp =	2.3 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$812	\$812						
(Subt: Assemblies 7.5 - 7.8)				\$2,352	\$2,352	decontamination &	& sampling of CSA	9			
7.9 Soils Samples						production rate = 0	.5 hours/sample fo	two techs			
Technician	4.4	hours	\$38.00	\$167	\$167	4.4 samp @	0.5 hr/samp =	2.2 hours @	2 pers/crew =	4.4 hours	technician rate: rate 2011 3rd party quote
VOC/PCB/Total Metals Analysis	4.4	samp	\$395.00	\$1,738	\$1,738	4.0 grid sq @	1.1 samp/area =	4.4 samples			analytical price: average of three quotes
Subt - Soil Samples				\$1,905	\$1,905		·		·		
(Subt: Assemblies 7.9 - 7.9)				\$1,905	\$1,905	soil sampling at CS	SA 29				
Total Non-Super hours	39.7										
7.10 PPE Usage/H&S Planning						Level C @ 75%; Mo	d Level C @ 25% fo	r tot non-supv hrs	for all tasks; HASP @ 2	2.5% of non-supv hr	s
BBEIL MAIL IG	4.2		60.00	4.0	4.0		01 /1		a may like a least t	4.0.1	

7.10 PPE Usage/H&S Planning						Level C @ 75%;	Mod Level C @ 25%	for tot non-supv hr	s for all tasks; HASP @ 2.59	% of non-supv h	nrs
PPE Usage - Mod Level C	1.3	days	\$9.00	\$12	\$12	39.7 hours @	8 hr/day =	5.0 days @	25% "Mod C" days =	1.3 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	3.7	days	\$25.00	\$93	\$93	39.7 hours @	8 hr/day =	5.0 days @	75% "C" days =	3.7 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	1.7	hours	\$75.00	\$128	\$128	39.7 hours @	2.5% hr/hr =	1.7 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$232	\$232						
7.11 Supervision						0.2 weeks for cl	osure of Truck Wash	Building			
Foreman	8.0	hours	\$65.00	\$520	\$520	0.2 weeks @	40 hrs/wk =	8.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	\$0	Included in Ger	n'l Contractor G&A/H	Iome Office indirect	costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520	\$520						
7.12 Certification						Engineer @ 1.59	% and Clerical @ 1.59	% of total non-supe	rvisory hours for all tasks		
Engineer	1.0	hours	\$130.00	\$130	\$130	39.7 hours @	0.015 hr/hr =	1.0 hours			Engineer rate: 2011 3rd party quote
Clerical	1.0	hours	\$45.00	\$45	\$45	39.7 hours @	0.015 hr/hr =	1.0 hours			Clerical rate: 2011 3rd party quote
Subtotal CertificationSubtotal -Certification				\$175	\$175		•	•	•		
(Subt: Assemblies 7.10 - 7.12)				\$927	\$927		<u> </u>				

7.0 CSA 29 (Truck Wash Bldg)	Direct Cost	Total	Basic	\$13,461	\$5,387

7.0 CSA 29 (Truck Wash Bldg)			
Total Cost Summary			
•			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost OffSite Disposal	Cost Range
Direct Costs/Basic Disposal		\$13,461	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$942	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$538	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$808	note: DEC uses 6%
Engineering During Construction	2.00%	\$269	note: DEC uses 2%
General Contractor Profit	6.00%	\$808	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$3,365	
Subtotal: CSA 29 (Trk Wsh Bldg)		\$16,826	
Plus Contingency	10.00%	\$1,683	CWM and DEC 10%
Total: CSA 29 (Truck Wash Bldg)		\$18,509	

#### **Cost References:**

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<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 8.0 CSA 11 (South Trail Parking)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	of Production and Quantities for In-house Estimate In-house Pricing References	
8.1 Inventory Verification	1			1		n rates: 8 tankers or rolloffs/hour/crew; two persons required;	
Laborer	1.25	hours	\$39.00	\$49	\$49	kers @ 0.125 hr/tanker = 0.625 hours @ 2 units/crew = 1.25 hours loaded labor rate: loaded labor	ate 2011 3rd party quote
Subtotal - Inventory Verification				\$49	\$49	capacity is 29 tankers: 5 tanker proposed permit limit However, unit only capable of si	oring 29 tankers
8.1a Inventory Verification	12	la access	¢20.00	\$468	Ć 4 C C	n rates: 8 tankers or rolloffs/hour/crew; two persons required;	2011 201
Subtotal - Inventory Verification	12	hours	\$39.00	\$468 \$468		olloffs @ 0.125 hr/rolloff = 6 hours @ 2 units/crew = 12.0 hours loaded labor rate: loaded labor capacity is 58 rolloffs end to end: 48 realistic limit	ate 2011 3rd party quote
(Subt: Assemblies 8.1 - 8.1)				\$517		ducting inventory of CSA 11 (South Trailer Parking Area)	
(Subt. Assemblies 8.1 8.1)				3317	3317	natting inventory of Con 11 (South Trainer Funning Area)	
8.2 Offsite Transportation						5) 5,500-gal tankers parked at CSA 11 = 27,500 gals	
Transport in 5,500-gal tanker	7645.0	miles	\$3.50	\$26,758	\$26,758	10 gals @ 5500 gals/load = 5.0 loads @ 1529 miles/trip = 7645 miles Rate: transporters quote/site ex	perience
Offsite Transportation - Solids	18480.0	miles	\$3.25	\$60,060		otons @ 16 tons/load = 48.0 loads @ 385 miles/trip = 18480.0 miles Rate: transporters quote/site ex	perience
Subt - Offsite Transportation				\$86,818	\$26,758	nes offsite disposal/incineration of liquid	
8.2a Transp All Rolloffs: Onsite Stab						uction rate = 10 mins/rolloff for on-site travel (all rolloffs previously existing at site)	
Road Tractor (4 x 2, 30-ton)	8.0	hours	\$32.45	\$0	\$260	olloffs @ 1 rolloff/load = 48.0 loads @ 10 mins/trip = 8.0 hours RSM/HC p. 472 (line item 01 54	33 40 7410)
Driver	8.0	hours	\$45.00	\$0		olloffs @ 1 rolloff/load = 48.0 loads @ 10 mins/trip = 8.0 hours loaded labor rate: loaded labor	
Rolloff (30-CY) (existing equip't)	0.0	hours	\$19.02			loffs @ 1 rolloff/load = 0.0 loads @ 0.5 hours/trip = 0.0 hours dumpster RSM/BC p. 42 (02225-	730-0800)
Subtotal -Transport Rolloffs Onsite				\$0	\$620	nes onsite stabilization and disposal	
8.2b Stabilization (non-Macro mat'l)						n rate = 100 tons/hour = 800 tons/day (non-Macro Room material); 30 CY roll = 16 tons	
PROCESS TONS (incl kiln dust)	883.2	TONS	n/a			lloffs @ 30 CY each @ 16 tons/rolloff + 15% kiln dust = 883.2 tons	
Cement Kiln Dust - Mat'l&Delv Cost	115.2	tons	\$48.00		\$5,530	CWM actual 2011 costs	
Stabilization Cost	768.0	tons	\$25.00	\$0	\$19,200	CWM actual 2011 costs inc. labor	• •
TCLP Testing - RCRA (EPA 1311)	16.0	samp	\$348.33	\$0		lloffs @ 3 ro's/samp = 16.0 samples average of 3 third party labs; on	e sample per 3 rollotts
Subt - Stabilization				\$0	\$30,303		
0.2a Transa Pallaffa ta Onsita Ilfill			-			uction rate = 0.25 hours for onsite travel	
8.2c Transp Rolloffs to Onsite L'fill Road Tractor (4 x 2, 30-ton)	12.0	hours	\$32.45	\$0	ćaoc	lloffs @ 1 rolloff/load = 48.0 loads @ 0.25 hours/trip = 12.0 hours RSM/HC p. 472 (line item 01 54	22 40 7410\
Driver	12.0	hours	\$45.00			lloffs @ 1 rolloff/load = 48.0 loads @ 0.25 hours/trip = 12.0 hours   loaded labor rate: loaded labor	,
Rolloff (30-CY) (existing equip't)	0.0	hours	\$19.02		\$340	dumpster RSM/BC p. 42 (02225-	
Subt - Transp RO's to Onsite Landfill	3.0	110013	713.02	\$0		nbly estimate assumes on-site disposal	, 33 3300/
The state of the s				30	7525	,	
8.2d Unload non-Macro Rolloffs						uction rate = 0.25 hours for unload in landfill	
Laborer	12.0	hours	\$39.00	\$0	\$468	lloffs @ 1 rolloff/load = 48.0 loads @ 0.25 hours/trip = 12.0 hours loaded labor rate: loaded labor	rate 2011 3rd party quote
Backhoe (1 CY)	12.0	hours	\$19.18			lloffs @ 1 rolloff/load = 48.0 loads @ 0.25 hours/trip = 12.0 hours   RSM/HC p. 467 (line item 01 54	
Equipment Operator (Medium)	12.0	hours	\$45.00			lloffs @ 1 rolloff/load = 48.0 loads @ 0.25 hours/trip = 12.0 hours loaded labor rate: loaded labor	,
Rolloff (30-CY) (existing equip't)	0.0	hours	\$19.02	\$0	\$0	dumpster RSM/BC p. 42 (02225	730-0800)
Subt - Unload RO's at Onsite L'Fill				\$0	\$1,238		
8.3 Offsite Disposal							
Disposal Cost (Incin PCB Liquids)	27500.0	gallons	\$4.68	\$128,700	\$128,700		,
			l	<u> </u>		· · · ·	st comparison industry pricing based on
Offsite Disp - Haz Rolloff Solids	768.0	tons	\$133.00			lloffs @ 30 CY each @ 16 tons/rolloff = 768.0 tons current market conditions	
Subt - Offsite Liquids Disposal			ļ	\$230,844	\$128,700		
(Subt: Assemblies 8.2 - 8.3)				\$317,662	\$188 <b>,</b> 548	sal of bulk liquid PCB wastes from 5 tankers/48 rolloffs	

#### 8.0 CSA 11 (South Trail Parking)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities fo	or In-house Estima	te		In-house Pricing References
8.4 Decon CSA 11 Area (wash)	1 1					production rate :	= 105 SF/hr for 1-pers	on crew w/ one un	nit each: facility expe	rience	
Laborer	140.0	hours	\$39.00	\$5,460		14702 SF @	105 SF/hr =	140.0 hours @		140.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	140.0	hours	\$4.04	\$566		14702 SF @	105 SF/hr =	140.0 hours @		140.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	140.0	hours	\$3.41	\$477		14702 SF @	105 SF/hr =	140.0 hours @	•	140.0 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon CSA 11 Area (wash)				\$6,503	\$6,503						. , . , . ,
8.5 Decon CSA 11 Area (rinse)						production rate	= 105 SF/hr for 1-pers	on crew w/ one un	nit each: facility expe	rience	
Laborer	140.0	hours	\$39.00	\$5,460	\$5.460	14702 SF @	105 SF/hr =	140.0 hours @		140.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	140.0	hours	\$4.04	\$5,400	. ,	14702 SF @	105 SF/hr =	140.0 hours @		140.0 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	140.0	hours	\$3.41	\$477		14702 SF @	105 SF/hr =	140.0 hours @		140.0 hours	RSM/HC p. 471 (line item 01 54 33 40 3430)
Subt - Decon CSA 11 Area (rinse)	140.0	nours	75.41	\$6,503	\$6,503	14/0231 @	103 31/111 -	140.0 110013 @	I diniy diew -	170.0 110013	nany ne p. 473 (nne nem 01 34 33 40 7000)
						1	0.51 /				
8.6 Decon water samp/disp - N/A		L.	600.00	A	A		= 0.5 hours/sample fo		2 /-	4.4.5	Assistant and a 2014 2nd
Technician	1.1	hours	\$38.00	\$42		1.1 samp @	0.5 hr/samp =	0.6 hours @	2 pers/crew =	1.1 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)	1.1	samp	\$105.00	\$116		1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
On-site Water Disposal	15000.0	gal	\$0.0313	\$470		15,000 gallons					facility o/s mild waste treat price; vol @ 0.05 gal/sf (equip lit)
Subt - Decon Water Samp/Dispose				\$627	\$627						
8.7 PCB Wipe Samples							= 0.5 hours/sample fo				
Technician	24.6	hours	\$38.00	\$935	· ·	24.6 samp @	0.5 hr/samp =	12.3 hours @	2 pers/crew =	24.6 hours	technician rate: rate 2011 3rd party quote
TCLP (Metals/VOCs/Semi-VOCs)	1.1	samp	\$446.67	\$491		1.0 areas @	1.1 samp/area =	1.1 samples			analytical price: average of three quotes
PCB Analysis (SW 8081/8082)	23.5	samp	\$83.33	\$1,958		14702 SF @	625 SF/samp =	23.5 samples			analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$3,384	\$3,384		0 " 6001	11/0 11 0 11			
(Subt: Assemblies 8.4 - 8.7)				\$17,017	\$17,017	decontaminatio	n & sampling of CSA 1	11 (South Parking A	Area)		
8.8 Demolish Conc CSA 11						prod'n rate = 8 C	Y/hr (site experience)	; 10" mesh reinf: 1	cf = 150#; 1 cy = 2 to	ons	
Laborer	56.5	hours	\$39.00	\$2,204		14702 SF @	260 SF/hour	56.5 hours @	1 units/crew =	56.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	113.1	hours	\$50.70	\$5,734	\$5,734	14702 SF @	260 SF/hour	56.5 hours @	2 units/crew =	113.1 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Excavator	113.1	hours	\$84.09	\$9,511	\$9,511	14702 SF @	260 SF/hour	56.5 hours @	2 units/crew =	113.1 hours	RSM/HC p. 467 (line item 01 54 33 20 0320)
Hydraulic Hammer Attach (1,200#)	56.5	hours	\$20.59	\$1,163		14702 SF @	260 SF/hour	56.5 hours @	1 units/crew =	56.5 hours	RSM/HC p. 467 (line item 01 54 33 20 0349)
Claw Attachment	56.5	hours	\$2.47	\$140	\$140	14702 SF @	260 SF/hour	56.5 hours @	1 units/crew =	56.5 hours	RSM/HC p. 477 (line item 01 54 33 20 0345)
Loader	0.0	hours	\$30.03	\$0		not required					RSM/HC p. 469 (line item 01 54 33 20 4730)
Dump Truck (12-ton load)	56.5	hours	\$24.78	\$1,400		14702 SF @	260 SF/hour	56.5 hours @	1 units/crew =	56.5 hours	RSM/HC p. 469 (line item 01 54 33 20 5250)
Welding Equipment	56.5	hours	\$5.41	\$306		14702 SF @	260 SF/hour	56.5 hours @	1 units/crew =	56.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Demolish Conc CSA 11				\$20,457	\$20,457	452 CY @	2 tons/CY =	903.9 tons			
8.9 Transp/Unload debris to onsite landfill						production rate =	= 0.5 hours for onsite	travel			
Road Tractor (4 x 2, 30-ton)	0.0	hours	\$32.45	\$0	\$0	not required					RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	37.7	hours	\$45.00	\$0		903.9 tons @	12 tons/load =	75.3 loads	0.5 hours/trip =	37.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
D T 1 (42 + 1 1)	0.0	hours	\$24.78	\$0		Included in 8.8 ra	•				RSM/HC p. 469 (line item 01 54 33 20 5250)
Dump Truck (12-ton load)	0.0	110013	Ψ= Ο	ΨU	70						

### 8.0 CSA 11 (South Trail Parking)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Production and Quantities for In-house Estimate In-house P	Pricing References
				1	1		
8.10 Unload Demolition Debris						Included in 8.9	
Laborer	0.0	hours	\$39.00			·	bor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$50.70				bor rate: loaded labor rate 2011 3rd party quote
Loader	0.0	hours	\$30.03				o. 469 (line item 01 54 33 20 4730)
Dump Trailer (20 CY)	0.0	hours	\$5.20	\$0	\$0	not required RSM/HC p.	o. 469 (line item 01 54 33 20 5400)
Subt - Unload Demo Debris				\$0	\$0		
8.11 Offsite Conc Debris T&D						assume off-site "D" disposal facility within 50 miles of facility; 1 CY = 32.5 SF of conc. @ 10" depth	
Offsite Transportation - Debris	150.5	miles	\$3.25	\$489	\$0	452 CY @ 15 CY/load = 30.1 loads @ 5 miles/trip = 150.5 miles Rate: trans	sporters quote/site experience
Offsite Disposal - Concrete Debris	903.9	tons	\$35.00	\$31,637	\$0	452 CY @ 2 tons/CY = 903.9 tons Modern Di	Disposal/Site Experience
Subt - Offsite Conc Debris T&D				\$32,126	\$0		
(Subt: Assemblies 8.8 - 8.11)				\$52,582	\$22,153	off-site transport and disposal of demolition debris	
	•				•	<u> </u>	
8.12 Soils Samples						production rate = 0.5 hours/sample for two techs	
Technician	15.4	hours	\$38.00	\$585	\$585	15.4 samp @ 0.5 hr/samp = 7.7 hours @ 2 pers/crew = 15.4 hours technician	n rate: rate 2011 3rd party quote
VOC/PCB/Total Metals Analysis	15.4	samp	\$395.00			14.0 grid sq @ 1.1 samp/area = 15.4 samples analytical p	price: average of three quotes
Subt - Soil Samples				\$6,668			
(Subt: Assemblies 8.12 - 8.12)				\$6,668	\$6,668	soil sampling at CSA 11	

Total Non-Super hours

584.4

					Lov	al C @ 0% · M/	od Level C @ 25%: I	Level D @ 75% for t	tot non-cupy hre for all ta	sks; HASP @ 2.5% of non-sup	
8.13 PPE Usage/H&S Planning					hrs		ou Level C @ 23%,	Level D @ 73% lol l	tot non-supvins for all ta	sks, HASF @ 2.5% of Holl-sup	
PPE Usage - Level D	54.8	days	\$0.00	\$0	\$0 584	1.4 hours @	8 hr/day =	73.1 days @	75% "D" days =	54.8 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	18.3	days	\$9.00	\$165	\$165 584	1.4 hours @	8 hr/day =	73.1 days @	25% "Mod C" days =	18.3 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	0.0	days	\$25.00	\$0	\$0 584	1.4 hours @	8 hr/day =	73.1 days @	0% "C" days =	0 days	0% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	14.6	hours	\$75.00	\$1,095	\$1,095 584	1.4 hours @	2.5% hr/hr =	14.6 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$1,260	\$1,260						
8.14 Supervision					2 w	eeks for closu	ire of South Trailer	Parking closure			
Foreman	80.0	hours	\$65.00	\$5,200	\$5,200 2 w	reeks @	40 hrs/wk =	80.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	\$0 Incl	luded in Gen'l	I Contractor G&A/F	Iome Office indirec	t costs		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$5,200	\$5,200						
8.15 Certification					Eng	gineer @ 1.5%	and Clerical @ 1.5	% of total non-supe	ervisory hours for all tasks		
Engineer	8.8	hours	\$130.00	\$1,144	\$1,144 584	1.4 hours @	0.015 hr/hr =	8.8 hours			Engineer rate: 2011 3rd party quote
Clerical	8.8	hours	\$45.00	\$396	\$396 584	1.4 hours @	0.015 hr/hr =	8.8 hours	•		Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$1,540	\$1,540	•		•	•		
(Subt: Assemblies 8.13 - 8.15)				\$8,000	\$8,000	•		•	•		

8.0 CSA 11 (South Trail Parking) Direct Cost Total Basic \$402,446 \$242,903

8.0 CSA 11 (South Trail Parking) Total Cost Summary			
Cost Category	Proposed Percent	Proposed 2011 Cost	Cost Range
	of Direct Cost	OffSite Disposal	
Direct Costs/Basic Disposal		\$402,446	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$28,171	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$16,098	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$24,147	note: DEC uses 6%
Engineering During Construction	2.00%	\$8,049	note: DEC uses 2%
General Contractor Profit	6.00%	\$24,147	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$100,611	
Subt: CSA 11 (SouthTrail Pkg)		\$503,057	
Plus Contingency	10.00%	\$50,306	CWM and DEC 10%
Total: CSA 11 (South Trail Pkg)		\$553,363	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 10.0 Laboratory

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Produc	ction and Quantities fo	r In-house Estimate			In-house Pricing References
10.1 Hazcat Lab Containers						Not necessary					
Subt - Hazcat Lab Containers				\$0	\$0	•	entory of laboratory cor	ntents not necessar	v - known quantities	and types	
							, , , , , ,		, , , , , , , , , , , , , , , , , , , ,		
10.2 Hazcat/Overpack Lab Containers						production rate containers/labp	= 20 units/hour (1 unit ack	per 3 min); assume	5 variously-sized lab	)	
Technician	60.0		\$38.00		\$2,280	600 cont @	20 cont/hr =	30.0 hours @	2 units/crew =	60.0 hours	technician rate: rate 2011 3rd party quote
Chemist	30.0		\$75.00	\$2,250		600 cont @	20 cont/hr =	30.0 hours @	1 units/crew =	30.0 hours	Chemist rate: rate 2011 3rd party quote
Labpacks (55-gal recond. steel)	120.0	each	\$114.68			600 cont @	5 cont/LbPk =	120.0 Labpacks	· ·		2004 DEC Rate * Implicit Deflator
Subt - Overpack Lab Containers				\$18,292	\$18,292					1. 1	
(Subt: Assemblies 10.1 thru 10.2)				\$18,292	\$18,292	loading, on-site	transporting, unloadin	g, and on-site dispo	sal of drummed PCB	solids	
	_										
10.3 Load Organic Liquid Labpacks						production rate	= 80 drums/hour; RSM	/UP p. 9-171 (line it	em 33-19-0103)		
Laborer	1.0	hours	\$39.00	\$39	\$39	37 LbPks @	40 LbPks/Hr =	0.5 hours @	2 units/crew =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	0.5	hours	\$22.21	\$11	\$11	37 LbPks @	40 LbPks/Hr =	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	0.5	hours	\$6.26	\$3	\$3	37 LbPks @	40 LbPks/Hr =	0.5 hours @	1 units/crew =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Org. Liquid Labpacks				\$53	\$53						
10.4 Trans Org. Liq. LbPks Offsite							iler = eighty (80) 55-gal				
Flatbed Transport	127.5	miles	\$3.50			37 LbPks @	80 LbPk/load =	0.5 loads @	255 miles/trip =	127.5 miles	Rate: transporters quote/site experience
Subt - Offsite Transp/Org. Liq. LbPk				\$446	\$446						
10.5 Offsite Disposal - Org. Liqs.						disposal prico –	\$1.91/pound to inciner	ato organic liquid la	hnacks		
Disposal Cost (Organic Liquids)	7400.0	Lbs	\$1.91	\$14,134	¢1/ 12/	37 Lbpks @	200 Lbs/LbPk =	7400.0 Lbs	праско		HWC/ETC 2004 & CWM 2011 cost comparison industry pricing
Subt - Offsite Disposal - Org. Ligs.	7400.0	LUS	Ş1.51	\$14,134	\$14,134	37 LUPKS @	200 LD3/LDFK -	7400.0 L03			HWC/ETC 2004 & CWW 2011 cost comparison industry pricing
(Subt: Assemblies 10.3 thru 10.5)				\$14,633	\$14,633	loadina transr	oortation, and offsite dis	snosal of lahnacks o	of organic liquids		
(Subtributed 1818 time 1818)				714,033	714,033	rodding, trunsp	ortation, and offsite als	эрозигој парраска с	y organic nquius		
10.6 Load Misc. Labpacks	1					nroduction rate	= 80 drums/hour/perso	nn: Facility eynerier	ice .		
Laborer	2.2	hours	\$39.00	\$86	ŚŊ	83 LbPks @	80 LbPks/Hr =	1.1 hours @	2 units/crew =	2.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	1.1		\$22.21	\$24		83 LbPks @	80 LbPks/Hr =	1.1 hours @	1 units/crew =	1.1 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	1.1		\$6.26			83 LbPks @	80 LbPks/Hr =	1.1 hours @	1 units/crew =	1.1 hours	RSM/HC p. 470 (line item 01 54 33 40 6600)
Subt - Load Misc. Labpacks	1.1		70.20	\$117		load drums for o		2.200.3	_ a	2.2.10013	1.5, p 2 ( 0.2.0.10000)
10.6a Load Misc. Labpacks						production rate	= 80 drums/hour/perso	on; Facility experier	ice		
Laborer	2.0	hours	\$39.00	\$0		80 LbPks @	80 LbPks/Hr =	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	1.0	hours	\$22.21	\$0	\$22	80 LbPks @	80 LbPks/Hr =	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	1.0	hours	\$6.26	\$0	\$6	80 LbPks @	80 LbPks/Hr =	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Load Misc. Labpacks				Ś0	64.06	Load drums to d		•	•	•	

### 10.0 Laboratory

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Produc	tion and Quantities for	In-house Estimat	e		In-house Pricing References
10.7 Transport to Onsite Landfill						production rate	= 0.5 hours for onsite tr	avel			
Road Tractor (4 x 2, 30-ton)	0.5	hours	\$32.45	\$0		80 LbPks @	80 drums/load =	1.0 loads @	0.5 hr/load =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0.5	hours	\$45.00	\$0		80 LbPks @	80 drums/load =	1.0 loads @	0.5 hr/load =	0.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Flatbed Trailer (40-ton)	0.5	hours	\$6.26	\$0		80 LbPks @	80 drums/load =	1.0 loads @	0.5 hr/load =	0.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Transport to Onsite Landfill				\$0	\$42	assumes off-site	e land disposal; Facility	Estimate assumes	on-site disposal		
10.8 Unload Labpacks Onsite						Not Applicable:	assume off-site land dis	posal			
Laborer	2.0	hours	\$39.00	\$0	\$78	80 LbPks @	80 LbPks/Hr =	1.0 hours @	2 units/crew =	2.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Forklift	1.0	hours	\$22.21	\$0	\$22	80 LbPks @	80 LbPks/Hr =	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 470 (line item 01 54 33 40 2020)
Flatbed Trailer (40-ton)	1.0	hours	\$6.26	\$0	\$6	80 LbPks @	80 LbPks/Hr =	1.0 hours @	1 units/crew =	1.0 hours	RSM/HC p. 472 (line item 01 54 33 40 6600)
Subt - Unload Labpacks Onsite				\$0	\$106	_					
10.9 Offsite Disp: Misc LbPks						assume off-site l	and disposal; 80 drms/l	oad			
Offsite Transportation	1681.9	miles	\$3.50	\$5,887	\$0	83 LbPks @	80 LbPks/ld =	1.1 loads @	1529 miles/trip =	1681.9 miles	Rate: transporters quote/site experience
Offsite Disposal - Landfill	83.0	LabPk	\$341.00	\$28,303	\$0	83 LbPks @	200 lbs/LbPks =	16600 lbs			HWC/ETC 2004 & CWM 2011 cost comparison industry pricing
Subt - Offsite Disp. Misc. Labpacks				\$34,190	\$0	offsite disposal o	of all labpacks (PCB was	te incineration)			
10.9a Offsite Disp: Misc LbPks						assume off-site	land disposal; 80 drms/	load			
Offsite Transportation	152.9	miles	\$3.50	\$0	\$535	3 LbPks @	80 LbPks/ld =	0.1 loads @	1529 miles/trip =	152.9 miles	Rate: transporters quote/site experience
Offsite Disposal - Landfill	3.0	LabPk	\$341.00	\$0	\$1,023	3 LbPks @	200 lbs/LbPks =	600 lbs	·		HWC/ETC 2004 & CWM 2011 cost comparison industry pricing
Subt - Offsite Disp. Misc. Labpacks				\$0	\$1,558	offsite disposal o	of 3 labpacks (PCB waste	incineration)			
(Subt: Assemb 10.6 thru 10.9(a))				\$34,307	\$1,813	loading, transp	ortation, offsite disposa	l of labpacks			
10.10 Decon Laboratory (Wash)						production rate	= 105 SF/hr/person				
Laborer	9.5	hours	\$39.00	\$371	\$371	1000 SF @	105 SF/hr =	9.5 hours @	1 units/crew =	9.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	9.5		\$4.04	\$371		1000 SF @	105 SF/hr =	9.5 hours @	1 units/crew =	9.5 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	9.5		\$0.84	\$8		1000 SF @	105 SF/hr =	9.5 hours @	1 units/crew =	9.5 hours	RSM/HC p. 471 (line item 01 54 33 40 7800)
Subt - Decon Lab (wash)	5.5		<del>, , , , , , , , , , , , , , , , , , , </del>	\$417	\$417		200 0. / 111	3.33ui3 @	± aa, are w	3.33413	,
10.11 Decon Laboratory (Rinse)						production rate	= 105 SF/hr/person				
Laborer	9.5	hours	\$39.00	\$371	\$371	1000 SF @	105 SF/hr =	9.5 hours @	1 units/crew =	9.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Pressure Washer	9.5		\$4.04	\$38		1000 SF @	105 SF/hr =	9.5 hours @	1 units/crew =	9.5 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum Sweeper	9.5		\$0.84	\$8		1000 SF @	105 SF/hr =	9.5 hours @	1 units/crew =	9.5 hours	RSM/HC p. 473 (line item 01 54 33 40 7800)
Subt - Decon Lab (rinse)			,	\$417	\$417						
10.12 Decon Water Samp/Dispose						production rate	0.5 hours/sample for tw	o techs: facility to	reatment price \$0.0273	3/gal	
Technician	2.2	hours	\$38.00	\$84	\$2/	2.2 samp @	0.5 hr/samp =	1.1 hours @	2 units/crew =	2.2 hours	technician rate: rate 2011 3rd party quote
VOC Analysis (EPA 624)	2.2		\$105.00	\$231		2.0 areas @	1.1 samp/area =	2.2 samples	Z arrits/ crew =	2.2 Hours	analytical price: average of three quotes
100/mary313 (El 71024)											
On-site Water Disposal	1000.0	gal	\$0.0313	\$31	531	1000 SF @	1.0 gal/sf/wa =	1000.0 gallons			facility o/s mild waste treat price; vol @ 0.05 gal/sf (equip lit)

### 10.0 Laboratory

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	I Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	sis of Production and Quantities for In-house Estimate		In-house Pricing References
		1	1					
10.13 PCB Wipe & Destruct Samp						TCLP analyses necessary according to site-wide closure plan		
Technician	12.0	hours	\$38.00	\$456	\$456	0 samp @ 0.5 hr/samp = 6.0 hours @ 2 units/crew =	12.0 hours	technician rate: rate 2011 3rd party quote
TCLP VOC & Metals Analysis	0.0	samp	\$446.67	\$0	\$0			analytical price: average of three quotes
PCB Analysis (SW 8080)	12.0	samp	\$83.33	\$1,000	\$1,000	00 SF @ 625 SF/samp = 12.0 samples		analytical price: average of three quotes
Subt - PCB Wipe/Destruct Samp				\$1,456	\$1,456			
(Subt: Assemb 10.10 thru 10.13)				\$2,636	\$2,636	ilding decontamination and sampling		
Total Non-Super hours	130.9							

					Le	evel C @ 75%; N	Mod Level C @ 25% for	r total non-supv hr	for all tasks; HASP @	2.5% of non-supv	
10.14 PPE Usage & H&S Planning					h	rs					
PPE Usage - Mod Level C	4.1	days	\$9.00	\$37	\$37 13	30.9 hours @	8 hr/day =	16.4 days @	25% "Mod C" days	= 4.1 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	12.3	days	\$25.00	\$308	\$308 13	30.9 hours @	8 hr/day =	16.4 days @	75% "C" days =	12.3 days	75% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	3.3	hours	\$75.00	\$248	\$248 13	30.9 hours @	0.025 hr/hr =	3.3 hours			Safety Eng Rate: rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$592	\$592						
10.15 Supervision					0.	4 weeks for clo	sure of South Trailer F	arking closure			
Foreman	16.0	hours	\$65.00	\$1,040	\$1,040 0.	4 weeks @	40 hrs/wk =	16.0 hours			Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	\$0 In	cluded in Gen'	I Contractor G&A/Hon	ne Office indirect c	osts		Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$1,040	\$1,040						
10.16 Certification					Eı	ngineer @ 1.5%	and Clerical @ 1.5% o	of total non-superv	isory hours for all task	<u> </u>	
EngineerEngineer	2.0	hours	\$130.00	\$260	\$260 13	30.9 hours @	0.015 hr/hr =	2.0 hours			Engineer rate: 2011 3rd party quote
Clerical	2.0	hours	\$45.00	\$90	\$90 13	30.9 hours @	0.015 hr/hr =	2.0 hours			Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$350	\$350						
(Subt: Assemb 10.14 thru 10.16)				\$1,982	\$1,982	supervision, hed	alth & safety, and certi	fication			

10.0 Laboratory - Basic	Direct Cost	Total	Basic	\$71,849	\$39,356

10.0 Laboratory			
Total Cost Summary			
	<u> </u>		
Cost Category	Proposed	Proposed	Cost Range
	Percent of Direct	2011 Cost OffSite	
	Cost	Disposal	
Direct Costs/Basic Disposal		\$71,849	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$5,029	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$2,874	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$4,311	note: DEC uses 6%
Engineering During Construction	2.00%	\$1,437	note: DEC uses 2%
General Contractor Profit	6.00%	\$4,311	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$17,962	
Subtotal - Laboratory - Basic		\$89,812	
Plus Contingency	10.00%	\$8,981	CWM and DEC 10%
Total - Laboratory - Basic		\$98,793	
Total - Laboratory - Basic		\$30,733	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 11.0 Roadways

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Offsite Disposal	2011 CWM Extended Price - Onsite Disposal	Basis of Product	ion and Quantities for	In-house Estimate			In-house Pricing References
	1	ı				1					
11.1 Sweep Roadways						•		· · ·	miles of roadway 20-feet w		
Laborer	7.0	hours	\$39.00	\$273	\$273		15000 SF/hour =	7.0 hours @	1 units/crew =	7.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	7.0		\$45.00	\$315	\$315		15000 SF/hour =	7.0 hours @	1 units/crew =	7.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Road Sweeper (90 Hp)	7.0	hours	\$32.25	\$226	\$226		15000 SF/hour =	7.0 hours @	1 units/crew =	7.0 hours	RSM/HC p. 473 (line item 01 54 33 50 3400)
Subt - Hazcat Lab Containers				\$814	\$814						
11.2 Load Roadway Sweepings						production rate	= 50 CY/hour; @ one-in	ich (1") depth of ro	ad debris = 325 CY over 105	5,600 SF	
Laborer	6.5	hours	\$39.00	\$254	\$254	325 CY @	50 CY/hr	6.5 hours @	1 units/crew =	6.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	6.5	hours	\$45.00	\$293		325 CY @	50 CY/hr	6.5 hours @	1 units/crew =	6.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Loader (Small)	6.5	hours	\$14.39	\$94	\$94	325 CY @	50 CY/hr	6.5 hours @	1 units/crew =	6.5 hours	RSM/HC p. 468 (line item 01 54 33 20 4610)
Dump Truck (12 Ton)	6.5	hours	\$24.78	\$161	\$161	325 CY @	50 CY/hr	6.5 hours @	1 units/crew =	6.5 hours	RSM/HC p. 469 (line item 01 54 33 20 5250)
Subt - Load Roadway Sweepings				\$801	\$801						
11.3 Transp/Unload: Onsite Landfill						production rate :	0.5 hours for onsite tr	avel			
Driver	6.8	hours	\$45.00	\$0	\$306	162.5 tons @	12 tons/load =	13.5 loads @	0.5 hours/trip =	6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Dump Truck (12 Ton)	6.8	hours	\$24.78	\$0	\$169	325 CY @	0.5 tons/CY =	162.5 tons			RSM/HC p. 469 (line item 01 54 33 20 5250)
Subt - Transport to Onsite Landfill				\$0	\$475	onsite disposal ro	oad debris				
11.4 Unload Roadway Sweepings						Not Required: in	cluded in 11.3				
Laborer	0.0	hours	\$39.00	\$0	\$0						loaded labor rate: loaded labor rate 2011 3rd party quote
Equipment Operator (Medium)	0.0	hours	\$45.00	\$0	\$0						loaded labor rate: loaded labor rate 2011 3rd party quote
Loader (Small)	0.0	hours	\$14.39	\$0	\$0						RSM/HC p. 468 (line item 01 54 33 20 4610)
Dump Trailer (20 CY)	0.0	hours	\$5.20	\$0	\$0						RSM/HC p. 469 (line item 01 54 33 20 5400)
Subt - Unload Sweepings Onsite			·	\$0	\$0						
11.5 Offsite Disp: Sweepings						assume off-site	and disposal; 20 tons/lo	oad			
Offsite Transportation	3118.5	miles	\$3.25	\$10,135	\$0	162.5 tons @	20 tons/load =	8.1 loads @	385 miles/trip =	3118.5 miles	Rate: transporters quote/site experience
Offsite Disposal - Landfill	162.5	tons	\$90.00	\$14,625	\$0	325 CY @	0.5 tons/CY =	162.5 tons			HWC/ETC 2004 & CWM 2011 cost comparison industry pricing base on current market conditions
Subt - Offsite Disp. Sweepings	102.3		φ30.00	\$24,760	\$0		0.5 (0115) 61	102.5 (0115			on current market conditions
(Subt: Assemb 11.1 thru 11.5(a))				\$26,374	7.		vays, loading, transport	ation and off-site o	lisposal of sweepings		
						I. 10000	111 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100===(6			_
11.6 PPE Usage & H&S Planning						Level C @ 0%; Le	evel Mod C @ 25%; Leve	ei D @ 75% for tot	non-supv hrs for all tasks; H	IASP @ 2.5% of non-supv	
PPE Usage - Level D	3.2	days	\$0.00	\$0	\$0	33.8 hours @	8 hr/day =	4.2 days @	75% "D" days =	3.2 days	Standard Work Clothes - Site Experience
PPE Usage - Mod Level C	1.0		\$9.00	\$9		33.8 hours @	8 hr/day =	4.2 days @	25% "Mod C" days =	1.0 days	25% of non-supv hrs in Mod Level C (price: \$9/day)
PPE Usage - Level C	0.0	days	\$25.00	\$0		33.8 hours @	8 hr/day =	4.2 days @	0% "C" days =	0 days	0% of non-supv hrs in Level C (price: \$25/day)
Safety Engineer	0.8	hours	\$75.00	\$60		33.8 hours @	0.025 hr/hr =	0.8 hours	,	·	Safety Eng Rate: rate 2011 3rd party quote
				\$69	\$69		•				

### 11.0 Roadways

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit	2011 CWM Extended Price - Offsite Disposal		Basis of Production and Quantities for In-house Estimate	In-house Pricing References
11.7 Supervision		1				0.2 weeks supervisory time for Roadways	T
•				4			
Foreman	8.0	hours	\$65.00	\$520	\$520	0.2 weeks @ 40 hrs/wk = 8.0 hours	Outside foreman rate: 2011 3rd party quote
Site Project Manager	0.0	hours	\$75.00	\$0	\$0	Included in Gen'l Contractor G&A/Home Office indirect costs	Site Manager Rate: 2011 3rd party quote
Subtotal - Supervision				\$520	\$520		
11.8 Certification						Engineer @ 1.5% and Clerical @ 1.5% of total non-supervisory hours for all tasks	
Engineer	0.5	hours	\$130.00	\$65	\$65	33.8 hours @ 0.015 hr/hr = 0.5 hours	Engineer rate: 2011 3rd party quote
Clerical	0.5	hours	\$45.00	\$23	\$23	33.8 hours @ 0.015 hr/hr = 0.5 hours	Clerical rate: 2011 3rd party quote
Subtotal - Certification				\$88	\$88		
(Subt: Assemblies 11.6 thru 11.8)				\$677	\$677	supervision, health & safety, and certification	

11.0 Roadways			
Total Cost Summary			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost OffSite Disposal	Cost Range
Direct Costs/Basic Disposal		\$27,051	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$1,894	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$1,082	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$1,623	note: DEC uses 6%
Engineering During Construction	2.00%	\$541	note: DEC uses 2%
General Contractor Profit	6.00%	\$1,623	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$6,763	
Subtotal - Roadways		\$33,814	
Plus Contingency	10.00%	\$3,381	CWM and DEC 10%
Total - Roadways		\$37,195	

#### **Cost References:**

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 12.0 Site Monitoring

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate					In-house Pricing References
Γ										
12.1 Outfalls 002, 003, 004 SPDES Monitoring					production rat	e = 2 hours per sample for a one	e-person crew: one	(1) year of monitorii	ng during closure	
Weekly Sampling Events					1 years =	52 weeks @	3 outfalls @	1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician	312	hours	\$38.00	\$11,856	156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew =	312.0 hours	technician rate: rate 2011 3rd party quote
Pickup Truck	312	hours	\$10.45	\$3,260	312.0 hours					RSM/HC p. 472 (line item 01 54 33 40 7100)
Sampling Equipment	312	hours	\$5.00	\$1,560	156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew =	312.0 hours	samplers, meters, etc.
Sampling Supplies	156	samp	\$5.00	\$780	156 samples					bottles, shipping supplies
рН	156	samp	\$10.67	\$1,664	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples		weekly: Average of three quotes
Specific Conductance	156	samp	\$13.33	\$2,080	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples		weekly: Average of three quotes
Total Suspended Solids (TSS)	128	samp	\$13.33	\$1,707	2 outfalls @	1 samp/OF/week +	1 OF @ 2/month	@ 52 weeks =	128 samples	weekly: Average of three quotes
Total Dissolved solids	128	samp	\$15.00	\$1,920	2 outfalls @	1 samp/OF/week +	1 OF @ 2/month	@ 52 weeks =	128 samples	weekly: Average of three quotes
Settleable Solids	608.4	samp	\$13.33	\$8,112	3 outfalls @	3.9 samp/OF/week @	52 weeks =	608.4 samples		daily during flow assume 3.9/week: Average of three quotes
BOD-5	36	samp	\$31.67	\$1,140	3 outfalls @	1 samp/OF/month @	1 year =	36 samples		monthly: Average of three quotes
Dissolved Oxygen	36	samp	\$17.50	\$630	3 outfalls @	1 samp/OF/month @	1 year =	36 samples		monthly: Average of three quotes
Ammonia (NH3)	36	samp	\$22.67	\$816	3 outfalls @	1 samp/OF/month @	1 year =	36 samples		monthly: Average of three quotes
VOCs (624)	72	samp	\$105.00	\$7,560	3 outfalls @	2 samp/OF/month @	1 year =	72 samples		2/month: Average of three quotes
Oil & Grease (1631)	72	samp	\$40.00	\$2,880	3 outfalls @	2 samp/OF/month @	1 year =	72 samples		2/month: Average of three quotes
Copper	36	samp	\$17.67	\$636	3 outfalls @	1 samp/OF/month @	1 year =	36 samples		monthly: Average of three quotes
Zinc	36	samp	\$17.67	\$636	3 outfalls @	1 samp/OF/month @	1 year =	36 samples		monthly: Average of three quotes
Phenols	36	samp	\$26.67	\$960	3 outfalls @	1 samp/OF/month @	1 year =	36 samples		monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))	156	samp	\$133.33	\$20,800	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples		weekly: Average of three quotes
2-Chloroethyl vinyl ether		samp	\$86.67	\$0	3 outfalls @	2 samp/OF/month @	1 year =	72 samples		2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane	72	samp	\$75.00	\$5,400	3 outfalls @	2 samp/OF/month @	1 year =	72 samples		2/month: Average of three quotes
Methylene chloride		samp	\$75.00	\$0	3 outfalls @	2 samp/OF/month @	1 year =	72 samples		2/month: Average of three quotes (inc VOC 624 analysis)
Shipping	156	samp	\$5.00	\$780						
Subt - SPDES Outfall Sampling & Analysis				\$75,177	three outfalls	requiring weekly sampling & and	alysis for 1.0 year d	uring closure		
12.2 Discharge Monitoring Report					Monthly Discha	arge Monitoring Reports				
Engineer (Report)	24	hours	\$130.00	\$3,120	1 years =	2 hrs/event =	24.0 hours @	1 units/crew =	24.0 hours	Engineer rate: 2011 3rd party quote
Clerical	48	hours	\$45.00	\$2,160	1 years =	4 hrs/event =	48.0 hours @	1 units/crew =	48.0 hours	Clerical rate: 2011 3rd party quote
Subt - Discharge Monitoring Report				\$5,280	submittal of SP	DES Permit required Discharge N	Monitoring Report (	DMR)		
12.3 RCRA Inspections (daily)					Technician 8 hr	s/day 5 days per week on week	days and 4 hrs/day	2 days per week on	weekends	
Technician	2496	hours	\$38.00	\$94,848	1 years =	52 weeks @	48 hrs/week =	2496 hours		
Pickup Truck	2496	hours	\$10.45	\$26,083	2496 hours					
Subt - RCRA Inspections				\$120,931	Daily RCRA Insp	pections of facility				
(Subt: Assemblies 12.1 thru 12.3)				\$201,388		-				

12.0 Site Monitoring			
Total Cost Summary			
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost	Cost Range
Direct Costs/Basic Disposal		\$201,388	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , , , , , , , , , , , , , , , , , ,	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$14,097	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$8,056	note: DEC uses 4%
Pre-Construction Design Costs	0.00%	\$0	No design necessary
Engineering During Construction	0.00%	\$0	No engineering necessary
General Contractor Profit	6.00%	\$12,083	Note DEC adds 6%
Indirect Costs/Basic Disposal	17.00%	\$34,236	
Subtotal - Site Monitoring		\$235,624	
Plus Contingency	10.00%	\$23,562	
Total - Site Monitoring		\$259,187	

#### Cost References:

<sup>&</sup>quot;RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

### 13.0 Third Party Leachate Treatment Cost

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production	and Quantities for In-h	ouse Estimate	In-house Pricing References		
13.1 AWTS Operation					Shift operation of the	e AWTS for 1 year				
Material handler/basic labor	1920.0	hours	\$39.00	\$74,880	240 days @	8 hours/day =	1920.0 hours @	1 units/crew =	1920.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	3840.0	hours	\$39.00	\$149,760	240 days @	8 hours/day =	1920.0 hours @	2 units/crew =	3840.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	5840.0	hours	\$38.00	\$221,920	365 days @	8 hours/day =	2920 hours @	2 units/crew =	5840.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	1920.0	hours	\$38.00	\$72,960	240 days @	8 hours/day =	1920.0 hours @	1 units/crew =	1920.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	2920.0	hours	\$65.00	\$189,800	365 days @	8 hours/day =	2920 hours @	1 units/crew =	2920.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - AWTS Operation				\$709,320	AWTS Operation					
13.2 Batch Tank Qualification					2 Batch Qualification	tanks prior to discharg	e to facultative pon	ds		To Meet LDR requirements
PCB	24	samp	\$133.33	\$3,200	2 tanks @	1 samp/tank/month @	1 year =	24 samples		monthly: Average of three quotes
Semi-Volatiles	24	samp	\$208.33	\$5,000	2 tanks @	1 samp/tank/month @	1 year =	24 samples		monthly: Average of three quotes
Total Mercury	24	samp	\$25.00	\$600	2 tanks @	1 samp/tank/month @	1 year =	24 samples		monthly: Average of three quotes
BOD-5	24	samp	\$31.67	\$760	2 tanks @	1 samp/tank/month @	1 year =	24 samples		monthly: Average of three quotes
Subt - Batch Tank Qualification				\$9,560		•		•		Samples collected by lab technician
(Subt: Assemb 13.1 thru 13.2)				\$718,880	operation of AWTS fo	or one (1) year during c	losure of the site	<u> </u>		

13.0 AWTS Operation - Basic	Direct Cost	Total	Basic	\$718,880

Note:

Labor only. Material costs included in leachate treatment unit costs included in the applicable assemblies.

13.0 AWTS Operation			
Total Cost Summary			
	Proposed	Proposed	
Cost Category	Percent	2011	Cost Range
		Cost	
	of Direct Cost		
Direct Costs/Basic Disposal		\$718,880	
Plus Indirect Costs/Profit:			
Site Activity Management Costs	7.00%	\$50,322	note: DEC uses 7%
Gen'l Contractor G&A/Home Office	4.00%	\$28,755	note: DEC uses 4%
Pre-Construction Design Costs	6.00%	\$43,133	note: DEC uses 6%
Engineering During Construction	2.00%	\$14,378	note: DEC uses 2%
General Contractor Profit	6.00%	\$43,133	Note DEC adds 6%
Indirect Costs/Basic Disposal	25.00%	\$179,720	
Subtotal - AWTS Operation		\$898,600	
Plus Contingency	10.00%	\$89,860	CWM and DEC 10%
Total - AWTS Operation		\$988,460	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
Waste Cover Area Parameters		39.6 acres =	= 1724976 SF =	: 191664 SY	= 63888 BCY @ 1' deep	
Certified Final Cover Area (as of 2010)		17.9 acres =	= 779724 SF = 8	36636 SY		
Slope Correction (5%)		21.7 + 5% =	22.8	acres		
Active Waste Area			= 993168 SF = :		= 18,392 BCY @ 0.5' deep = 55,176 BCY @ 1.5' deep	
2011 Final Cover Area (minus 10 acres)				8 acres = 55756	3 SF = 61952 S\ = 10,325 BCY @ 0.5' deep = 30,976 BCY @ 1.5' deep	
Perimeter Ditch		1,500 linear				
Drainage Tile System		6,500 linear	r feet	,		
14.1 Final Waste Cover Grading					production rate = 250 cy/hr - based upon max of 12 inch depth	
Volume of Material to be Graded					75988 BCY plus 25% comp fact = 94985 LCY x 0% offsite mat'l = 0 LCY	no add'l mat'l; levelling/grading of existing waste pile only
Waste Grading	12.8	acre	\$5,000.00		12.8 acres	Contractor Rates/Site experience
Subt - Grading Final Waste Cover				\$64,000	BCY = bank (in situ) compacted material; LCY = loose (ex situ) uncompacted material	
14.1a Equipment Decontamination					production rate = 4 hours per unit with 2 man crew: 6 pieces of equipment	
Laborer	48	hours	\$39.00		6 units @ 4 hrs/unit = 24 hours @ 2 pers/crew = 48 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
Cleaning Solvent	6	gal	\$4.00	\$24	6 units @ 1 gal/unit = 6 gallons	site experience
Pressure Washer	24		\$4.04		6 units @ 4 hrs/unit = 24 hours @ 1 units/crew = 24 hours	RSM/HC p. 471 (line item 01 54 33 40 5450)
PCB Solids/Debris Transport	4.8	mile	\$3.50		1 drum Solids/debris @ 80 drums/load = 0.0125 loads @ 385 miles/load = 4.8 miles	Rate: transporters quote/site experience
PCB Solids/Debris Disposal	1	drum	\$100.00		1 drum Solids/debris	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing
Subt - Equipment Decontamination				\$2,110		
14.1b Decon Water Samp/Dispose					production rate = 0.5 hours/sample for two techs; facility treatment unit price = \$0.0273/gallon	
Technician	1	hours	\$38.00		1.0 samp @ 0.5 hr/samp = 0.5 hours @ 2 pers/crew = 1.0 hours	HASP req's two: loaded labor rate 2011 3rd party quote
VOC Analysis (EPA 624)	1	. samp	\$105.00	\$105	1.0 areas @ 1.0 samp/area = 1.0 samples	analytical price: average of three quotes
On-site Water Disposal	1200	gal	\$0.0313	\$38	6 units @ 200 gal/unit/wa = 1200 gallons	200 gallons per unit/site experience
Subt - Decon Water Samp/Disposal				\$181		
14.1c PCB Equipment Wipe					production rate = 0.5 hours/sample for two techs;2 wipe samples per unit/site experience	
Technician	12	hours	\$38.00		12.0 samp @ 0.5 hr/samp = 6.0 hours @ 2 pers/crew = 12.0 hours	HASP reg's two: loaded labor rate 2011 3rd party quote
PCB Analysis (SW 8081/8082)	12	samp	\$83.33		6 units @ 2 samp/unit = 12.0 samples	analytical price: average of three quotes
Subt - PCB Wipe				\$1,456		
14.2 Perimeter Ditch Spreading					Included in 14.3	
Subt - Spreading Ditch Fill			1	\$0.00	IIICIUUCU III 17.3	
Subt - Spreading Diterrin				<b>70.00</b>		
14.3 Perimeter Road/Ditch Compaction					Includes ditch excavation & road placement compaction	2010 Average of two bids
Subt - Compact Fin'l Cover/Ditch	1500	LF	\$12.00	\$18,000	Liner feet	
14.4 Final Cover/Ditch Inspection					Included in CQA 14.26	
Subt - Inspecting Final Cover/Ditch				\$0		
(Subt: Assemblies 14.1 thru 14.4)				\$85,746	grading, compacting, & inspecting final waste pile layer; decon & testing of equipment	waste cover area

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
14.5 Pre-Qual Clay Mat'l Testing					Clay material not used for final cover based on 2009 Redesign	
Subt - Pre-Qual Clay Mat'l Testing				\$0	Replaced with 0.5' grading layer and geosynthetic clay liner (GCL)	see assemblies 14.9a & 14.9b for grading layer and GCL
14.6 Clay Test Pad Testing					Clay material not used for final cover based on 2009 Redesign	
Subt - Clay Test Pad Testing				\$0	Replaced with 0.5' grading layer and geosynthetic clay liner (GCL)	see assemblies 14.9a & 14.9b for grading layer and GCL
14.7 Clay Layer Spreading					Clay material not used for final cover based on 2009 Redesign	
Subt - Spreading Clay Layer				\$0	Replaced with 0.5' grading layer and geosynthetic clay liner (GCL)	see assemblies 14.9a & 14.9b for grading layer and GCL
14.8 Clay Layer Compaction					Clay material not used for final cover based on 2009 Redesign	
Subt - Compacting Clay Layer				\$0	Replaced with 0.5' grading layer and geosynthetic clay liner (GCL)	see assemblies 14.9a & 14.9b for grading layer and GCL
14.9 Clay Layer Testing					Clay material not used for final cover based on 2009 Redesign	
Subt - Clay Layer Testing				\$0	Replaced with 0.5' grading layer and geosynthetic clay liner (GCL)	see assemblies 14.9a & 14.9b for grading layer and GCL
14.9a Grading Layer					Based on 2009 Redesign & 12.8 acres remaining to be closed	
General Fill	12906	CY	\$11.00	\$141,966	10325 BCY plus 25% comp fact = 12906 LCY x 100% offsite mat'l 12906 LCY	
General Fill Place/Compact	12906	CY	\$10.00	\$129,060	10325 BCY plus 25% comp fact = 12906 LCY x 100% offsite mat'l 12906 LCY	Average of two bids (3rd bid disqualified due to non-conformity)
Grading Layer Surface Prep	12.8	acre	\$10,000.00	\$128,000	12.8 acres	
Subt - Grading Layer				\$399,026		
<b>5</b> ,				•		
14.9b Geosynthetic Clay Liner					Based on 2009 Redesign & 12.8 acres remaining to be closed	
GCL Material	696960	SF	\$0.46	\$320,602	557568 SF plus 25% lap factor = 696960 SF	2011 Actual Cost per SQFT including shipping & tax
GCL Installation	696960	SF	\$0.35		557568 SF plus 25% lap factor = 696960 SF	2010 Quoted price from CETCO
Subt - GCL		-	70.00	\$564,538		
(Subt: Assemblies 14.5 thru 14.9b)				\$963,564		cap cover area
(1)	l		<u> </u>	7500,00		
14.10 40-Mil Liner					production rate = 250 SF/Hr,	
40-Mil Polymeric Liner	696960	SF	\$0.21	\$146.362	557568 SF plus 25% lap factor = 696960 SF	2010 Actual Cost per SQFT including tax & shipping
40-Mil Polymeric Liner Installation	696960	SF	\$0.46		557568 SF plus 25% lap factor = 696960 SF	2010 Quoted price from CETCO
Subt - 40-Mil Liner			Ţc	\$466,963		
				¥ .00,500		
14.11 Liner Anchor Trench			† †			
Anchor Trench	12.8	acres	\$1,000.00	\$12 800	12.8 acres remaining	Average of two bids (3rd bid disqualified due to non-conformity)
Subt - Anchor Trench	12.0	40103	71,000.00	· · ·	includes labor & equipment for trenching, backfilling, and compacting (3' x 1.5')	The sace of the bias (or a bia disqualified due to from comortinity)
Subt Antilol Helicii				712,800	prictions ration as equipment for trending, buckynning, and compacting (5 x 1.5 )	
14.12 Geocomposite Drainage Layer					production rate = 5,000 SF/Hr, RSM/UP p. 9-83 (33-08-0513)	
Geocomposite Drainage Layer	696960	SF	\$0.38	\$264,845	557568 SF plus 25% lap factor = 696960 SF	2011 Actual Blended cost (TN240 & TN350) including shipping & handling
Geocomposite Drainage Layer Install	696960	SF	\$0.32	\$223,027	,	2010 Quoted price from CETCO
Subt - Geocomposite Layer	123300		72.02	\$487,872		
Jane Geocomposite Layer				7707,872		

				2011 CWM		
Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
	<b>_</b>		1			
14.13 Geosynthetic Liner Testing					QC testing included in Assem 14.10; see assembly 14.26 for QA Monitoring	
Subt - Liner Testing			\$0	\$0	field testing crew required to work concurrently with liner placement crew in Assem 14.10	
(Subt: Assemb 14.10 thru 14.13)			7.0		installing geosynthetics above impervious gcl layer	liner area: cap cover plus 25% lap factor
	•	•				•
14.14 Unclassified Fill					depth = 1.5 feet (in one 18" lift) for final cover based on 2009 Redesign	
General Fill - offsite source	38720	LCY	\$11	\$425,920	30976 BCY plus 25% comp fact = 38720 LCY x 100% offsite mat'l 38720 LCY	Actual Quoted Cost 2011 (Tri-C, Inc.)
Subt - Spreading Unclassified Fill				\$425,920	BCY = bank (in situ) compacted material; LCY = loose (ex situ) uncompacted material	
44.45 Course skip a Hardweified Fill					Comparing of any 4.5 feet life	
14.15 Compacting Unclassified Fill	20720	1.07	640	6207.200	Compaction of one 1.5 feet lift	A
Place/Spread/Compact Unclass. Fill	38720	LCY	\$10		30976 BCY plus 25% comp fact = 38720 LCY x 100% offsite mat'l 38720 LCY	Average of two bids (3rd bid disqualified due to non-conformity)
Subt - Compacting Unclass. Fill				\$387,200		
14.16 Unclassified Fill Testing						
Subt - Unclassified Fill Testing				\$0	Included in Assemb 14.26 QA/QC Monitoring	
446 11 1 15 15 17 15 17						
14.16a Unclassified Fill Test Fill		<del></del>	412.000	440.000		1102044/=10.1.)
Test Fill Construction	1	each	\$12,000		1 test fill/source @ 1 source/12.8 acres = 1 test fill	Actual Cost 2011 (Tri-C, Inc.)
Test Fill QA Testing/Reporting	1	each	\$8,000	\$8,000		Actual Cost 2011 (Ensol, Inc.)
Subt - Unclassified Fill Test Fill (Subt: Assemb 14.14 thru 14.16a)				\$20,000	spreading and compacting unclassifed fill layer; 1.5-feet in depth using 100% offsite material	
(Subt. Assemb 14.14 thru 14.16u)				\$833,120	spreading and compacting unclassifed fill layer, 1.5-feet in depth asing 100% offsite material	cap cover area
14.17 Spreading Topsoil					depth = 0.5 feet	
Topsoil	12906	LCY	\$15.00	\$193 590	10325 BCY plus 25% comp fact = 12906 LCY x 100% offsite mat'l 12906 LCY	Actual Cost 2011 (Tri-C, Inc.)
Spreading Topsoil	12906	LCY	\$11.00		10325 BCY plus 25% comp fact = 12906 LCY x 100% offsite mat'l 12906 LCY	Average of two bids (3rd bid disqualified due to non-conformity)
Subt - Spreading Topsoil	12300	LCI	\$11.00		BCY = bank (in situ) compacted material; LCY = loose (ex situ) uncompacted material	Includes hydroseeding/mulch/fertilizer
Subt Spreading ropson				7333,330	ber – bank (in sita) compacted material, Let – 1005c (ex sita) ancompacted material	includes hydrosecung/maich/reftmzer
14.18 Cap Vegetation						see assembly 14.17 for facility vegetation estimate
Hydro Seeding w/Mulch & Fertilizer	0	MSF	0	\$0	Included in Assemb 14.17	
Erosion Control Matting	10360	SY	\$12.50	\$129,500		Average of two bids (3rd bid disqualified due to non-conformity)
Subt -Cap Vegetation				\$129,500		
(Subt: Assemb 14.17 thru 14.18)				\$465,056	placing topsoil and hydro seeding with mulch and fertilizer	cap cover area
14.19 Downflume Installation						
Rip Rap Downflume (grouted)	1	each	\$23,625.00	\$23,625	12.8 acres @ 1 downflume = 1 downflume	Average of two bids (3rd bid disqualified due to non-conformity)
Subt - Install Downflume				\$23,625		
14.20 Cap Drainage Syst Install'n					production rate = 47.5 LF/hr, RSM/SWL p. 77 (02510-850-0200)	
Install Cap Drainage System	6500	LF	\$15.06	\$97.890	12.8 acres	Actual Cost 2011 (Tri-C. Inc.)
Subt - Install Cap Drainage System	5300	<del>- ''</del>	715.00	\$97,890		Average of two bids (3rd bid disqualified due to non-conformity)
(Subt: Assemb 14.19 thru 14.20)			<del>                                     </del>		downflume and drainage system installation	cap cover area
,		1	l l	7121,313	acommunic and aramage system instantation	**F ** * * * **

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities	for In-house Estimate		In-house Pricing References	
14.21 Groundwater Monitoring					production rate = 0.5 hours per sam	ple for two techs; 51 we	lls; 3 QA/QC; 1 event	/6 months	
Technician	54	hours	\$38.00	\$2,052	54 samp @ 0.5 hrs/sam	p = 22 hours @	2 units/crew =	54.0 hours	
Sampling Supplies	54	samp	\$25.00	\$1,350	54 samples		*		bottles, shipping supplies
VOC Analysis (EPA 624)	51	samp	\$105.00	\$5,355	·				
VOC Analysis (EPA 624) QA/QC	3	samp	\$105.00	\$315	3 sampl/event				
Subt - GW Mon During Closure				\$9,072	groundwater monitoring for six (6)	months			
(Subt: Assembly 14.21)				\$9,072					
14.22 Leachate Management			ı		leachate collected from surface and	sub surface projected t	a ha mildly cantamin	atad	
Onsite Aqueous Treatment	12656975	gals	\$0.0178	\$225 204	12656975 gals 12 months	sub-surrace projected t	o be illining containing	ateu	leachate quantity based avg 2002 -2011 actuals over 12 months closure
Electricity for 40-gpm Pumps	12036973	kwh	\$0.0178			yr x 10% time on @	7.0 pumps =	12,264 kwhs	40 gpm pump = 2 hp; 1.0 hph = .75 kwh
Electricity for 40-gpm Pumps  Electricity for 100-gpm Pumps	13140	kwh	\$0.10			yr x 10% time on @	3.0 pumps =	13,140 kwhs	100 gpm pump = 5 hp; 1.0 hph = .75 kwh
Electricity for 600-gpm Pump	26280	kwh	\$0.10			yr x 10% time on @	1.0 pump =	26,280 kwhs	600 gpm pump = 30 hp; 1.0 hph = .75 kwh
200 GPM Transfer Pump	1	each	\$6,194.00	\$6,194	30 kW/pump x 8700 m3/1.0	1.0 pump =	1.0 pamp -	20,200 KWII3	2004 DEC Rate * Implicit Deflator
Fuel for 200-gpm Transfer Pump	1800	gals	\$4.50		2 gal/hr x 900 hrs/yea		1800 gals		fuel for transfer pump
Pump/Motor Replace/Maint/Repair	1800	each	\$2,294.00	\$6,882			1000 gais		2004 DEC Rate * Implicit Deflator
Subt - Leachate Management	,	Cacii	\$2,234.00		leachate collection and manageme				2004 DEC Nate Implicit Deliator
Just - Leachate Management				<b>7231,03</b> 3	reachate conection and managemen	it for twelve months			
14.23 Leachate Monitoring					12 months of leachate monitoring				
Technician	56	hours	\$38.00		56.0 samp @ 0.5 hrs/sam		2 units/crew =	56.0 hours	
Sampling Supplies	56	samp	\$5.00		56.0 samples Included in t				bottles, shipping supplies
Primary Leachate: PP VOCs (epa 624)	58.8	samp	\$105.00		4 samp/yr x 14 cells x	1.0 years	1.05 QA req't =	58.8 samples	analytical price: average of three quotes - permit specifications
Primary Leachate: PCBs (sw 8081)	29.4	samp	\$131.67		2 samp/yr x 14 cells x	1.0 years	1.05 QA req't =	29.4 samples	analytical price: average of three quotes - permit specifications
Primary Leachate: PP Metals (sw 6010)	29.4	samp	\$155.00		2 samp/yr x 14 cells x	1.0 years	1.05 QA req't =	29.4 samples	analytical price: average of three quotes - permit specifications
Secondary Leach: VOCs (epa 624)	58.8	samp	\$105.00		4 samp/yr x 14 cells x	1.0 years	1.05 QA req't =	58.8 samples	analytical price: average of three quotes - permit specifications
Secondary Leach: PP Organics	14.7	samp	\$633.33		1 samp/yr x 14 cells x	1.0 years	1.05 QA req't =	14.7 samples	analytical price: average of three quotes - permit specifications
Secondary Leach: PP Metals (sw 6010)	14.7	samp	\$155.00	\$2,279	1 samp/yr x 14 cells x	1.0 years	1.05 QA req't =	14.7 samples	analytical price: average of three quotes - permit specifications
Shipping	58.8	each	\$5.00	\$294					
Subt - Leachate Monitoring					leachate collection and manageme	nt for twelve months			CWM estimate for leachate monitoring for 6 months
(Subt: Assemb 14.22 thru 14.23)				\$286,705					
14.24 PPE Usage & H&S Planning					Level C during waste grading, gradin	g layer installation, and	decon only.		
PPE Usage - Level D	650	days	\$0.00	\$0	650 man days to complete closure				
PPE Usage - Mod Level C	0	days	\$9.00	\$0	0 days for Modified Level C				
PPE Usage - Level C	110	days	\$25.00	\$2,750	55 days for waste grading, grading la	yer installation and equ	ip decon * 2 crew = 1	10 days	
Health & Safety Officer	112	hours	\$75.00	\$8,400	4480.0 hours @ 2.5% hr/hr :	= 112.0 hours			
Subt - PPE Usage/H&S Planning				\$11,150				<u> </u>	
14.25 Supervision									
Foreman	0	hours	\$65.00		Foreman included in per acre unit co				
Site Project Manager	0	hours	\$75.00	\$0	Included in Construction Manageme	nt costs			
Construction Management	12.8	acre	\$4,500.00		\$4,500 per acre @ 12.8 acres				
Subtotal - Supervision				\$57,600					
				•					

### 14.0 RMU-1 Landfill Closure

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
		1				
14.26 QA/QC Monitoring/Certification						
GCL Conformance Testing	7.0	test	\$235.00	\$1,645	557568 SF plus 25% lap factor = 696960 SF @ 1 test/100000 SF = 7.0 tests	Actual Costs 2011 (TRI Environmental)
40-Mil Liner Conformance Testing	7.0	test	\$98.00	\$686	557568 SF plus 25% lap factor = 696960 SF @ 1 test/100000 SF = 7.0 tests	Actual Costs 2011 (TRI Environmental)
Geocomposite Liner Conformance Testing	7.0	test	\$300.00	\$2,100	557568 SF plus 25% lap factor = 696960 SF @ 1 test/100000 SF = 7.0 tests	Actual Costs 2011 (TRI Environmental)
Interface Friction Testing (GCL/Soil)	1	test	\$5,055.00	\$5,055	1 test per material type/source	Actual Costs 2011 (TRI Environmental)
Interface Friction Testing (GCL/40-Mil)	1	test	\$5,055.00	\$5,055	1 test per material type/source	Actual Costs 2011 (TRI Environmental)
Interface Friction Testing (40-Mil/Geocomposite)	1	test	\$5,055.00	\$5,055	1 test per material type/source	Actual Costs 2011 (TRI Environmental)
Interface Friction Testing (Geocomposite/Soil)	1	test	\$5,055.00	\$5,055	1 test per material type/source	Actual Costs 2011 (TRI Environmental)
QA/QC Monitoring/Certification	12.8	acre	\$25,700.00	\$328,960	12.8 acres	Actual cost 2010/2011 (Ensol, Inc.)
Subtotal - Certification				\$353,611		
(Subt: Assemb 14.24 thru 14.26)				\$422,361	supervision, health & safety, and certification	
14.0 RMU-1 Landfill Closure		1		\$4,154,774	CWM estimate based on 12.8 acres	7

The Total Labor and Maintenance Costs per year to run the AWT Facility was calculated under the Site Wide Post Closure Plan and will remain constant regardless of whether or not RMU-1 is generating leachate; the labor, maintenance and number of days per year to run the facility will be the same. Therefore, no costs are associated with labor and maintenance.

14.0 RMU-1 Landfill Closure	!					
Cost Category	Proposed Percent of Direct Cost	Proposed 2011 Cost	Cost Range			
Direct Costs/Basic Closure		\$4,154,774				
Direct Costs/ Basic Closure		34,134,774				
Site Activity Management Costs	7.00%	\$290,834	note: DEC uses 7%			
Gen'l Contractor G&A/Home Office	4.00%	\$166,191	note: DEC uses 4%			
Pre-Construction Design Costs	6.00%	\$249,286	note: DEC uses 6%			
Engineering During Construction	2.00%	\$83,095	note: DEC uses 2%			
General Contractor Profit	6.00%	\$249,286	Note DEC adds 6%			
Indirect Costs/Basic Closure	25.00%	\$1,038,694				
		4				
Subtotal - RMU-1 Landfill Closure		\$5,193,468				
Plus Contingency	10.00%	\$519,347	CWM and DEC 10%			
Total - RMU-1 Landfill Closure		ĆE 742 045				
Total - Rivio-1 Lanumi Closure		\$5,712,815				
Cost Per Acre		\$446,313.63	CWM estimate based on 12.8 acres			
Cost References:				Waste Area o	f RMU-1 (14 ce	ells):
"RSM/HC" refers to the RSMeans "Hea	•		, , ,			
-			a - Unit Price", 2004 Edition (rates adjusted	d Cell#	Acres	
"RSM/BC" refers to the RSMeans "Bui	Iding Construction	Cost Data", 200	3 Edition (rates adjusted for inflation)		1	2.5
Assumentions					2	2.0
Assumptions:					3 4	2.4 1.9
Doduct 17.0 acros of completed and co	artified cannod are	a (Dhacac L+brau	igh VI) from total 14 cell area of RMU-1.		5	3.2
Use RMU-1 Cover system design comp		•	9 ,		6	3.1
ose Kivio-1 cover system design comp	onents from CVVIVI	INIVIO-1 CIOSUIE	riaii.		7	3.4
	0.5 Grading Laye	or (Unclassified/	General Fill)		8	3.6
	Geosynthetic Cla		Scherar riny		9	3.0
	40 mil roughene		nhrane		10	2.7
	Geocomposite d	_	ibiane		11	2.5
	•		lassified/general fill		12	2.2
	Six inches (0.5 fe		_		13	3.0
	31x 111c11c3 (0.5 1c	et) topson and t	regetative cover		14	4.1
				Total Area		39.6 acres
				Therefore:		39.6 acres
						17.9 capped
						21.7 acres remaining to be capped
						22.8 +5%
						10 2011 capping
						12.8 acres remaining to be capped
				(Add 5% to ar	ea to cover to a	account for 3:1 side slopes)

# Unit Rates RMU-1 Closure Cost Estimate CWM Chemical Services, LLC, Model City, New York

2011 Unit Rates are based on actual costs for contractor capping 10.0 acres of RMU-1 during Phase VII Final Cover construction.

#### Basis:

### UNIT RATES (THIRD PARTY COSTS)

RMU-1 CLOSURE		2011		Basis of Production and Quantities for In-House Estimate
	UOM		Price	
WASTE GRADING				
Final waste grading & surface preparation:	acre	\$	5,000	Actual 2010 costs/site experience using site personnel
GRADING LAYER				
Load, haul, place, grade, grading layer:	CY	\$		Actual Quoted Cost 2011 (Tri-C, Inc.) for placement of grading layer (\$10/CY)
Purchase/delivery of general fill from off-site source =	CY	\$		Actual Quoted Cost 2011 (Tri-C, Inc.) for providing of grading layer (\$11/CY)
Grading layer surface preparation:	acre	\$	10,000.00	Actual cost incurred for 2010 activities
EARTHWORKS CONTRACTOR MOB/DEMOB	acre	\$	37,750.00	Average of two bids (third bid disqualified due to non-conformity)
GEOSYNTHETICS		+		
Geosynthetic Clay Liner (GCL)				
Material Cost	SQFT	\$	0.46	2011 Actual Cost per SQFT including shipping & tax
Installation Cost	SQFT	\$	0.35	2010 Average of two bids
Subtotal	SQFT	\$	0.81	
GEOSYNTHETICS CONTRACTOR MOB/DEMOB	acre	Ś	12 750 00	2010 Average of two bids
GEOSTIVITIETICS CONTINCTON MIODI DEMOD	acic	7	13,730.00	2010 Average of two bids
40 mil Roughened HDPE geomembrane (textured 2 sided)				
Material Cost	SQFT	\$		2010 Actual Cost per SQFT including tax & shipping
Installation Cost	SQFT	\$	0.46	2010 Average of two bids
Subtotal	SQFT	\$	0.67	
Geosynthetic Installation at Standpipe Riser	each	Ś	1.000.00	Average of two bids (third bid disqualified due to non-conformity)
Geosynthetic Installation at Riser Vault	each	\$		Average of two bids (third bid disqualified due to non-conformity)
Geocomposite				
Material Cost	SQFT	\$		2011 Actual Blended cost (TN240 & TN350) including shipping & handling
Installation Cost (w/Sewing)	SQFT	\$		2010 Average of two bids
Subtotal	SQFT	\$	0.70	
Subtotal Geosynthetics:	SQFT	\$	2.18	GCL + Membrane + Geocomposite
ANCHOR TRENCHES		-		
Permanent	acre	\$	1,100	Quoted price from Tri-C
Temporary	acre	\$		Quoted price from Tri-C
Subtotal	acre	\$	5,600	
			•	

# Unit Rates RMU-1 Closure Cost Estimate CWM Chemical Services, LLC, Model City, New York

2011 Unit Rates are based on actual costs for contractor capping 10.0 acres of RMU-1 during Phase VII Final Cover construction. **Basis:** 

### UNIT RATES (THIRD PARTY COSTS)

RMU-1 CLOSURE		2011	l	Basis of Production and Quantities for In-House Estimate
GEOTEXTILE MATERIAL	acre	\$	1,220	Quoted price from Tri-C
PERIMETER DITCHES AND ROADWAYS				
Perimeter Ditches and Roadways	LF	\$	12	2010 Average of two bids
UNCLASSIFIED FILL				
Load, haul, place, grade and compact general fill:	CY	\$	10.00	Actual Quoted Cost 2011 (Tri-C, Inc.) for placement of general fill (\$10/CY)
Purchase/delivery of general fill from off-site source =	CY	\$		Actual Quoted Cost 2011 (Tri-C, Inc.) for providing of general fill (\$11/CY)
Test Fill Pad Construction	each	\$	12,000.00	Actual 2010 costs/site experience
Test Fill Pad QA/QC & Reporting	each	\$	8,000.00	Actual 2010 costs/site experience
TOPSOIL/VEGETATION				
Load, place, grade, topsoil:seed, fertilize and mulch =	CY	\$		2011 Quoted price from Tri-C
Purchase/delivery of topsoil from off-site source =	CY	\$		Quoted price from Tri-C
Purchase and Installation of erosion control matting =	SY	\$	12.50	Average of two bids (third bid disqualified due to non-conformity)
Subtotal Topsoil/Vegetation	CY	\$	38.50	
DRAINAGE				
Provide, install final cover drainage tile system	LF	\$	15.06	Average of two bids (third bid disqualified due to non-conformity)
Provide, install final cover surface water downflume	each	\$	23,625	6,300 SQFT x \$3.75/SQFT = \$23,625
CQA, SURVEYING AND CQA REPORT	acre	\$	21,689	2010 Average of two bids
CONSTRUCTION CONTRACTOR MOB/DEMOB/ADMIN/SURVEY =	%		5	
DESIGN SUPPORT			•	
Pre-Construction Design Costs		\$	25,000	\$25,000 for 22.8 acres
Engineering During Construction		\$	25,000	\$25,000 for 22.8 acres
CONSTRUCTION MANAGEMENT	acre	\$	4,500	Quoted price Ensol, Inc

GEOSYNTHETICS CONFORMANCE TESTING			
40-Mil Geomembrane (1/100,000)	sample	\$ 98	Actual Costs 2011 (TRI Environmental)
Geocomposite (1/100,000)	sample	\$ 300	Actual Costs 2011 (TRI Environmental)
GCL (1/100,000)	sample	\$ 235	Actual Costs 2011 (TRI Environmental)
Interface Friction Testing (GCL/Soil)	sample	\$ 5,055	Actual Costs 2011 (TRI Environmental)
Interface Friction Testing (GCL/40-Mil)	sample	\$ 5,055	Actual Costs 2011 (TRI Environmental)

# Unit Rates RMU-1 Closure Cost Estimate CWM Chemical Services, LLC, Model City, New York

2011 Unit Rates are based on actual costs for contractor capping 10.0 acres of RMU-1 during Phase VII Final Cover construction.

#### Basis:

#### UNIT RATES (THIRD PARTY COSTS)

5.11.1 1.1.1 2.5 (1.1.1.1 5.5 1.5)				
RMU-1 CLOSURE		2011		Basis of Production and Quantities for In-House Estimate
Interface Friction Testing (40-Mil/Geocomposite)	sample	\$	5,055	Actual Costs 2011 (TRI Environmental)
Interface Friction Testing (Geocomposite/Soil)	sample	\$	5,055	Actual Costs 2011 (TRI Environmental)

MISCELLANEOUS			
200 GPM Transfer Pump	each	\$6,194	2004 DEC Rate * Implicit Deflator
Pump/Motor Replace/Maint/Repair	each	\$2,294.00	2004 DEC Rate * Implicit Deflator

#### Rate Adjustment for inflation:

2011 Rate = 110.654 (2010 GDP) ÷ 96.77 (2004 GDP) = 1.14347421721608

1.147

Adjust 2004 DEC rates to 2011 rates based on implicit deflator



# Post-Closure Cost Estimate Summary CWM Chemical Services, LLC Model City Facility Model City, New York

No.	Facility Activity Area	Proposed Post- Closure One Year Cost: Base = 2010	Post Closure Period	Proposed 30- Year Post Closure Costs	Perpetual Care Annual Costs Base = 2010	Perpetual Care Discount Rate 2010	Perpetual Care Monitoring Costs Base = 2010
PCC-1	SLF 1 - 6 (Post CI)	\$611,261	30	\$18,337,820	\$599,851	3.85%	\$15,580,558
PCC-2	SLF 7 (Post CI)	\$243,792	30	\$7,313,752	\$237,668	3.85%	\$6,173,192
PCC-3	SLF 10 (Post CI)	\$231,706	30	\$6,951,166	\$227,134	3.85%	\$5,899,596
PCC-4	SLF 11 (Post CI)	\$323,147	30	\$9,694,415	\$310,844	3.85%	\$8,073,869
PCC-5	SLF 12 (Post CI)	\$248,737	30	\$7,462,111	\$239,180	3.85%	\$6,212,477
PCC-6	Resid Mgmt Unit 1 (Post Cl)	\$300,564	30	\$9,016,922	\$271,026	3.85%	\$7,039,625
PCC-7	Lagoons/Salts Areas (Post CI)	\$36,015	30	\$1,080,444	\$35,698	3.85%	\$927,226
PCC-8	Process Tank Area (Post CI)	\$40,469	30	\$1,214,055	\$40,469	3.85%	\$1,051,130
CM-1	Corrective Measures (Post Cl)	\$426,828	30	\$12,804,855	\$426,828	3.85%	\$11,086,454
	Totals	\$2,462,518	n/a	\$73,875,541	\$2,388,699	n/a	\$62,044,127

Notes: (1) DEC Approved Perpetual Care Discount Rate equals 3.85%. Discount Rate recalculated January 2010 at 4.05%. 3.85% used for calculation.

Basic Closure Activities: Direct Costs	Basis of Production and Quantities for In-house Estimate	DEC Estimate Basis (shaded) In-house Pricing References (unshaded)
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Corrective Measures Parameters Table 1 of 4		Aqueous		Extraction		
Number of Monitoring Check Points	GW Wells	Sumps	<b>DNAPL Sumps</b>	Wells	Piezo-meters	Total Ck Pts
West Drum Area	5	7	19	0	18	49
Lagoons/Process Area I&II	9	7	8	7	14	45
Process Area III	1	1	0	0	5	7
Process Area IV	0	0	0	2	0	2
Area South of SLF 3	1	0	0	2	4	7
P1202S Area	3	0	0	1	4	8
BW02S Area	2	0	0	1	4	7
PCB Warehouse Area	0	0	0	2	3	5
North Salts	5	0	0	0	0	5
East/West Salts	6	0	0	0	0	6
Investigation Wells	7	0	0	0	0	7
Subt - Annual Monitoring Events	39	15	27	15	52	148

r	
GWES O&M Manual	
& GWSAP	
	_
	_
	_
	-

Corrective Measures Parameters Table 2 of 4		Aqueous		Extraction				Frequency of			1
Annual Groundwater/DNAPL Level Monitoring Events	GW Wells	Sumps	DNAPL Sumps	Wells	Piezo-meters	Total Ck Pts	No./ Year	Monitoring	Events/ Year		1
West Drum Area	4	7	19	0	18	48	4	quarterly	192		GWES O&M Manual
Lagoons/Process Area I&II	5	7	8	7	16	43	4	quarterly	172		& GWSAP
Process Area III	1	1	. 0	0	5	7	4	quarterly	28		
Process Area IV	0	0	0	2	. 0	2	1	annually	2		
Area South of SLF 3	2	0	0	2	4	8	4	quarterly	32		
P1202S Area	0	0	0	2	. 4	6	2	semi-annually	12		
BW02S Area	0	0	0	2	. 4	6	2	semi-annually	12		
PCB Warehouse Area	0	0	0	2	3	5	2	semi-annually	10		
North Salts	0	0	0	0	0	0	0	n/a	0		
East/West Salts	0	0	0	0	0	0	0	n/a	0	•	
Investigation Wells	0	0	0	0	0	0	0	n/a	0	•	
Subtotal - Annual GW/DNAPL Monitoring Level Events	12	15	27	17	54	125	n/a	n/a	460		

Basic Closure Activities: Direct Costs	Basis of Production and Quantities for In-house Estimate	DEC Estimate Basis (shaded) In-house Pricing References (unshaded)
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Corrective Measures Parameters Table 3 of 4			Aqueous		Extraction				Frequency of	Events/	
Annual Groundwater Sampling Events - VOC Analysis	Storage Tank	GW Wells	Sumps	DNAPL Sumps	Wells	Piezo-meters	Total Ck Pts	No./ Year	Monitoring	Year	
West Drum Area	C	3	(	0	0	0	3		2 semi-annually	6	GWES O&M Manual
Lagoons/Process Area I&II	C	9	) (	C	0	0	9		2 semi-annually	18	& GWSAP
Process Area III	1	. 1	. (	0	0	0	2		2 semi-annually	4	
Process Area IV	1		) (	0	0	0	1		1 annually	1	
Area South of SLF 3	C	C	) (	0	0	0	0		2 semi-annually	0	
P1202S Area	1	. 1	. (	0	0	0	2		2 semi-annually	4	
BW02S Area	1		(	0	0	0	1		2 semi-annually	2	
BW02S Area	C	1	. (	0	0	0	1		1 annually	1	
PCB Warehouse Area	1		(	0	0	0	1		2 semi-annually	2	
North Salts	C	5	(	0	0	0	5		2 semi-annually	10	
East/West Salts	C	6	6	0	0	0	6		2 semi-annually	12	
Investigation Wells	C	) 3	(	0	0	0	3		1 annually	3	
Investigation Wells	C	) 4	(	0	0	0	4		2 semi-annually	8	
Subtotal - Annual GW Sampling Events - VOC Analysis	5	33	(	0	0	0	38	n/a	n/a	71	

Corrective Measures Parameters Table 4 of 4										
Annual Groundwater Sampling Events - VOCs/Semi-VOCs/PCBs/Metals Analysis		Aqueous		Extraction				Frequency of		1
(STCL)	GW Wells	Sumps	<b>DNAPL Sumps</b>	Wells	Piezo-meters	Total Ck Pts	No./ Year	Monitoring	Events/ Year	
West Drum Area	0	3	0	0	0	3	1	annually	3	GWES O&M Manual
Lagoons/Process Area I&II	0	2	0	0	0	2	1	annually	2	& GWSAP
Process Area III	0	0	0	0	0	0	0	n/a	0	
Process Area IV	0	0	0	0	0	0	0	n/a	0	
Area South of SLF 3	1	0	0	1	0	2	1	annually	2	
P1202S Area	0	0	0	0	0	0	1	annually	0	
BW02S Area	0	0	0	0	0	0	1	annually	0	
PCB Warehouse Area	0	0	0	0	0	0	1	annually	0	
North Salts	0	0	0	0	0	0	0	n/a	0	
East/West Salts	0	0	0	0	0	0	0	n/a	0	
Investigation Wells	0	0	0	0	0	0	0	n/a	0	
Subtotal - Annual GW Sampling Events (STCL Analysis)	1	5	0	1	0	7	n/a	n/a	7	

STCL = Superfund Target Compound List

GWES O&M Manual = Groundwater Extraction System Operations & Maintenance Manual

GWSAP = Site-Wide Groundwater Sampling & Analysis Plan

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production an	d Quantities for In	-house Estimate			In-house Pricing References (unshaded)
CM-1.1 Annual Groundwater Monit'g						GW Level Monitoring C	row – 1 Tochnician	· GW Sampling Crow -	- 2 Technicians		
GW/DNAPL Level Monit'g Events							34.0 semi-ann =	430.0 events	- Z Technicians		see Parameter Table 2
Technician - Level Monitoring	115	hours	\$38.00	\$4,370	\$4 370		0.25 hrs/event x	1 per crew =	115 hours		third party labor rates
GW Sampling Events	113	nours	\$30.00	ψ <del>1</del> ,570	ψ <del>-1,570</del>	66.0 semi-an +	12.0 annual =	78.0 events x	1.05 each =	81.9 samp	see Parameter Tables 3 & 4; add 5% QA to samples
Technician - GW Sampling	164	hours	\$38.00	\$6,232	\$6,232		1.0 hrs/samp x	2 per crew =	164.0 hours	01.5 5dp	third party labor rates
Sampling Supplies		samp	\$25.00	\$2,050		82.0 samples		- po: 0:0::			bottles, shipping supplies
/OCs		samp	\$105.00	\$7,277		69.3 samples					average of 3 third party quotes
VOCs/Semi-VOCs/PCBs/Metals		samp	\$773.33	\$9,821		12.7 samples					average of 3 third party quotes
Subt - Annual GW Monitoring			Ţ	\$29,750		CM-1 groundwater mo	nitorina				
	1			,,- 50	,, - 50	<i>y</i>	<u>-</u>				
CM-1.2 Extr GW Leachate Mgmt	1					operation time = 8 hou	rs/day x 5 days/we	ek x 50 weeks/year =	2,000 hours		
Leachate Treatment	751018	gal	\$0.1526	\$114,605	\$114,605	•			pon avg. of rates 1997	to 2011	unit price derived from AWTS O&M model
Leachate Treatment (PA III)	140000	gal	\$0.1526	\$21,364					e per linear foot from e		
Leachate Treatment (PA IV)	14400	gal	\$0.1526	\$2,197					from PCB Warehouse	,	
Leach Treat Syst. Capital Repl Cost	1	LS	\$17,642.00	\$17,642	\$17,642	\$3,087 K div by 25 year	life = \$123,495/yr	div by 7 facility units	= \$17,642 each		DEC estimate of AWTS capital replacement costs @ 25 yrs
Laborer	48.0	hours	\$38.00	\$1,824	\$1,824	4 hrs/mon x	12 mon/year =	48 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Technician	48.0	hours	\$38.00	\$1,824	\$1,824	4 hrs/mon x	12 mon/year =	48 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Sampling Supplies	6.3	samp	\$25.00	\$158		2.0 samp/yr x	3.0 tanks x	1.05 each =	6.3 samples/year		bottles, shipping supplies
VOCs	6.3	samp	\$105.00	\$662	\$662	6.3 samples					average of 3 third party quotes
Electrical Costs - Pumps	1548.7	KWH	\$0.086	\$133		1,384.0 hr/yr x	1.5 hp/hr x	0.746 kw/hp =	1548.7 KWH/yr		2004 DEC Rate * Implicit Deflator
Replacement of Main Pump T-8001	0.2	pump	\$12,000.00	\$2,400	\$2,400	1 pump per	5 years =	0.2			15 hp pump, site experience
Replacement of Pumps	3.0	pump	\$1,490.00	\$4,470	\$4,470	30 pumps @ 1	0.0% pumps/yr =	3 pumps			2.0 hp, 4" submersible pump, site experience
Replacement of Pump Dischg Hose	3.0	hose	\$211.54	\$635	\$635	30 pumps @ 1	0.0% pumps/yr =	3 hoses			DEC 2004 rate * deflator (2004-2010)
Disposal of Pumps/Hoses	30.0	CF	\$12.45	\$374	\$374	3 pu/hos @	10 CF/pump =	30 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 3"	20.0	LF	\$13.41	\$268	\$268	2,000 LF @	1.0% per year =	20.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 4"/8" & 6"/10"	10.0	CF	\$12.45	\$125	\$125	20.0 LF @	0.50 CF/LF =	10.0 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Extr GW Leachate Mgmt				\$168,680	\$168,680	annual O&M costs plus	capital replaceme	nt of treatment syster	m, pumps, and pipin <u>c</u>		
CM-1.2a AWTS Operation						Shift operation of the A	WTS for 12 month	S			
Material handler/basic labor	274.3	hours	\$39.00	\$10,698		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units		loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	548.6	hours	\$39.00	\$21,395			8 hours/day =	1920.0 hours @	2 units/crew/7 units		loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	834.3	hours	\$38.00	\$31,703		365 days @	8 hours/day =	2920.0 hours @	2 units/crew/7 units		loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	274.3	hours	\$38.00	\$10,423		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units		loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	274.3	hours	\$65.00	\$17,830		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units		loaded labor rate: loaded labor rate 2011 3rd party quote
oubt - AWTS Operation				\$92,049	\$92,049	AWTS Operation - oper	ation of AWTS for	welve (12) months du	ıring post closure or pe	rpetual care of the site	
CM-1.2b Site Waters Treatment											
eachate Treatment - Post Closure	201193.00	Ü	\$0.0313	\$6,297		1,408,349 gals average					unit price derived from AWTS model
eachate Treatment - Perpetual Care	201193.00	0	\$0.0313	\$0		1,408,349 gals average		, ,			unit price derived from AWTS model
Tank Trailer (5,500 gals) Collect	_	hours	\$6.31	\$769			1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	
Road Tractor (4 x 2, 30 ton) Transport	18.30	hours	\$32.45	\$594		, , , ,	5500 gals/load =	256.1 loads @	0.5 hrs/trip =	128 hrs/7 units = 18.3 hr	, , , ,
Tank Trailer (5,500 gals) Transport	121.90	hours	\$6.31	\$769			1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	, , , ,
Tank Trailer (5,500 gals) Fill T-100	121.90	hours	\$6.31	\$769			1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	, , , , , , , , , , , , , , , , , , , ,
ubt - Site Waters Treatment				\$9,199	\$9,199	CM share of annual site	waters collection	& treatment: post-clo	sure & perpetual care fi	requency are equa	Labor included in PCC-1.7a

Batch Sampling Events   2,6 bours   3.80   5.99   5.99   3.5mp/event   3.5mm/event   3.0mm/event	In-house Pricing References (unshaded)	ate	-house Estimate	on and Quantities for In	Basis of Producti	2011 CWM Extended Price - Annual Cost Perpetual Care	2011 CWM Extended Price - Annual Cost Post Closure Period	Unit Price	Unit of Measure	Estimated Quantity	Basic Closure Activities: Direct Costs
Concept   Conc	ative ponds To Meet LDR requirements	ative ponds	rge to facultative po	on tanks prior to discha	2 Batch Qualificat						CM-1.2c Batch Tank Qualification
Seminocition (1925)   3-0 amp   5288.33   5715   2 tanks @ 1 sampfleat/month (1 ) year   2 samples/year yaths   3.4 samples   monthly/harrage of three quotes   1.4 monthly/harrage of			•			\$357	\$357	\$105.00	samp	3.4	
CREA   STATE   CREATION   CREAT				• • • • • • • • • • • • • • • • • • • •							
Monty Politizet Netes (2007)   3.6   Samp   \$18.00   \$405   \$045   2 tanks @ 1 samptan/morth   1 year   24 samples/ units = 3.4 samples   monthly, Average of three quotes											
Metroury (28.51)   3.4   samp   95.00   586   586   2 lamis @ 1 samplyan/month ( 1 year = 24 samples/ months   3.4 samples   monthly, Average of three quotes purished   3.4 samples   monthly, Average of three quotes (28.5 purished   3.4 samples   3.5 monthly, Average of three quotes (38.5 purished   3.4 samples   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly, Average of three quotes (38.5 purished   3.4 samples   monthly			•								
Section   Sect	ar = 24 samples/7 units = 3.4 samples monthly: Average of three quotes	r = 24 samples/7 units =	1 year =	1 samp/tank/month (	2 tanks @	\$86	\$86	\$25.00	samp	3.4	Mercury (245.1)
System   S		r = 24 samples/7 units =	1 year =	1 samp/tank/month (	2 tanks @	\$86	\$86	\$25.00	samp	3.4	
\$2,465   \$		r = 24 samples/7 units =	1 year =	1 samp/tank/month (	2 tanks @	\$120	\$120	\$35.00	samp	3.4	Cyanide
1		. ,		l batch tank qualification					·		
1	a three-person crew SPDES PreQual Sampling of Outfall 001 prior to discharge	a three-person crew	sample for a three	2.0 hours per composite	production rate =					001)	CM-1.2d Pond Sampling & Analysis (Outfall (
Technician   2.5   hours   \$38.00   \$99   \$99   \$99   \$3mps @ 2.0 hrs/samp = 6.0 hours @ 3 units/crew = 6.0 hrs/? units = 2.6 hrs   chrician rate: rate 2011 and party sampling Equipment   0.5   samp   \$25.00   \$23   \$3mps @ 2.0 hrs/samp = 6.0 hours @ 1 units/crew = 6.0 hrs/? units = 0.9 hrs   boats, amplenger, meters, etc.	sampling & analysis prior to pond discharge									,	
Sampling Supplies   0.5   Samp   52.500   \$23   \$23   \$3   samp s @ 2.2.0 ker Sample \$   1 units/crew = 6.0 hery 7 units = 0.9 hes Samplies = 0.5 lamp   51.05   \$3.5		3 units/crew =	•	• • • • • • • • • • • • • • • • • • • •		\$99	\$99	\$38.00	hours	2.6	, ,
Sample		·									
per		• • • • • • • • • • • • • • • • • • • •									
Specific Conductance   0.5 samp   513.33   57   57 samples/ 7 units = 0.5 samples   Samples   Delianed using field equipment   Del	analytical price: average of three quotes	-									oH
Sample   So   Samp   So   So   Sample   So   So   Samples   Obtained using field equipment   Obtained   Obtained using field equipment   Obtained   Obtained   Obtained using field equipment   Obtained   Obtained   Obtained   Obtained   Obtained   Obtained   Obtained   Obtained   Obtained   Obta	analytical price: average of three quotes										Specific Conductance
Dissolved Oxygen   0.5   samp			auipment	·				-			
Total Dissolved solids (TDS)   0.5 samp   515.00   58   583 samples/7 units = 0.5 samples   samples/2 miles = 0.5 samples								-			
TOUS (Intol dissolved volatile solids)	analytical price: average of three quotes		1-1					\$15.00			, ,
TOC	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·				\$23.33			TDVS (total dissolved volatile solids)
Sample   S	analytical price: average of three quotes			= 0.5 samples	3 samples/ 7 unit	\$8	\$8	\$15.33	samp	0.5	Alkalinity as CaCO3
Ca/Mg Hardness (200.7)				= 0.5 samples	3 samples/ 7 unit	\$16	\$16	\$31.67	samp	0.5	
Total Suspended Solids (TSS)	analytical price: average of three quotes										
Ammonia (NH3)	analytical price: average of three quotes			= 0.5 samples	3 samples/ 7 unit	\$7	\$7	\$13.33	samp	0.5	Total Suspended Solids (TSS)
Ammonia (NH3)	analytical price: average of three quotes			= 0.5 samples	3 samples/ 7 unit	\$7	\$7	\$13.33	samp	0.5	Settleable Solids
Phosphorous   0.5   samp   \$20.00   \$10   \$10   \$1   \$2   \$2   \$3   \$3   \$4   \$2   \$2   \$3   \$3   \$4   \$2   \$3   \$3   \$4   \$3   \$4   \$3   \$4   \$4	analytical price: average of three quotes			= 0.5 samples	3 samples/ 7 unit			\$22.67	samp	0.5	Ammonia (NH3)
Samp   \$41.67   \$21	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·				\$20.00	samp	0.5	
Cyanide         0.5         samp         \$35.00         \$18         \$18         \$38mples / Tunits = 0.5 samples         analytical price: average of three quo analytical price: average of three quo sulfides           Sulfates         0.5         samp         \$21.00         \$11         \$11         \$38mples / 7 units = 0.5 samples         analytical price: average of three quo analytical price: average of three quo sulfides           Surfactants (MBAS)         0.5         samp         \$28.33         \$14         \$14         \$38mples / 7 units = 0.5 samples         analytical price: average of three quo analytical price: average of three quo sulfides           OLS         350.00         \$15         \$15         \$35.00         \$15         \$15         \$35.00         \$15         \$15         \$35.00         \$15         \$15         \$35.00         \$15         \$15         \$35.00         \$15         \$15         \$35.00         \$15         \$15         \$35.00         \$15         \$15         \$35.00											
Sulfates         0.5         samp         \$21.00         \$11         \$11         3 samples / 7 units = 0.5 samples         analytical price: average of three quo           Sulfides         0.5         samp         \$25.00         \$13         \$13         3 samples / 7 units = 0.5 samples         analytical price: average of three quo           BOD-5         0.5         samp         \$28.33         \$14         \$14         \$14         \$15         \$15         \$15         \$14         \$15<											
Surface   Surf	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·							•
Surfactants (MBAS)   0.5   samp   \$28.33   \$14   \$14   \$3 samples / 7 units = 0.5 samples   analytical price: average of three quote	analytical price: average of three quotes										
Samp   \$30.00   \$15	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·							
Fluoride 0.5 samp \$19.33 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10	analytical price: average of three quotes			•							
Chlorine 0.5 samp \$19.33 \$10 \$10 \$ samples/ 7 units = 0.5 samples analytical price: average of three quot Residual Chlorine 0.5 samp \$15.00 \$8 \$8 \$8 \$ samples/ 7 units = 0.5 samples analytical price: average of three quot NO2 0.5 samp \$21.00 \$11 \$11 \$ samples/ 7 units = 0.5 samples analytical price: average of three quot NO2 0.5 samp \$19.33 \$10 \$10 \$10 \$ samples/ 7 units = 0.5 samples analytical price: average of three quot NO2 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10	analytical price: average of three quotes			•							
Sesidual Chlorine   0.5   samp   \$15.00   \$8   \$8   \$8   samples/7 units = 0.5 samples   sam	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·							
NO2	analytical price: average of three quotes							\$15.00			Residual Chlorine
NO3	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·							
VOCs (624)	analytical price: average of three quotes										
Semi-volatile organics (625)   0.5   samp   \$208.33   \$104   \$1	analytical price: average of three quotes										
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))  0.5 samp \$133.33 \$67 \$67 3 samples/7 units = 0.5 samples  analytical price: average of three quotostal Phenols  0.5 samp \$21.67 \$11 \$11 3 samples/7 units = 0.5 samples  analytical price: average of three quotostal Phenols  0.5 samp \$26.67 \$13 \$13 3 samples/7 units = 0.5 samples  analytical price: average of three quotostal Phenols  Priority Pollutant Metals (200.7) *  0.5 samp \$188.00 \$94 \$94 3 samples/7 units = 0.5 samples  analytical price: average of three quotostal Phenols  Mercury (245.1)  0.5 samp \$25.00 \$13 \$13 3 samples/7 units = 0.5 samples  analytical price: average of three quotostal Phenols  analytical price: average of three quotost	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·				-			
Dil & Grease (1631)  O.5 samp \$21.67 \$11 \$11 3 samples/7 units = 0.5 samples  analytical price: average of three quot otal Phenols  Oriority Pollutant Metals (200.7) *  O.5 samp \$188.00 \$94 \$94 3 samples/7 units = 0.5 samples  Arecrury (245.1)  O.5 samp \$25.00 \$13 \$13 3 samples/7 units = 0.5 samples  analytical price: average of three quot of three q	analytical price: average of three quotes			•					samp	0.5	
cotal Phenols 0.5 samp \$26.67 \$13 \$13 samples/7 units = 0.5 samples analytical price: average of three quot of thr	analytical price: average of three quotes			· · · · · · · · · · · · · · · · · · ·				-			
Priority Pollutant Metals (200.7) * 0.5 samp \$188.00 \$94 \$94 \$1 samples/7 units = 0.5 samples analytical price: average of three quot Mercury (245.1) 0.5 samp \$25.00 \$13 \$13 \$13 \$13 \$13 \$13 \$13 \$13 \$13 \$13	analytical price: average of three quotes										
Mercury (245.1)         0.5         samp         \$25.00         \$13         3 samples/7 units = 0.5 samples         analytical price: average of three quote analytic	analytical price: average of three quotes										
Mercury (1631B)         0.5 samp         \$111.67         \$56         \$56         3 samples/7 units = 0.5 samples         analytical price: average of three quotes	analytical price: average of three quotes										
	analytical price: average of three quotes										
, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,			· · · · · · · · · · · · · · · · · · ·							,
Subt - Pond Sampling & Analysis \$1,353 \$1,353 one pond discharge (batch) requiring sampling & analysis prior to discharge		vsis prior to discharae	nplina & analysis pri					, 2,222.00		5.13	

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production and Quantities for In-house Estimate	In-house Pricing References (unshaded)
CM-1.2e Pond S&A Certification & Report	1		1	1		one event per year for divers to check discharge pipe; one predischarge qualification report	
Divers (Sr. Technicians)	0.0	hours	\$0.00	\$0	ćn	ncluded in underwater inspection below	
SCBA Gear (2 units)		hours	\$0.00	\$0 \$0		ncluded in underwater inspection below	
Laborer (Surface Support)		hours	\$0.00	\$0		ncluded in underwater inspection below	
Underwater Inspection		each	\$4,000.00	\$600		\$4,000 per event @ 1 event per year/ 7 units = 0.15 events	Based on 2010 site rate of \$3,500
Engineer (Report)		hours	\$130.00	\$741		, , ,	Eng Rate: rate 2011 3rd party quote
Subt - S&A Cert'n & Report	5.7	nours	\$150.00	\$1,341		diver(s) to check discharge pipe; also engineer's predischarge qualification report	Fac Pond 8 out of service empty
Subt Surveiting Report				71,541	71,541	averige to theek distinuinge pipe, also engineer a predistinuinge qualification report	Tue Forta & out of service empty
CM-1.2f Empty (Pump) FAC Pond to Outfall						orod'n rate = 960,000 gals/day = 60,000 gals/hr = 1,000 gals/min per facility est @ 16 hrs/day O&M	Treated wastewater from all 7 units
FAC Pond 1/2 Inventory in Gallons	2750618.0	aals	n/a			45.8 total hours reg'd to pump	& site waters
Labor to pump/discharge		day hrs	n/a	\$0	ŚN	ncluded in CM-1.2a above	
Tech/Sampler (day shift only)		day hrs	\$38.00	\$0	•	ncluded in CM-1.2a above	
Settleable Solids	1.6	samp	\$13.33	\$21		45.8 hours @ 1.0 sample per 4.0 hours = 11.5 samples /7 units = 1.6 samples	analytical price: average of three quotes
Dissolved Oxygen		samp	- 715.55	\$0		45.8 hours @ 1.0 sample per 80.0 hours = 1.0 samples Field Measurement	analytical price: average of three quotes
Sulfide (total)		samp	\$25.00	\$25		45.8 hours @ 1.0 sample per 80.0 hours = 1.0 samples	analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)	1	total hrs	\$12.34	\$80		45.8 tot hrs @ 100% total time = 45.8 hours @ 1 units/crew = 45.8 hrs/ 7 units = 6.5 hrs	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)		foot-hrs	\$0.0110	\$216		45.8 tot hrs @ 100% total time = 45.8 hours @ 3000 LF/crew = 137400 ft-hrs/7 units = 19,628	RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2			70.0220	\$342	•	transfer contents of FAC Pond to discharge pipe to Niagara Rivei (3,000 ft)	, p (
(Subt: Assemb CM-1.1 thru 1.2f)				\$305,179		Corrective Measures share of annual O&M and capital costs for leachate collection & treatment	
CM-1.3 Empty Tanks T-8004/5/6/7						production rate = 1,650 gals per hour	
Laborer	0	Hour	\$39.00	\$0	\$0	abor included in third party operation of AWTS: Assembly CM-1.2a	
Pumping Equipment	0	Hour	\$0.00	\$0	\$0	existing equipment part of tank system	
Tank Trailer (5,500 gals)	16.8	Hour	\$6.31	\$106		27,770 gals @ 1650 gals/hr = 16.8 per crew = 1.0 unit/crew = 16.8 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanks T-8004/5/6/7				\$106	\$106	pumping leachate from Tanks T-8004, T-8005, T-8006, and T-8007 for transport to Tank T-158	· · · ·
· · · · · · · · · · · · · · · · · · ·							
CM-1.3a Empty Tanks T-8009/10						production rate = 1,650 gals per hour	
Laborer	0	Hour	\$39.00	\$0	\$0	abor included in third party operation of AWTS: Assembly CM-1.2a	
Pumping Equipment	0	Hour	\$0.00	\$0	\$0	Existing equipment part of tank system	
Tank Trailer (5,500 gals)	93.6	Hour	\$6.31	\$591		154,400 gals @ 1650 gals/hr = 93.6 per crew = 1.0 unit/crew = 93.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tanks T-8004/5/6/7				\$591	\$591	pumping leachate from Tanks T-8009, and T-8010 for transport to Tank T-158	
CM-1.4 Transp't Leachate Onsite	1					production rate = 0.5 hours for on-site transport see CM-1.3 above	
Road Tractor (4 x 2, 30 ton)	2 55	Hour	\$32.45	\$83	\$83	27,770 gals @ 5500 gals/load = 5.1 loads @ 0.5 hrs/trip = 2.55 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver		Hour	\$45.00	\$0		abor included in third party operation of AWTS: Assembly CM-1.2a	, p (mic item 02 0 1 00 10 1740)
Tank Trailer (5,500 gals)		Hour	\$6.31	\$16		27,770 gals @ 5500 gals/load = 5.1 loads @ 0.5 hrs/trip = 2.55 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
			71.01	\$99		onsite transport of leachate from Tanks T-8004, T-8005, T-8006, and T-8007 to Tank T-158	
Subt - Transp Leachate Onsite					-		
Subt - Transp Leachate Onsite				,			
Subt - Transp Leachate Onsite  CM-1.4a Transp't Leachate Onsite			4			production rate = 0.5 hours for on-site transport see CM-1.3a above	
Subt - Transp Leachate Onsite  CM-1.4a Transp't Leachate Onsite  Road Tractor (4 x 2, 30 ton)		Hour	\$32.45	\$454		154,400 gals @ 5500 gals/load = 28.1 loads @ 0.5 hrs/trip = 14.0 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Subt - Transp Leachate Onsite  CM-1.4a Transp't Leachate Onsite  Road Tractor (4 x 2, 30 ton)  Driver	0	Hour	\$45.00	\$0	\$0	154,400 gals @ 5500 gals/load = 28.1 loads @ 0.5 hrs/trip = 14.0 hours  abor included in third party operation of AWTS: Assembly CM-1.2a	,
Subt - Transp Leachate Onsite  CM-1.4a Transp't Leachate Onsite  Road Tractor (4 x 2, 30 ton)	0				\$0 \$88	154,400 gals @ 5500 gals/load = 28.1 loads @ 0.5 hrs/trip = 14.0 hours	RSM/HC p. 472 (line item 01 54 33 40 7410) RSM/HC p. 472 (line item 01 54 33 40 6900)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production and Quantities for In-house Estimate In-house Pricing References (unshaded)
	_					
CM-1.5 Fill Tank T-158						production rate = 1,650 gals per hour
Laborer		Hour	\$39.00	\$0		Labor included in third party operation of AWTS: Assembly CM-1.2a
Pumping Equipment		Hour	\$0.00	\$0		Existing equipment part of tank system
Tank Trailer (5,500 gals)	16.8	Hour	\$6.31	\$106		27,770 gals @ 1650 gals/hr = 16.8 per crew = 1.0 unit/crew = 16.8 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Fill Tank T-158				\$106	\$106	pumping leachate taken from Tanks T-8004, T-8005, T-8006, and T-8007 into Tank T-158
CM-1.5a Fill Tank T-158						production rate = 1,650 gals per hour
Laborer	0	Hour	\$39.00	\$0		Labor included in third party operation of AWTS: Assembly CM-1.2a
Pumping Equipment	0	Hour	\$0.00	\$0		Existing equipment part of tank system
Tank Trailer (5,500 gals)		Hour	\$6.31	\$591		154,400 gals @ 1650 gals/hr = 93.6 per crew = 1.0 unit/crew = 93.6 hours RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Fill Tank T-158				\$591		pumpina leachate taken from Tanks T-8009, and T-8010 into Tank T-158
(Subt: Assemb CM-1.3 thru 1.5a)				\$2.035		CM-1 annual leachate transport costs
·	1			, , ,	, ,	· · · · · · · · · · · · · · · · · · ·
CM-1.6 T&D PCBs						Max annual production years between 2003 & 2010 of 2,025 gallons
Laborer	0	Hour	\$39.00	\$0		Include in Assembly CM-1.2a
Pumping Equipment	0	Hour	\$0.00	\$0	\$0	Existing tank system equipment
Transport DNAPL PCB Liquids	565.7	miles	\$3.50	\$1,980		2,025 gals/yr @ 5000 gals/load = 0.37 loads @ 1529.0 miles/trip = 565.7 miles transporters quote & site experience
Dispose of DNAPL PCB Liquids	2025	gals	\$4.68	\$9,477		2,025 gallons HWC/ETC 2004 & Current third party rate
Subt - T&D DNAPL PCBs				\$11,457	\$11,457	
(Subt: Assemb CM-1.6 thru 1.6)				\$11,457	\$11,457	CM-1 annual DNAPL PCB liquids transport & disposal costs
CM-1.7 Tank Assessments						sixteen (16) tanks requiring internal & external inspections once every five years by 1 PE + 2 Techs
Internal & External Inspections						16 tanks @ 5 yr inspect = 3.2 tnks/yr @ 7 areas = 0.5 tnks/yr
Engineer - Inspection	3.7	Hour	\$130.00	\$481	\$481	0.5 tanks/yr x 8 hrs/tnk x 1.0 per crew = 3.7 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection	7.3	Hour	\$38.00	\$277	\$277	0.5 tanks/yr x 8 hrs/tnk x 2.0 per crew = 7.3 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.8	Hour	\$130.00	\$234	\$234	0.5 tanks/yr x 4 hrs/tnk x 1.0 per crew = 1.8 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments				\$992	\$992	inspection of 16 tanks
CM-1.8 Tank Assessments						thirty (32) tanks requiring only external inspections once every five years by 1 PE
External Only Inspections						32 tanks @ 5 yr inspect = 6.4 tnks/yr @ 7 areas = 0.9 tnks/yr
Engineer - Inspection	3.4	Hour	\$130.00	\$442		0.9 tanks/yr x 4 hrs/tnk x 1.0 per crew = 3.4 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection	0	Hour	\$38.00	\$0	\$0	0.9 tanks/yr x 4 hrs/tnk x 0.0 per crew = 0.0 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.7	Hour	\$130.00	\$221	\$221	0.9 tanks/yr x 2 hrs/tnk x 1.0 per crew = 1.7 hours loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments				\$663	\$663	inspection of 32 tanks
(Subt: Assemb CM-1.7 thru 1.8)				\$1,655	\$1,655	CM-1 share of annual tank assessment costs

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period		Basis of Production	and Quantities for In-	-house Estimate			In-house Pricing References (unshaded)
CM-1.9 Replace Mon Well Pump											
Replace Mon Well Pumps	0.98	pump	\$900.00	\$882	\$882	39 pumps @	2.5% per year =	0.98 pumps/yr			Site experience third party costs
Technician	2.0	Hour	\$38.00	\$76	\$76	2 hours per year					third party labor costs
Disposal of Pumps	0.98	CF	\$12.45	\$12	\$12	0.98 pumps @	1.0 CF/pump =	0.98 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Concrete Pads	0.98	pad	\$131.50	\$129	\$129	39 pads @	2.5% per year =	0.98 pads/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Well Surface Concrete	2	CF	\$12.45	\$25	\$25	0.98 pads @	2.0 CF/pad =	2.0 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Covers	0.98	each	\$371.63	\$364	\$364	38 covers @	2.5% per year =	0.98 covers/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Mon Well Covers	0.49	CF	\$12.45	\$6	\$6	0.98 covers @	0.5 CF/cover =	0.49 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Disposar or iviori vven covers				\$1,494	\$1.404		mp maintenance and re	enlacement			
Subt - Replace Mon Well Pumps				<b>\$1,434</b>	71,434	monitoring well pur	inp manitenance and it	epiacement			
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)				\$1,494 \$1,494			np maintenance & repl				
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)  Total Non-Super hours	394.0					CM-1 mon well pun	np maintenance & repl	lacement	supv hrs for all tasks; HASP @	2.5% of non-supy hrs	
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9) Total Non-Super hours  CM-1.10 PPE Use/H&S Planning		days	\$0.00	\$1,494	\$1,494	CM-1 mon well pun	np maintenance & repl	lacement	supv hrs for all tasks; HASP @ 75% "D" days =	2.5% of non-supv hrs 36.7 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9) Total Non-Super hours  CM-1.10 PPE Use/H&S Planning PPE Usage - Level D	36.7		\$0.00	\$1,494	\$1,494 \$0	CM-1 mon well pun	np maintenance & repl	D @ 75% for tot non-		•	75% of non-supv hrs in Level D (used facility price: \$0/day) 15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
Subt - Replace Mon Well Pumps	36.7 7.3	days		\$1,494 \$0 \$66	\$1,494 \$0 \$66	CM-1 mon well pun Level C @ 10%; Mod 391.4 hours @	np maintenance & repl   Level C @ 15%; Level   8 hr/day =	D @ 75% for tot non- 48.9 days @	75% "D" days =	36.7 days	
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)  Total Non-Super hours  CM-1.10 PPE Use/H&S Planning  PPE Usage - Level D  PPE Usage - Mod Level C	36.7 7.3 4.9	days	\$9.00	\$1,494 \$0 \$66 \$123	\$1,494 \$0 \$66 \$123	CM-1 mon well pun Level C @ 10%; Mod 391.4 hours @ 391.4 hours @	np maintenance & repl   Level C @ 15%; Level   8 hr/day =   8 hr/day =	D @ 75% for tot non- 48.9 days @ 48.9 days @	75% "D" days = 15% "C" days =	36.7 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)  Total Non-Super hours  CM-1.10 PPE Use/H&S Planning  PPE Usage - Level D  PPE Usage - Mod Level C  PPE Usage - Level C	36.7 7.3 4.9	days days days	\$9.00 \$25.00	\$1,494 \$0 \$66 \$123	\$1,494 \$0 \$66 \$123 \$735	CM-1 mon well pun Level C @ 10%; Mod 391.4 hours @ 391.4 hours @ 391.4 hours @	l Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day = 8 hr/day =	D @ 75% for tot non- 48.9 days @ 48.9 days @ 48.9 days @	75% "D" days = 15% "C" days =	36.7 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day)
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)  Total Non-Super hours  CM-1.10 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer	36.7 7.3 4.9	days days days	\$9.00 \$25.00	\$1,494 \$0 \$66 \$123 \$735	\$1,494 \$0 \$66 \$123 \$735	CM-1 mon well pun Level C @ 10%; Mod 391.4 hours @ 391.4 hours @ 391.4 hours @	l Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day = 8 hr/day =	D @ 75% for tot non- 48.9 days @ 48.9 days @ 48.9 days @	75% "D" days = 15% "C" days =	36.7 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day)
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)  Total Non-Super hours  CM-1.10 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer Subt - PPE Usage/H&S Planning  CM-1.11 Supervision	36.7 7.3 4.9 9.8	days days days	\$9.00 \$25.00	\$1,494 \$0 \$66 \$123 \$735	\$1,494 \$0 \$66 \$123 \$735 \$923	CM-1 mon well pun Level C @ 10%; Mod 391.4 hours @ 391.4 hours @ 391.4 hours @	Level C @ 15%; Level   8 hr/day =   8 hr/day =   8 hr/day =   2.5% hr/hr =	D @ 75% for tot non- 48.9 days @ 48.9 days @ 48.9 days @	75% "D" days = 15% "C" days =	36.7 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day)
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)  Total Non-Super hours  CM-1.10 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C PHealth & Safety Officer Subt - PPE Usage/H&S Planning	36.7 7.3 4.9 9.8	days days days hours	\$9.00 \$25.00 \$75.00	\$1,494 \$0 \$66 \$123 \$735 \$923 \$0 \$0	\$1,494 \$0 \$66 \$123 \$735 \$923 \$0 \$0	Level C @ 10%; Mod 391.4 hours @ 391.4 hours @ 391.4 hours @ lincluded in PCC-1.2a Included in Gen'l Co	Level C @ 15%; Level   8 hr/day =   8 hr/day =   8 hr/day =   2.5% hr/hr =	D @ 75% for tot non- 48.9 days @ 48.9 days @ 48.9 days @ 9.8 hours	75% "D" days = 15% "C" days =	36.7 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Replace Mon Well Pumps (Subt: Assemb CM-1.9 thru 1.9)  Total Non-Super hours  CM-1.10 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer Subt - PPE Usage/H&S Planning  CM-1.11 Supervision Foreman	36.7 7.3 4.9 9.8	days days days hours	\$9.00 \$25.00 \$75.00 \$65.00	\$1,494 \$0 \$66 \$123 \$735 \$923	\$1,494 \$0 \$66 \$123 \$735 \$923 \$0 \$0	Level C @ 10%; Mod 391.4 hours @ 391.4 hours @ 391.4 hours @ 391.4 hours @ Included in PCC-1.2a Included in Gen'l Co	Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	D @ 75% for tot non- 48.9 days @ 48.9 days @ 48.9 days @ 9.8 hours	75% "D" days = 15% "C" days =	36.7 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote

CM-1: Corrective Measures				
Total Cost Summary				
·				
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	
		Period	Care	
Direct Costs		\$322,744	\$322,744	
Plus Indirect Costs/Profit:	2.224	40.500	40.500	
Site Activity Management Costs	3.00%			Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%			5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$3,227	\$3,227	For post-closure, design costs minimal and included in Assb CM-1.11. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$3,227	\$3,227	For post-closure, design costs minimal and included in Assb CM-1.11. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$19,365	\$19,365	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$48,412	\$48,412	
Subtotal - Direct/Indirect Costs		\$371,155	\$371,155	
Subtotal Birect, maneet costs		ψ371,133	ψ371,133	
Plus Contingency	15.00%	\$55,673	\$55,673	DEC uses 15% applied to total cost
Total - CM-1: Corrective Measures		\$426,828	\$426,828	

Corrective Measures Years of Post Closure

Years Since Closure

N/A

Post Closure Years Remaining

30

Post Closure Costs Remaining Years
Post Closure Costs 30-Years

\$12,804,855 \$12,804,855

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Producti	on and Quantities for In-I	ouse Estimate			In-house Pricing References
SLF 1 - 6 Parameters - Area						18.7 acres =	90508 SY =	814572 SF =	814.6 MSF	31680 LF (6 Mi ) = total est'd n	perimeter fencing for eight (8) SLFs
SLF 1 - 6 Parameters - Fencing										3960 LF = portion of perimeter	5 5 17
LF 1-6 Years of Post Closure	Closure	1985	Years Since Cl	osure		27	Post Closure Years Rem	aining		3	
PCC-1.1 Annual Visual Inspections						make visual insp	ections and log results; tw	o persons required			
Post-Closure						Post-Closure Frea	uencies according to Page	11 of Site-Wide Post-	Closure Plan		
Technician - Landfill	6.8	hours	\$38.00	\$258	\$0	2 hrs/insp x 1.7 ir	nsp/year x 2 per crew = 6.8	hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	6.8		\$38.00	\$258			$nsp/year \times 2 per crew = 6.8$				loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.5		\$38.00	\$57			nsp/year x 2 per crew/ 8 fa				loaded labor rate: loaded labor rate 2011 3rd party quote
Fechnician - Storm Water Mgt Syst	7.2		\$38.00	\$274			nsp/year x 2 per crew = 7.3				loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0		\$38.00	, \$0		included above					this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Post-Cls				\$847	\$0	SLF 1 - 6 post-clo	sure inspections				The state of the s
erpetual Care				·		Perpetual Care Fr	equencies according to Pa	ge 11 of Site-Wide Pos	t-Closure Plan		
echnician - Landfill	4.0	hours	\$38.00	\$0			nsp/year x 2 per crew = 4.0				loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Landfill Leachate Syst	4.0	hours	\$38.00	\$0			nsp/year x 2 per crew = 4.0				loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.0	hours	\$38.00	\$0	\$38	4 hrs/insp x 1.0 ir	nsp/year x 2 per crew/ 8 fa	cility units = 1.0 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	4.2	hours	\$38.00	\$0			insp/year x 2 per crew = 4				loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0	\$0	included above	.,,				this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Perp-Care				\$0	\$502	SLF 1 - 6 perpetu	al care inspections				
Subt: Assemb PCC-1.1 thru 1.1)				\$847		SLF 1 - 6 visual ir					
PCC-1.2 Perimeter Fence Maint.						one-eighth of to	tal perimeter fencing alloc	ated per SLF unit; 2% :	annual replacement projected		
Replacement of Fencing	79.2	LF	\$20.00	\$1,584	\$1,584	31680 LF div by	8 units x	2% per year =	79.2 LF		Site Experience 2010 Rate
Subt - Perimeter Fence Maint.				\$1,584	\$1,584	SLF 1 - 6 share o	f perimeter fence inspection	n & replacement			
Subt: Assemb PCC-1.2 thru 1.2)				\$1,584	\$1,584	SLF 1 - 6 share of	f perimeter fence inspection	n & replacement: post	-closure & perpetual care freque	ncy are equal	
	•			•							•
CC-1.3 Groundwater Monitoring									s (21 for unit + 1 upgradient)		
Nonit'g Events & Samples/Event						0.0 quart'ly +	42.0 semi-ann +	0.5 b-ann'l x	1.05 each =	44.6 samp	includes 5% QA sampling
ost-Closure											
echnician		hours	\$38.00	\$3,390		44.6 samps @	1.0 hrs/samp x	2 per crew =	89.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies		samp	\$25.00	\$1,115		44.6 samples					bottles, shipping supplies
OCs	44.6	samp	\$105.00	\$4,683		44.6 samples					Average of three quotes
ubt - GW Monitoring				\$9,188	\$0	post closure grou	undwater monitoring				
Monit'g Events & Samples/Event						21.0 wells @	sample/5 years	1.05 each =	4.4 samp/yr		No DEC estimate for perpetual care
erpetual Care						Perpetual care gro	oundwater monitoring on	e every five years			
echnician	8.8	hours	\$38.00	\$0	\$334	4.4 samps @	1.0 hrs/samp x	2 per crew =	8.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies	4.4	samp	\$25.00	\$0	\$110	4.4 samples	<u> </u>			<u> </u>	bottles, shipping supplies
VOCs	4.4	samp	\$105.00	\$0	\$462	4.4 samples					Average of three quotes
				\$0							

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Produc	tion and Quantities for In-h	ouse Estimate			In-house Pricing References
PCC-1.4 Outfalls 002.003.004 SPDES Mon	<u> </u>	ı	1			nundustion unto	- 2 have not somele for a		uson of monitoring during als		
Weekly Sampling Events						production rate 12 months =	= 2 nours per sample for a c	3 outfalls @	year of monitoring during clo 1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician	20	hours	\$38.00	\$1,482		156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	Sampling & analysis according to SPDES Permit
Pickup Truck		hours	\$10.45	\$408		39.0 hours	2.0 III 5/ SaIII p =	312.0 Hours @	1 ullits/clew/o ullits -	39:0 110015	
Sampling Equipment		hours	\$5.00	\$195		156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	samplers, meters, etc.
Sampling Supplies		samp	\$5.00	\$98		19.5 samples	2.0 ms/samp =	312.0 Hours @	1 units/crew/o units -	39.0 110013	bottles, shipping supplies
ын ын		samp	\$10.67	\$208		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Specific Conductance		samp	\$13.33	\$260		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
otal Suspended Solids (TSS)		samp	\$13.33	\$216		2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @	52 weeks =	•	samp weekly: Average of three quotes
Total Dissolved solids		samp	\$15.00	\$243		2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @			samp weekly: Average of three quotes
Settleable Solids		samp	\$13.33	\$1,015		3 outfalls @	3.9 samp/OF/week @		608.4 samples/8 units	76.1 samples	daily during flow assume 3.9/week: Average of three quotes
BOD-5		samp	\$31.67	\$1,013		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Dissolved Oxygen		samp	\$17.50	\$79		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Ammonia (NH3)		samp	\$22.67	\$102		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
/OCs (624)	9	samp	\$105.00	\$945		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Dil & Grease (1631)	9	samp	\$40.00	\$360		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Copper	4.5	samp	\$17.67	\$80		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Zinc		samp	\$17.67	\$80		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Phenols		samp	\$26.67	\$120		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33	\$2,600		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
2-Chloroethyl vinyl ether		samp	\$86.67	\$0		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane	9	samp	\$75.00	\$675		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Methylene chloride	0	samp	\$75.00	\$0		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Shipping	19.5	samp	\$5.00	\$98	\$98		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				,
Subt - SPDES Outfall Sampling & Analysis			,	\$9,403		three outfalls re	quiring weekly sampling & a	nalysis for each year d	iring post-closure		
PCC-1.4a Discharge Monitoring Report						Monthly Dischar	ge Monitoring Reports				
Engineer (Report)	3	hours	\$130.00	\$390	\$390	12 months @	2 hrs/event =	24.0 hours @	div by 8 units =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical	6	hours	\$45.00	\$270	\$270	12 months @	4 hrs/event =	48.0 hours @	div by 8 units =	6.0 hours	
Subt - Discharge Monitoring Report				\$660	\$660	submittal of SPD	ES Permit required Discharg	ge Monitoring Report (I	OMR)		
(Subt: Assemb PCC-1.3 thru 1.4a)				\$19,251	\$10,970	SLF 1 - 6 ground	water & stormwater monito	ring activities			
	•										
PCC-1.5 Landfill Cover Maint.											
Replacement of Cover	0.187	acre	\$20,973.33	\$3,922	\$3,922	18.7 acre @ 1.0	% per year = 0.187 acres/yr				unit price based upon vegetation, topsoil, from RMU-1,
Subt - Landfill Cover Maint.			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$3,922			cap maintenance and replac	cement			Assemblies 14.17 thru 14.18
				,	, . , ,		,				
PCC-1.6 Mowing/Grooming						·		<u> </u>	·		
Mowing	814.6		\$3.21	\$2,617		814.6 MSF @	1.0 per year =	814.6 MSF			DEC 2004 rate * deflator (2004-2010)
Fertilizing	162.9	MSF	\$3.82	\$622		814.6 MSF @	1.0 per	5.0 years =	162.9 MSF		DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming				\$3,240			g and fertilizing				
(Subt: Assemb PCC-1.5 thru 1.6)		1		\$7,162	\$7,162	SLF 1 - 6 cap m	aintenance activities: post-c	losure & perpetual care	frequency are equal		

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure		2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	on and Quantities for In-h	ouse Estimate			In-house Pricing References
PCC-1.7 Leachate System Mgmt		ſ	1		aparation time = 9	3 hours/day x 5 days/week	y E0 wooks (year = 2.0	200 hours		
Leachate Treatment - Post Closure	138178.00	gal	\$1.8244	\$252,098	\$0 138,178 gals avera		. X 30 WEEKS/ YEAR - 2,0	000 110u13		unit price derived from AWTS model with oil @ 25%
Leachate Treatment - Perpetual Care	138178.00	Ü	\$1.8244	\$2,098	\$252,098 138,178 gals avera					unit price derived from AWTS model with oil @ 25%
Leach Treat Syst. Capital Repl Cost		LS	\$17,642.00	\$17,642	\$17,642 \$3,087 K div by 25		iv hv 7 facility units = \$	\$17.642 each		DEC estimate of AWTS capital replacement costs @ 25 yrs
Laborer		hours	\$39.00	\$4,680	\$4,680 10 hrs/mon x 12 r		iv by 7 facility affits – ş	717,042 eden		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician		hours	\$38.00	\$4,560	\$4,560 10 hrs/mon x 12 r	• •				loaded labor rate: loaded labor rate 2011 3rd party quote
Electrical Costs - Pumps		KWH	\$0.086	\$13		hp/hr x 0.746 kw/hp = 152	5 KWH/vr			2004 DEC Rate * Implicit Deflator
Replacement of Main Pump T-105		pump	\$2,456.00	\$491	\$491 1 pump per 5 yea		.5 KVV11/ y1			250 gpm, 5 hp pump, Site Experience
Replacement of Pumps		pump	\$1,382.00	\$20,730	\$20,730 25 pumps @ 60.0					1.5 hp submersible pump, site experience
Replacement of Pump Dischg Hose		hose	\$211.54	\$3,173	\$3,173 25 pumps @ 60.0					DEC 2004 rate * deflator (2004-2010)
Disposal of Pumps/Hoses	150		\$12.45	\$1,868	\$1,868 15 pu/hos @ 10 C					DEC 2004 closure rate for large debris * deflator (2004-2010)
Replacement of Piping - 2"/4"	19.7		\$53.25	\$1,049	\$1,049 1,970 LF @ 1.0% p	'' '				DEC 2004 closure rate for large debits — deflator (2004-2010)
Disposal of Piping - 2"/4"		CF	\$12.45	\$81	\$81 19.7 LF @ 0.33 CF					DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 4"/8" & 6"/10"	20		\$73.50	\$1,470	\$1,470 2,000 LF @ 1.0% p					DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 4"/8" & 6"/10"		CF	\$12.45	\$125	\$125 20.0 LF @ 0.50 CF					DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt Leachate Coll Syst Mgmt	10	0.	Ų12.13	\$307,979	\$307,979 annual O&M costs		of treatment system in	numps and ninina		DEC 200 Following Face for large debtile deflator (200 F2010)
Subt Leadinate Son Syst Mgt				<del>+++++++++++++++++++++++++++++++++++++</del>	<b>4001,513</b> a.m.a.a. 0 a.m. 00513	prus cupreur reprucement	oj trediment system, p	samps, and piping		
PCC-1.7a AWTS Operation					Shift operation of	the AWTS for 12 months				no DEC estimate for this activity: DEC Estimate included in unit rate
Material handler/basic labor	274.3	hours	\$39.00	\$10,698	\$10,698 240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	548.6	hours	\$39.00	\$21,395	\$21,395 240 days @	8 hours/day =	1920.0 hours @	2 units/crew/7 units =	548.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	834.3	hours	\$38.00	\$31,703	\$31,703 365 days @	8 hours/day =	2920.0 hours @	2 units/crew/7 units =	834.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	274.3	hours	\$38.00	\$10,423	\$10,423 240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	274.3		\$65.00	\$17,830	\$17,830 240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - AWTS Operation	275	110415	Ç03.00	\$92,049				ng post closure or perpetual		loaded labor rater loaded labor rate 2011 5rd party quote
				70-7010	70-70-10-11-10-0-10-11-11-11-11-11-11-11-11-	<u> </u>	(,	-8 h		
PCC-1.7b Site Waters Treatment										
Leachate Treatment - Post Closure	201193.00	Ü	\$0.0313	\$6,297		erage of past 5 years/ 7 un				unit price derived from AWTS model
Leachate Treatment - Perpetual Care	201193.00	Ü	\$0.0313	\$0	\$6,297 1,408,349 gals ave					unit price derived from AWTS model
Tank Trailer (5,500 gals) Collect	121.90		\$6.31	\$769	\$769 1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Road Tractor (4 x 2, 30 ton) Transport	18.30	hours	\$32.45	\$594	\$594 1,408,349 gals @	5500 gals/load =	256.1 loads @	0.5 hrs/trip =	128 hrs/7 units = 18.3 hrs	RSM/HC p. 472 (line item 01 54 33 40 7410)
Tank Trailer (5,500 gals) Transport	121.90	hours	\$6.31	\$769	\$769 1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Fill T-100	121.90	hours	\$6.31	\$769	\$769 1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Site Waters Treatment				\$9,199	<b>\$9,199</b> SLF 1 - 6 share of a	annual site waters collection	on & treatment: post-c	losure & perpetual care frequ	ency are equal	Labor included in PCC-1.7a
PCC-1.7c Batch Tank Qualification					2 Batch Qualificati	ion tanks prior to discharge	e to facultative nonds			To Meet LDR requirements
VOCs (624)	3.4	samp	\$105.00	\$357	\$357 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	
Semi-volatile organics (625)		samp	\$208.33	\$715	\$715 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33	\$457	\$457 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Priority Pollutant Metals (200.7)		samp	\$188.00	\$645	\$645 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Mercury (245.1)		samp	\$25.00	\$86	\$86 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Sulfides		samp	\$25.00	\$86	\$86 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Cvanide	3.4	samp	\$35.00	\$120	\$120 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	Extended Price -	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	on and Quantities for I	n-house Estimate			In-house Pricing References
PCC-1.7d Pond Sampling & Analysis (Outfall 001)						production rate =	2.0 hours per composit	te sample for a three-p	person crew		SPDES PreQual Sampling of Outfall 001 prior to discharge
Batch Sampling Events			1			1 events @	3 samp/evnt=	3 samples	, c. 50 c. c		sampling & analysis prior to pond discharge
Technician	2.6	hours	\$38.00	\$99	\$99	3 samps @	2.0 hrs/samp =	6.0 hours @	3 units/crew =	18.0 hrs/7 units = 2.6 hrs	technician rate: rate 2011 3rd party quote
Sampling Equipment	0.9	hours	\$25.00	\$23	\$23	3 samps @	2.0 hrs/samp =	6.0 hours @	1 units/crew =	6.0 hrs/ 7 units = 0.9 hrs	boat, samplers, meters, etc.
Sampling Supplies	0.5	samp	\$25.00	\$13	\$13	3 samples/ 7 units			· · · · · · · · · · · · · · · · · · ·	·	bottles, shipping supplies
uH	0.5	samp	\$10.67	\$5		3 samples/ 7 units					analytical price: average of three quotes
pecific Conductance	0.5	samp	\$13.33	\$7	\$7	3 samples/ 7 units	= 0.5 samples				analytical price: average of three quotes
emperature	0.5	samp	-	\$0		3 samples	obtained using field	equipment			Obtained using field equipment
issolved Oxygen		samp	-	\$0		3 samples	obtained using field				Obtained using field equipment
otal Dissolved solids (TDS)		samp	\$15.00	\$8		3 samples/ 7 units					analytical price: average of three quotes
DVS (total dissolved volatile solids)		samp	\$23.33	\$12		3 samples/ 7 units	•				analytical price: average of three quotes
Ikalinity as CaCO3		samp	\$15.33	\$8		3 samples/ 7 units					analytical price: average of three quotes
OC		samp	\$31.67	\$16		3 samples/ 7 units					analytical price: average of three quotes
a/Mg Hardness (200.7)	_	samp	\$24.33	\$12		3 samples/ 7 units					analytical price: average of three quotes
otal Suspended Solids (TSS)		samp	\$13.33	\$7		3 samples/ 7 units	•				analytical price: average of three quotes
ettleable Solids	_	samp	\$13.33	\$7		3 samples/ 7 units					analytical price: average of three quotes
mmonia (NH3)		samp	\$22.67	\$11		3 samples / 7 units					analytical price: average of three quotes
nosphorous		samp	\$20.00	\$10	\$10	3 samples/ 7 units	= 0.5 samples				analytical price: average of three quotes
ON (TKN-NH3)		samp	\$41.67	\$21		3 samples/ 7 units					analytical price: average of three quotes
yanide		samp	\$35.00	\$18		3 samples/ 7 units					analytical price: average of three quotes
ulfates		samp	\$21.00	\$11		3 samples/ 7 units					analytical price: average of three quotes
ulfides		samp	\$25.00	\$13		3 samples/ 7 units					analytical price: average of three quotes
urfactants (MBAS)		samp	\$28.33	\$14		3 samples/ 7 units					analytical price: average of three quotes
OD-5		samp	\$30.00	\$15		3 samples/ 7 units					analytical price: average of three quotes
uoride		samp	\$19.33	\$10		3 samples/ 7 units	•				analytical price: average of three quotes
thlorine		samp	\$19.33	\$10		3 samples/ 7 units	•				analytical price: average of three quotes
esidual Chlorine		samp	\$15.00	\$8		3 samples/ 7 units	•				analytical price: average of three quotes
102		samp	\$21.00	\$11		3 samples/ 7 units					analytical price: average of three quotes
03		samp	\$19.33	\$10		3 samples/ 7 units					analytical price: average of three quotes
OCs (624)		samp	\$105.00	\$53		3 samples/ 7 units	•				analytical price: average of three quotes
emi-volatile organics (625)		samp	\$208.33	\$104		3 samples/ 7 units					analytical price: average of three quotes
esticides/PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33	\$67		3 samples/ 7 units					analytical price: average of three quotes
il & Grease (1631)		samp	\$21.67	\$11		3 samples/ 7 units	•				analytical price: average of three quotes
otal Phenols		samp	\$26.67	\$13		3 samples/ 7 units	•				analytical price: average of three quotes
riority Pollutant Metals (200.7) *		samp	\$188.00	\$94		3 samples/ 7 units					analytical price: average of three quotes
lercury (245.1)		samp	\$25.00	\$13		3 samples/ 7 units					analytical price: average of three quotes
lercury (1631B)		samp	\$111.67	\$56		samples/ 7 units					analytical price: average of three quotes
cute Toxicity/Bioassy	_	samp	\$3,800.00	\$570		sample/ 7 units					One quote: actual cost for 2010
bubt - Ponds' Sampling & Analysis	1 2.20		, ,,,,,,,,,,,	\$1,353				mpling & analysis prio	r to discharge		
<u> </u>			İ			•		, , ,	-		
CC-1.7e Pond S&A Certification & Report						ne event per yea	r for divers to check di	scharge pipe; one pred	lischarge qualification repo	rt	
Divers (Sr. Technicians)	0.0	hours	\$0.00	\$0			vater inspection below				
GCBA Gear (2 units)	0.0	hours	\$0.00	\$0	\$0	ncluded in under	vater inspection below	I			
aborer (Surface Support)		hours	\$0.00	\$0			vater inspection below				
nderwater Inspection		each	\$4,000.00	\$600		34,000 per event (			7 units = 0.15 events		Based on 2010 site rate of \$3,500
Engineer (Report)		hours	\$130.00	\$741		1 events @	40 hrs/event =	40.0 hours @	1 units/crew =	40.0 hours/7 units = 5.7	Eng Rate: rate 2011 3rd party quote
Subt - S&A Cert'n & Report	1			\$1,341				gineer's predischarge		,	Fac Pond 8 out of service empty

#### PCC-1: SLF 1 - 6

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	n and Quantities for In-	house Estimate			In-house Pricing References
PCC-1.7f Empty (Pump) FAC Pond to Outfall 001						prod'n rato - 960 0	00 gals/day = 60 000 ga	ls/hr = 1 000 gals/min r	per facility est @ 16 hrs/day (	28.14	Treated wastewater from all 7 units
FAC Pond 1/2 Inventory in Gallons	2750618.0	nals	n/a			45.8 total hours	reg'd	to pump	oci lacility est @ 10 ms/day c	JOHN THE PROPERTY OF THE PROPE	& site waters
abor to pump/discharge	2730010.0	day hrs	n/a	\$0	ŚŊ	Included in PCC-1.7		to pump			d site waters
Fech/Sampler (day shift only)		day hrs	\$38.00	\$0		Included in PCC-1.7					
Settleable Solids	1.6	samp	\$13.33	\$21				1.5 samples /7 units = 1	6 samples		analytical price: average of three quotes
Dissolved Oxygen		samp	-	\$0			imple per 80.0 hours = :		Field Measurement		analytical price: average of three quotes
Sulfide (total)		samp	\$25.00	\$25			ample per 80.0 hours = 1	•			analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)		total hrs	\$12.34	\$80		45.8 tot hrs @	100% total time =	45.8 hours @	1 units/crew =	45.8 hrs/ 7 units = 6.5 hrs	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)		foot-hrs	\$0.0110	\$216		45.8 tot hrs @	100% total time =	45.8 hours @	3000 LF/crew =	137400 ft-hrs/7 units = 19,628	RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2				\$342				e pipe to Niagara River	· · · · · · · · · · · · · · · · · · ·	,	, , , , , , , , , , , , , , , , , , , ,
(Subt: Assemb PCC-1.7 thru 1.7f)				\$414,729	•					re & perpetual care frequency are equ	al ·
				-	-		·		·		
	1										
PCC-1.8 Empty Tank T-130	_		100			•	• •	1/UP p. 9-171 (33-19-01	101)		
Laborer		Hour	\$39.00	\$0			nird party operation of A	AWTS			
Pumping Equipment		Hour	\$0.00	\$0			part of tank system	00.7	10 "	02 = :	DOLATIC 470 III 11 04 71 02 10 1000
Tank Trailer (5,500 gals) Post Closure Period		Hour	\$6.31	\$528		138,178 gals @	1650 gals/hr =	83.7 per crew =	1.0 unit/crew =	83.7 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period	83.7	Hour	\$6.31	\$0		138,178 gals @	1650 gals/hr =	83.7 per crew =	1.0 unit/crew =	83.7 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank T-130				\$528	\$528	pumping leachate	from Tank T-130 for tro	Insport to Tank T-158			
PCC-1.9 Transp't Leachate Onsite	12.6		422.45	<b>4400</b>	40	•	.5 hours for on-site tran	•	0.51 /:	42.61	DC14/HC 472/H: :: 04.54.22.42.7440)
Road Tractor (4 x 2, 30 ton) Post Closure Period		Hour	\$32.45	\$409		138,178 gals @	5500 gals/load =	25.1 loads @	0.5 hrs/trip =	12.6 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Road Tractor (4 x 2, 30 ton) Perpetual Care Period		Hour	\$32.45	\$0 \$0		138,178 gals @	5500 gals/load =	25.1 loads @	0.5 hrs/trip =	12.6 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver		Hour	\$45.00	\$0			nird party operation of A		0.5 has hein	43.Ch	DCAA/UC - 472 (line item 04 54 22 40 0000)
Tank Trailer (5,500 gals) Post Closure Period		Hour	\$6.31	\$80		138,178 gals @	5500 gals/load =	25.1 loads @	0.5 hrs/trip =	12.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period	12.6		\$6.31	\$0 <b>\$488</b>		138,178 gals @	5500 gals/load =	25.1 loads @	0.5 hrs/trip =	12.6 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transp Leachate Onsite				\$488	\$488	orisite transport of	f leachate from Tank T-1	130 LO TUTIK 1-158			
PCC-1.10 Fill Tank T-158						production rate - 1	GEO gals par hour: BCM	1/IID n 0 171 /22 10 01	101)		
	0.0	Hour	\$39.00	\$0	ćo		,650 gais per nour; RSN nird party operation of A	1/UP p. 9-171 (33-19-01	101)		
.aborer Pumping Equipment		Hour	\$39.00	\$0 \$0			part of tank system	CIVVA			
Fank Trailer (5,500 gals) Post Closure Period		Hour	\$6.31	\$0 \$528		138,178 gals @	1650 gals/hr =	83.7 per crew =	1.0 unit/crew =	83.7 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Post Closure Period  Tank Trailer (5,500 gals) Perpetual Care Period		Hour	\$6.31	\$528 \$0		138,178 gals @	1650 gals/hr =	83.7 per crew =	1.0 unit/crew =	83.7 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Fill Tank T-158	63.7	rioui	Ş0.31	\$0 <b>\$528</b>			taken from Tank T-130		1.0 umi/crew =	03.7 HUUIS	1.3M/11C p. 472 (iiiie iteiii 01 34 33 40 0300)
(Subt: Assemb PCC-1.8 thru 1.10)				\$528 \$1,545			annual leachate transpo				+
545.1.155cmb / 66 1.6 tm a 1.10)				<b>Э1,</b> 345	<b>э</b> 1,545	SEL I SHILLEDIT	an reachate transpo				
PCC-1.11 Tank Assessments							equiring internal & exte		very five years by 1 PE + 2 Te		
nternal & External Inspections						16 tanks @	5 yr inspect =	3.2 tnks/yr @	7 areas =	0.5 tnks/yr	
Engineer - Inspection		Hour	\$130.00	\$481		0.5 tanks/yr x	8 hrs/tnk x	1.0 per crew =	3.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$277		0.5 tanks/yr x	8 hrs/tnk x	2.0 per crew =	7.3 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.8	Hour	\$130.00	\$234		0.5 tanks/yr x	4 hrs/tnk x	1.0 per crew =	1.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
				\$992		inspection of 16 to					

#### PCC-1: SLF 1 - 6

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	n and Quantities for In-h	nouse Estimate			In-house Pricing References
PCC-1.12 Tank Assessments	1	1				thirty (22) tanks roa	quiring only external insp	actions once every five	years by 1 DE		T
External Only Inspections						32 tanks @	5 yr inspect =	6.4 tnks/yr @	7 areas =	0.9 tnks/vr	
Engineer - Inspection	2.4	Hour	\$130.00	\$442		0.9 tanks/yr x	4 hrs/tnk x	1.0 per crew =	3.4 hours	U.9 LIIKS/YI	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$442 \$0		0.9 tanks/yr x	4 hrs/tnk x	0.0 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%		Hour	\$130.00	\$221		0.9 tanks/yr x	2 hrs/tnk x	1.0 per crew =	1.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments	1.7	nour	\$130.00	\$663		inspection of 32 ta	· · · · · · · · · · · · · · · · · · ·	1.0 per crew =	1.7 Hours		loaded labor rate: loaded labor rate 2011 3rd party quote
(Subt: Assemb PCC-1.11 thru 1.12)				\$1,655				casts: nast slasura & nar	petual care frequency are equal		
PCC-1.13 Replace Mon Well Pump		1									
Replace Mon Well Pumps	0.55	pump	\$900.00	\$495	\$495	22 numns @ 2 5% r	per year = 0.55 pumps/y	r			Site experience third party costs
echnician		Hour	\$38.00	\$495 \$76		2 hours per year	per year - 0.55 purilps/y	1			third party labor costs
Disposal of Pumps	0.55		\$12.45	\$76		0.55 pumps @ 1.0 (	CE/numn = 0.55 CE				DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Concrete Pads		pad	\$131.50	\$72		1 1 2	r year = 0.55 pads/yr				DEC 2004 rate * deflator (2004-2010)
Disposal of Well Surface Concrete	1.1		\$131.30	\$14		0.55 pads @ 2.0 CF/					DEC 2004 rate denator (2004-2010)  DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Covers		each	\$371.63	\$204			per year = 0.55 covers/yr				DEC 2004 rate * deflator (2004-2010)
Disposal of Mon Well Covers	0.33		\$12.45	\$204		0.55 covers @ 0.5 C					DEC 2004 rate * deflator (2004-2010)  DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Replace Mon Well Pumps	0.28	CF	\$12.45	\$8 <b>72</b>			imp maintenance and re	nlacomont			DEC 2004 closure rate for large debris "deflator (2004-2010)
(Subt: Assemb PCC-1.13 thru 1.13)				\$872					& perpetual care frequency are e	aual	
	<u> </u>			40.5	7		, , ,	pracerrerrer post crosure	a perpetual care frequency are e	quui	
				<b>V</b> 0.1-			o be 10 feet in width	placement post closure	a perpetuur care frequency are e	<del>quu</del>	
SLF 1 - 6 Drainage Ditches				Ψ07-		4000 LF	o be 10 feet in width		a perpetaureure frequency are e	quui	drainage ditches specific to SLF 1 - 6 unit
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches				·		4000 LF 22600 LF div by	o be 10 feet in width  8 units =	2825 LF			drainage ditches in non-specific areas of facility
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair	0.016		\$5,698.00	\$91	\$91	4000 LF 22600 LF div by 6,825 LF x	o be 10 feet in width  8 units = 10 ft/LF =	2825 LF 1.567 acres @	1.0% per year =	0.016 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair	0.016 70.8		\$5,698.00 \$44.30	\$91 \$3,136	\$91 \$3,136	4000 LF 22600 LF div by 6,825 LF x 850 LF x	o be 10 feet in width  8 units =  10 ft/LF =  15 FT/LF @	2825 LF			drainage ditches in non-specific areas of facility
PCC-1.14 Drainage Ditch Repair  SLF 1 - 6 Drainage Ditches  Facility-wide Drainage Ditches  Drainage Ditch Repair  Rip-Rap Downchute Channel Repair  Subt - Drainage Ditch Repair				\$91	\$91 \$3,136	4000 LF 22600 LF div by 6,825 LF x	o be 10 feet in width  8 units =  10 ft/LF =  15 FT/LF @	2825 LF 1.567 acres @	1.0% per year =	0.016 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair				\$91 \$3,136	\$91 \$3,136	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina	o be 10 feet in width  8 units =  10 ft/LF =  15 FT/LF @	2825 LF 1.567 acres @ 9.0 SF/SY @	1.0% per year = 5.0% per year =	0.016 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-1.15 Drainage Ditch Cleaning				\$91 \$3,136	\$91 \$3,136	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair	2825 LF 1.567 acres @ 9.0 SF/SY @	1.0% per year = 5.0% per year =	0.016 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches				\$91 \$3,136	\$91 \$3,136	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair	2825 LF 1.567 acres @ 9.0 SF/SY @	1.0% per year = 5.0% per year =	0.016 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches	70.8			\$91 \$3,136	\$91 \$3,136 \$3,228	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair to be 10 feet wide; sedir	2825 LF 1.567 acres @ 9.0 SF/SY @ ment estimated to be 4 i	1.0% per year = 5.0% per year =	0.016 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning	70.8	SY	\$44.30	\$91 \$3,136 \$3,228	\$91 \$3,136 <b>\$3,228</b>	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 1 4000 LF 22600 LF div by	o be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ age ditch repair  to be 10 feet wide; sedir  8 units =	2825 LF 1.567 acres @ 9.0 SF/SY @ ment estimated to be 4 i	1.0% per year = 5.0% per year = nches deep.	0.016 acres 70.8 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment	70.8	CY miles	\$44.30	\$91 \$3,136 \$3,228	\$91 \$3,136 \$3,228 \$20 \$16	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 4000 LF 22600 LF div by 6,825.0 LF x	o be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ age ditch repair  to be 10 feet wide; sedir  8 units = 10.0 ft/LF x	2825 LF 1.567 acres @ 9.0 SF/SY @ ment estimated to be 4 in 2825 LF 0.333 feet (4") =	1.0% per year = 5.0% per year = nches deep. 841.8 CY @ 1%/yr =	0.016 acres 70.8 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment	70.8 8.4 5	CY miles	\$44.30 \$2.38 \$3.25	\$91 \$3,136 \$3,228 \$20 \$16	\$91 \$3,136 \$3,228 \$20 \$16 \$399	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 4000 LF 22600 LF div by 6,825.0 LF x 11.4 tons @	o be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ age ditch repair to be 10 feet wide; sedir  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY =	2825 LF 1.567 acres @ 9.0 SF/SY @ ment estimated to be 4 in 2825 LF 0.333 feet (4") = 0.55 loads @	1.0% per year = 5.0% per year = nches deep. 841.8 CY @ 1%/yr =	0.016 acres 70.8 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning  PCC-1.16 Basin Cleaning	70.8 8.4 5	CY miles	\$44.30 \$2.38 \$3.25	\$91 \$3,136 \$3,228 \$20 \$16 \$399	\$91 \$3,136 \$3,228 \$20 \$16 \$399	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 1 4000 LF 22600 LF div by 6,825.0 LF x 11.4 tons @ 8.4 CY @ stormwater draina	o be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ age ditch repair to be 10 feet wide; sedir  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY =	2825 LF 1.567 acres @ 9.0 SF/SY @ ment estimated to be 4 i 2825 LF 0.333 feet (4") = 0.55 loads @ 11.4 tons	1.0% per year = 5.0% per year = nches deep. 841.8 CY @ 1%/yr =	0.016 acres 70.8 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Fransportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-1.16 Basin Cleaning Basin No. 1	70.8 8.4 5	CY miles	\$44.30 \$2.38 \$3.25	\$91 \$3,136 \$3,228 \$20 \$16 \$399	\$91 \$3,136 \$3,228 \$20 \$16 \$399	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 1 4000 LF 22600 LF div by 6,825.0 LF x 11.4 tons @ 8.4 CY @ stormwater draina sediment estimated	8 units = 10 ft/LF = 15 FT/LF @  19 editch repair  to be 10 feet wide; sedin  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 1.36 ditch cleaning d to be 4 inches deep. 8 units =	2825 LF  1.567 acres @  9.0 SF/SY @  ment estimated to be 4 i  2825 LF  0.333 feet (4") =  0.55 loads @  11.4 tons	1.0% per year = 5.0% per year = nches deep. 841.8 CY @ 1%/yr =	0.016 acres 70.8 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-1.16 Basin Cleaning Basin No. 1 Basin No. 2	70.8 8.4 5 11.4	CY miles ton	\$2.38 \$3.25 \$35.00	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 4000 LF 22600 LF div by 6,825.0 LF x 11.4 tons @ 8.4 CY @ stormwater draina sediment estimated 140625 SF div by 150000 SF div by	so be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 15 FT/LF @ 16 ditch repair  10 to be 10 feet wide; sedir  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 1.35 ton/CY = 1.36 ditch cleaning 10 to be 4 inches deep. 8 units = 8 units = 8 units =	2825 LF 1.567 acres @ 9.0 SF/SY @  ment estimated to be 4 i  2825 LF 0.333 feet (4") = 0.55 loads @ 11.4 tons  17578 SF 18750 SF	1.0% per year = 5.0% per year = nches deep. 841.8 CY @ 1%/yr =	0.016 acres 70.8 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-1.16 Basin Cleaning Basin No. 1 Basin No. 2	70.8 8.4 5	CY miles ton	\$2.38 \$3.25 \$35.00	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 1 4000 LF 22600 LF div by 6,825.0 LF x 11.4 tons @ 8.4 CY @ stormwater draina sediment estimated	8 units = 10 ft/LF = 15 FT/LF @  19 editch repair  to be 10 feet wide; sedin  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 1.36 ditch cleaning d to be 4 inches deep. 8 units =	2825 LF  1.567 acres @  9.0 SF/SY @  ment estimated to be 4 i  2825 LF  0.333 feet (4") =  0.55 loads @  11.4 tons	1.0% per year = 5.0% per year = nches deep. 841.8 CY @ 1%/yr =	0.016 acres 70.8 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair	70.8 8.4 5 11.4	CY miles ton	\$2.38 \$3.25 \$35.00 \$2.38 \$3.25	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	4000 LF 22600 LF div by 6,825 LF x 850 LF x stormwater draina ditches estimated 4000 LF 22600 LF div by 6,825.0 LF x 11.4 tons @ 8.4 CY @ stormwater draina sediment estimated 140625 SF div by 150000 SF div by	so be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 15 FT/LF @ 16 ditch repair  10 to be 10 feet wide; sedir  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 1.35 ton/CY = 1.36 ditch cleaning 10 to be 4 inches deep. 8 units = 8 units = 8 units =	2825 LF 1.567 acres @ 9.0 SF/SY @  ment estimated to be 4 i  2825 LF 0.333 feet (4") = 0.55 loads @ 11.4 tons  17578 SF 18750 SF	1.0% per year = 5.0% per year = nches deep.  841.8 CY @ 1%/yr = 5 miles per load =	0.016 acres 70.8 SY 8.4 CY 5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13) unit price based upon FAC Ponds 1/2 disposal (6.14)
SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-1.15 Drainage Ditch Cleaning SLF 1 - 6 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-1.16 Basin Cleaning Basin No. 1 Basin No. 2 Basin Sediment Cleaning	70.8 8.4 5 11.4	CY miles ton CY	\$2.38 \$3.25 \$35.00	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	\$91 \$3,136 \$3,228 \$20 \$16 \$399 \$435	4000 LF 22600 LF div by 6,825 LF x 850 LF x 850 LF x stormwater draina ditches estimated 4000 LF 22600 LF div by 6,825.0 LF x 11.4 tons @ 8.4 CY @ stormwater draina sediment estimated 140625 SF div by 150000 SF div by 36,328 SF x	o be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ age ditch repair  to be 10 feet wide; sedin  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = age ditch cleaning  d to be 4 inches deep.  8 units = 8 units = 8 units = 0.333 feet (4") =	2825 LF  1.567 acres @  9.0 SF/SY @  ment estimated to be 4 in  2825 LF  0.333 feet (4") =  0.55 loads @  11.4 tons  17578 SF  18750 SF  448.0 CY @	1.0% per year = 5.0% per year = nches deep.  841.8 CY @ 1%/yr = 5 miles per load =	0.016 acres 70.8 SY 8.4 CY 5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 1 - 6 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 excavation (6.11)

# PCC-1: SLF 1 - 6

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	and Quantities for In-h	ouse Estimate			In-house Pricing References
20044701		ı				1 . 251/6	.54.6\0.40[/::::1\				
PCC-1.17 Culvert Maint/Replace SLF 1 - 6 Culverts							LF 1-6) & 40' (sitewide);	500 LF			and contract of the CLEAR Country
Facility-wide Culverts						20 culverts x 20 culverts x	25 feet long = 40 feet long =	800 LF div bv	8 units =	100 LF	culverts specific to SLF 1 - 6 unit
,	600	1.5	\$2.14	ć4 202	ć4 202	600.0 LF	40 feet long =	800 LF alv by	8 units =	100 LF	culverts in non-specific areas of facility
Culvert Cleaning - 8" diameter avg		LF		\$1,283							DEC 2004 rate * deflator (2004-2010)
Repl Culvert - 8" diam avg (SLF1-6)			\$11.61 \$22.35			25.0 LF					DEC 2004 rate * deflator (2004-2010)
Repl Culv't - 18" diam avg (sitewide)		LF				40.0 LF	0.75.07/15	10.0.01			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Ditch Excavation	48.8	-	\$2.96			65.0 LF x	0.75 CY/LF =	48.8 CY			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Bkfill/Compaction	48.8	CY	\$3.86	\$189		48.8 CY					DEC 2004 rate * deflator (2004-2010)
Subt - Culvert Maint/Replacement				\$2,800		culvert maintenanc		-1			
(Subt: Assemb PCC-1.14 thru 1.17)				\$11,009	\$11,009	SLF 1 - 6 Storm arai	паде татепапсе & гер	olacement: post-closure 8	R perpetual care frequency are e	quai	
PCC-1.18 Road Maint/Replace	1	I				gravel roads = 15 fe	eet wide; asphalt roads =	= 20 feet wide			
SLF 1 - 6 Gravel Roads						7200 LF x	15 feet wide =	12000 SY @	5% per year =	600.0 SY	gravel roads specific to SLF 1 - 6 unit
Facility-wide Asphalt Roads						21120 LF x	20 feet wide =	422400 SF @	1% per year =	4224.0 SF	asphalt roads in non-specific areas of facility
SLF 1 - 6 Gravel Road Repair	600	SY	\$3.12	\$1,873	\$1.873	600.0 SY				.==	DEC 2004 rate * deflator (2004-2010)
acility-wide Asphalt Roads	528		\$1.35			4,224.0 SF div by	8 units =	528.0 SF			DEC 2004 rate * deflator (2004-2010)
Subt - Road Maint/Replacement				\$2,585		road maintenance	and replacement				, , , , , , , , , , , , , , , , , , , ,
(Subt: Assemb PCC-1.18 thru 1.18)				\$2,585			tenance & replacement				
Total Non-Super hours	409.5										
PCC-1.19 PPE Use/H&S Planning						Level C @ 10%; Mod	l Level C @ 15%; Level D	@ 75% for tot non-supv	hrs for all tasks; HASP @ 2.5% o	f non-supv hrs	
PPE Usage - Level D	38.4	days	\$0.00	\$0		409.5 hours @	8 hr/day =	51.2 days @	75% "D" days =	38.4 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
PPE Usage - Mod Level C	7.7	days	\$9.00	\$69	\$69	409.5 hours @	8 hr/day =	51.2 days @	15% "C" days =	7.7 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day
PPE Usage - Level C	5.1	days	\$25.00	\$128	\$128	409.5 hours @	8 hr/day =	51.2 days @	10% "C" days =	5.1 days	10% of non-supv hrs in Level C (used facility price: \$25/day)
Health & Safety Officer	10.2	hours	\$75.00	\$765	\$765	409.5 hours @	2.5% hr/hr =	10.2 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
				\$962	\$962						
oubt - PPE Usage/H&S Planning											
PCC-1.20 Supervision	0	hours	\$65.00	\$0	\$0	Included in PCC-1.7a	AWTS Operation				loaded labor rate: loaded labor rate 2011 3rd party quote
PCC-1.20 Supervision		hours hours	\$65.00 \$75.00	\$0 \$0	•		AWTS Operation	fice indirect costs			loaded labor rate: loaded labor rate 2011 3rd party quote loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning  PCC-1.20 Supervision  Foreman  Site Project Manager  Subtotal - Supervision					\$0	Included in Gen'l Co		fice indirect costs			. , ,

PCC-1: SLF 1 - 6				
Total Cost Summary				
•				
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	
		Period	Care	
Direct Costs		\$462,201	\$453,574	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$13,866	\$13,607	Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$18,488	\$18,143	5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$4,622	\$4,536	For post-closure, design costs minimal and included in Assb 1.20. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$4,622	\$4,536	For post-closure, design costs minimal and included in Assb 1.20. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$27,732	\$27,214	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$69,330	\$68,036	
Subtotal - Direct/Indirect Costs		\$531,531	\$521,610	
Plus Contingency	15.00%	\$79,730	\$78,241	DEC uses 15% applied to total cost
Table DOCALOURA C		¢614.264	Ć500.054	
Total - PCC-1: SLF 1 - 6		\$611,261	\$599,851	

3

SLF 1-6 Years of Post Closure 27 Post Closure Years Remaining

Post Closure Costs Remaining Years	\$1,833,782
Post Closure Costs 30-Years	\$18.337.820

Subt - GW Monitoring

\$0

\$474 perpetual care groundwater monitoring

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
SLF 7 Parameters - Area						11.2 acres = 54444 SY = 490000 SF = 490 MSF 31680 LF (6 Mi.) = total est'd	perimeter fencing for eight (8) SLFs
SLF 7 Parameters - Fencing						3960 LF = portion of perimete	r fencing for SLF 7
SLF 7 Years of Post Closure	Closure	1985	Years Since C	losure		27 Post Closure Years Remaining 3	
PCC-2.1 Annual Visual Inspections						make visual inspections and log results; two persons required	
Post-Closure						Post-Closure Frequencies according to Page 11 of Site-Wide Post-Closure Plan	
Technician - Landfill	6.8	hours	\$38.00	\$258	\$0	2 hrs/insp x 1.7 insp/year x 2 per crew = 6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	6.8	hours	\$38.00	\$258		2 hrs/insp x 1.7 insp/year x 2 per crew = 6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Perimeter Fencing	1.5	hours	\$38.00	\$57		3 hrs/insp x 2.0 insp/year x 2 per crew/ 8 facility units = 1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Storm Water Mgt Syst	7.2		\$38.00	\$274		2 hrs/insp x 1.8 insp/year x 2 per crew = 7.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - 25-Yr Storm Event	0.0		\$38.00	\$0		included above	this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Post-Cls			,	\$847		SLF 7 post-closure inspections	, , ,
erpetual Care					•	Perpetual Care Frequencies according to Page 11 of Site-Wide Post-Closure Plan	
Fechnician - Landfill	4.0	hours	\$38.00	\$0	\$152	2 hrs/insp x 1.0 insp/year x 2 per crew = 4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Landfill Leachate Syst	4.0		\$38.00	\$0		2 hrs/insp x 1.0 insp/year x 2 per crew = 4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Fechnician - Perimeter Fencing	1.0		\$38.00	\$0		4 hrs/insp x 1.0 insp/year x 2 per crew/ 8 facility units = 1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	4.2		\$38.00	\$0		2 hrs/insp x 1.04 insp/year x 2 per crew = 4.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Fechnician - 25-Yr Storm Event		hours	\$38.00	\$0		included above	this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Perp-Care	0.0		φ30.00	\$0		SLF 7 perpetual care inspections	this detirity by a moraded with diminal starm water inspect ins
(Subt: Assemb PCC-2.1 thru 2.1)				\$847		SLF 7 visual inspections	
PCC-2.2 Perimeter Fence Maint. Replacement of Fencing Subt - Perimeter Fence Maint. (Subt: Assemb PCC-2.2 thru 2.2)	79.2	LF	\$20.00	\$1,584 <b>\$1,584</b> <b>\$1,584</b>	\$1,584	one-eighth of total perimeter fencing allocated per SLF unit; 2% annual replacement projected  31680 LF div by 8 units x 2% per year = 79.2 LF  SLF 7 share of perimeter fence inspection & replacement  SLF 7 share of perimeter fence inspection & replacement: post-closure & perpetual care frequency are equal	Site Experience 2010 Rate
PCC-2.3 Groundwater Monitoring	1					sampling crew composed of two technicians; 11 monitoring wells (10 for unit + 1 upgradient)	
Monit'g Events & Samples/Event						0.0  quart'ly + 22.0  semi-ann + 0.0  b-ann'l x $1.05  each = 23.1  samp$	includes 5% QA sampling
ost-Closure							
Technician Technician	46.2	hours	\$38.00	\$1,756	\$0	23.1 samps @ 1.0 hrs/samp x 2 per crew = 46.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
sampling Supplies	23.1	samp	\$25.00	\$578	\$0	23.1 samples	bottles, shipping supplies
OCs	23.1	samp	\$105.00	\$2,426		23.1 samples	Average of three quotes
oubt - GW Monitoring				\$4,759		post closure groundwater monitoring	<u> </u>
Monit'g Events & Samples/Event						11.0 wells @ sample/5 years	
Perpetual Care						Perpetual care groundwater monitoring once every five years	
Technician	4.6	hours	\$38.00	\$0	\$175	2.3 samps @ 1.0 hrs/samp x 2 per crew = 4.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Sampling Supplies		samp	\$25.00	\$0		2.3 samples	bottles, shipping supplies
VOCs		samp	\$105.00	\$0		2.3 samples	Average of three quotes
Subt - GW Monitoring	2.5	эшр	Ç105.00	\$0 \$0		2.3 samples pernetual care groundwater monitoring	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Produc	ction and Quantities for In-I	nouse Estimate			In-house Pricing References
PCC-2.4 Outfalls 002,003,004 SPDES Mon					p	roduction rate	= 2 hours per sample for a	one-person crew: each	vear of monitoring durin	g closure	
Weekly Sampling Events						2 months =	52 weeks @	3 outfalls @	1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician	39	hours	\$38.00	\$1,482	\$1,482 1	56 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	, , , , , , , , , , , , , , , , , , ,
Pickup Truck	39	hours	\$10.45	\$408	\$408	9.0 hours					
Sampling Equipment	39	hours	\$5.00	\$195	\$195 1	56 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	samplers, meters, etc.
Sampling Supplies	19.5	samp	\$5.00	\$98	\$98	19.5 samples					bottles, shipping supplies
pH	19.5	samp	\$10.67	\$208	\$208 3	outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Specific Conductance	19.5	samp	\$13.33	\$260	\$260 3	outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Total Suspended Solids (TSS)	16.2	samp	\$13.33	\$216		outfalls @	1 samp/OF/week +	1 OF @ 2/month @			weekly: Average of three quotes
Total Dissolved solids	16.2	samp	\$15.00	\$243	\$243 2	outfalls @	1 samp/OF/week +	1 OF @ 2/month @			p weekly: Average of three quotes
Settleable Solids	76.1	samp	\$13.33	\$1,015	\$1,015 3	outfalls @	3.9 samp/OF/week @	52 weeks =	608.4 samples/8 units	76.1 samples	daily during flow assume 3.9/week: Average of three quotes
BOD-5	4.5	samp	\$31.67	\$143	\$143 3	outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Dissolved Oxygen	4.5	samp	\$17.50	\$79	\$79 3	outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Ammonia (NH3)	4.5	samp	\$22.67	\$102	\$102 3	outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
VOCs (624)	9	samp	\$105.00	\$945	\$945 3	outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Oil & Grease (1631)	9	samp	\$40.00	\$360	\$360 3	outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Copper	4.5	samp	\$17.67	\$80	\$80 3	outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Zinc	4.5	samp	\$17.67	\$80	\$80 3	outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Phenols	4.5	samp	\$26.67	\$120	\$120 3	outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))	19.5	samp	\$133.33	\$2,600	\$2,600 3	outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
2-Chloroethyl vinyl ether	0	samp	\$86.67	\$0	\$0 3	outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane	9	samp	\$75.00	\$675	\$675 3	outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Methylene chloride	0	samp	\$75.00	\$0	\$0 3	outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Shipping	19.5	samp	\$5.00	\$98	\$98						
Subt - SPDES Outfall Sampling & Analysis				\$9,403	<b>\$9,403</b> t	nree outfalls re	equiring weekly sampling &	analysis for each year	during post-closure		
PCC-2.4a Discharge Monitoring Report					N	1onthly Discha	rge Monitoring Reports				
Engineer (Report)	3	hours	\$130.00	\$390	\$390	2 months @	2 hrs/event =	24.0 hours @	div by 8 units =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical	6	hours	\$45.00	\$270	\$270	2 months @	4 hrs/event =	48.0 hours @	div by 8 units =	6.0 hours	
Subt - Discharge Monitoring Report				\$660	<b>\$660</b> s	ubmittal of SPI	DES Permit required Dischar	ge Monitoring Report	(DMR)		
(Subt: Assemb PCC-2.3 thru 2.4a)				\$14,822	\$10,537	SLF 7 groundw	ater & stormwater monitori	ing activities			
PCC-2.5 Landfill Cover Maint.				J							
Replacement of Cover	0.112	acre	\$20,973.33	\$2,349	\$2,349 1	1.2 acre @ 1.0	% per year = 0.112 acres/yr				unit price based upon vegetation, topsoil, from RMU-1
Subt - Landfill Cover Maint.				\$2,349	\$2,349	SLF 7 upper ca <sub>l</sub>	p maintenance and replacer	nent			Assemblies 14.17 thru 14.18
PCC-2.6 Mowing/Grooming					+						
Mowing	490.0	MSF	\$3.21	\$1,574	\$1,574 4	90.0 MSF @	1.0 per year =	490.0 MSF			DEC 2004 rate * deflator (2004-2010)
Fertilizing	98.0	MSF	\$3.82	\$374	\$374 4	90.0 MSF @	1.0 per	5.0 years =	98.0 MSF		DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming				\$1,949		SLF 7 mowing					, ,
(Subt: Assemb PCC-2.5 thru 2.6)				\$4,298			tenance activities: post-clos	sure & perpetual care f	requency are equal		

Rasic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	n and Quantities for In-h	ouse Estimate			In-house Pricing References
PCC-2.7 Leachate System Mgmt						oneration time = 8	hours/day x 5 days/week	x 50 weeks/year = 2	000 hours		
Leachate Treatment - Post Closure	50832	gal	\$0.2195	\$11,156					evious 5-years post closure		offsite deep well injection, WM Vickery, OH
Leachate Treatment - Perpetual Care	50832		\$0.2195	\$0					evious 5-years post closure		, , , , , , , , , , , , , , , , , , , ,
Off-site Transport to finish treatment - Post Closur	2726	miles	\$3.50	\$9,541		50,832 gals @	5500 gal/tankr =	9.2 loads @	295 miles/trip =	2,726 miles	Actual 2010 costs, site experience
Off-site Transport to finish treatment - Perpetual C	2726	miles	\$3.50	\$0	\$9,541	50,832 gals @	5500 gal/tankr =	9.2 loads @	295 miles/trip =	2,726 miles	Actual 2010 costs, site experience
Leach Treat Syst. Capital Repl Cost	1	LS	\$17,642.00	\$17,642			year life = \$123,495/yr di	v by 7 facility units =	\$17,642 each	,	DEC estimate of AWTS capital replacement costs @ 25 yrs
Laborer	24	hours	\$39.00	\$936		2 hrs/mon x	12 mon/year =	24 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Technician	24	hours	\$38.00	\$912	\$912	2 hrs/mon x	12 mon/year =	24 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Electrical Costs - Pumps	39.2	KWH	\$0.086	\$3	\$3	35.0 hr/yr x	1.5 hp/hr x	0.746 kw/hp =	39.2 KWH/yr		2004 DEC Rate * Implicit Deflator
Replacement of Main Pump		pump	\$2,456.00	\$491		1 pump per	5 years =	0.2 pumps	.,		250 gpm, 5 hp pump, Site Experience
Replacement of Pumps	1	pump	\$1,382.00	\$1,382		6 pumps @	16.7% per year =	1.0 pumps			1.5 hp submersible pump, site experience
Replacement of Pump Dischg Hose	1	hose	\$211.54	\$212		1 pumps x	1 per pump =	1 hoses			DEC 2004 rate * deflator (2004-2010)
Disposal of Pumps/Hoses	10	CF	\$12.45	\$125	\$125	1 pu/hos @	10 CF/pump =	10 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replacement of Piping - 2"/4"	11	LF	\$53.25	\$586	\$586	1,100 LF @	1.0% per year =	11.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 2"/4"	3.6	CF	\$12.45	\$45	\$45	11.0 LF @	0.33 CF/LF =	3.6 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 4"/8" & 6"/10"	0.5		\$73.50	\$37		50 LF @	1.0% per year =	0.5 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 4"/8" & 6"/10"	0.3	CF	\$12.45	\$4	\$4	0.5 LF @	0.50 CF/LF =	0.3 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt Leachate Coll Syst Mgmt			·	\$43,070	\$43,070	annual O&M costs	plus capital replacement	of treatment system,	pumps, and piping		
PCC-2.7a AWTS Operation						Shift operation of t	he AWTS for 12 months				no DEC estimate for this activity: DEC Estimate included in unit rate
Material handler/basic labor	274.3	hours	\$39.00	\$10,698	\$10,698	240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	548.6	hours	\$39.00	\$21,395	\$21,395	240 days @	8 hours/day =	1920.0 hours @	2 units/crew/7 units =	548.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	834.3	hours	\$38.00	\$31,703	\$31,703	365 days @	8 hours/day =	2920.0 hours @	2 units/crew/7 units =	834.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	274.3	hours	\$38.00	\$10,423	\$10,423	240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	274.3	hours	\$65.00	\$17,830	\$17,830	240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - AWTS Operation				\$92,049	\$92,049	AWTS Operation - o	peration of AWTS for two	elve (12) months dur	ing post closure or perpet	ual care of the site	
PCC-2.7b Site Waters Treatment											
Leachate Treatment - Post Closure	201193.00	gal	\$0.0313	\$6,297	\$0	1,408,349 gals aver	age of past 5 years/ 7 uni	ts = 201,193 gallons			unit price derived from AWTS model
Leachate Treatment - Perpetual Care	201193.00	gal	\$0.0313	\$0	\$6 <u>,</u> 297	1,408,349 gals aver	age of past 5 years/ 7 uni	ts = 201,193 gallons			unit price derived from AWTS model
Tank Trailer (5,500 gals) Collect	121.90	hours	\$6.31	\$769	\$769	1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Road Tractor (4 x 2, 30 ton) Transport	18.30	hours	\$32.45	\$594		1,408,349 gals @	5500 gals/load =	256.1 loads @	0.5 hrs/trip =	128 hrs/7 units = 18.3 hrs	RSM/HC p. 472 (line item 01 54 33 40 7410)
Tank Trailer (5,500 gals) Transport	121.90	hours	\$6.31	\$769	\$769	1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Fill T-100	121.90	hours	\$6.31	\$769		1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Site Waters Treatment				\$9,199	\$9,199	SLF-7 share of annu	al site waters collection &	& treatment: post-clo	sure & perpetual care freq	quency are equal	Labor included in PCC-1.7a
PCC-2.7c Batch Tank Qualification							on tanks prior to discharge				To Meet LDR requirements
VOCs (624)		samp	\$105.00	\$357		2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	
Semi-volatile organics (625)		samp	\$208.33	\$715			1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33	\$457			1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Priority Pollutant Metals (200.7)		samp	\$188.00	\$645			1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Mercury (245.1)		samp	\$25.00	\$86			1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Sulfides		samp	\$25.00	\$86			1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Cyanide	3.4	samp	\$35.00	\$120 <b>\$2,465</b>		2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Subt - Batch Tank Qualification							ial batch tank qualificatio				Samples collected by lab technician

PCC-2: SLF 7											
Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Produ	iction and Quantities fo	r In-house Estimate			In-house Pricing References
PCC-2.7d Pond Sampling & Analysis (Outfall 001	· I	1	l				e = 2.0 hours per compo	site samula far a three			SPDES PreQual Sampling of Outfall 001 prior to discharge
Batch Sampling Events	,					1 events @	e = 2.0 nours per compc 3 samp/evnt=	3 samples	person crew		sampling & analysis prior to pond discharge
Technician	2.6	hours	\$38.00	\$99	¢00	3 samps @	2.0 hrs/samp =	6.0 hours @	3 units/crew =	18.0 hrs/7 units = 2.6 hrs	technician rate: rate 2011 3rd party quote
Sampling Equipment		hours	\$25.00	\$23		3 samps @	2.0 hrs/samp =	6.0 hours @	1 units/crew =	6.0 hrs/ 7 units = 0.9 hrs	boat, samplers, meters, etc.
Sampling Equipment Sampling Supplies		samp	\$25.00	\$13			nits = 0.5 samples	6.0 Hours @	1 units/crew -	6.0 Hrs/ 7 utilits = 0.9 Hrs	bottles, shipping supplies
Sampling Supplies		samp	\$10.67	\$15 \$5			nits = 0.5 samples				analytical price: average of three quotes
pn Specific Conductance		samp	\$10.67	\$5 \$7			nits = 0.5 samples				analytical price: average of three quotes analytical price: average of three quotes
Temperature		samp	\$15.55	\$0		3 samples 7 u	obtained using fiel	d aquinment			Obtained using field equipment
		samp	-	\$0 \$0		3 samples					
Dissolved Oxygen Total Dissolved solids (TDS)		samp	\$15.00	\$0 \$8			obtained using fiel nits = 0.5 samples	u equipinent			Obtained using field equipment analytical price: average of three quotes
TDVS (total dissolved volatile solids)		samp	\$15.00	\$8 \$12			nits = 0.5 samples				
Alkalinity as CaCO3		samp	\$23.33	\$12			nits = 0.5 samples				analytical price: average of three quotes analytical price: average of three quotes
TOC		samp	\$31.67	\$16			nits = 0.5 samples				analytical price: average of three quotes
Ca/Mg Hardness (200.7)		samp	\$24.33	\$10			nits = 0.5 samples				analytical price: average of three quotes
Total Suspended Solids (TSS)		samp	\$13.33	\$7			nits = 0.5 samples				analytical price: average of three quotes
Settleable Solids		samp	\$13.33	\$7 \$7			nits = 0.5 samples				analytical price: average of three quotes
Ammonia (NH3)		samp	\$22.67	\$11			nits = 0.5 samples				analytical price: average of three quotes
Phosphorous		samp	\$20.00	\$10			nits = 0.5 samples				analytical price: average of three quotes
TON (TKN-NH3)	0.5		\$41.67	\$21			nits = 0.5 samples				analytical price: average of three quotes
Cyanide	_	samp	\$35.00	\$18			nits = 0.5 samples				analytical price: average of three quotes
Sulfates		samp	\$33.00	\$11			nits = 0.5 samples				analytical price: average of three quotes
Sulfides		samp	\$25.00	\$13			nits = 0.5 samples				analytical price: average of three quotes
Surfactants (MBAS)		samp	\$28.33	\$13			nits = 0.5 samples				analytical price: average of three quotes
BOD-5		samp	\$30.00	\$14 \$15			nits = 0.5 samples				analytical price: average of three quotes
Fluoride		samp	\$19.33	\$10			nits = 0.5 samples				analytical price: average of three quotes
Chlorine		samp	\$19.33	\$10			nits = 0.5 samples				analytical price: average of three quotes
Residual Chlorine		samp	\$15.00	\$10			nits = 0.5 samples				analytical price: average of three quotes
NO2		samp	\$13.00	\$11			nits = 0.5 samples				analytical price: average of three quotes
NO3		samp	\$19.33	\$10			nits = 0.5 samples				analytical price: average of three quotes
VOCs (624)		samp	\$105.00	\$53			nits = 0.5 samples				analytical price: average of three quotes
Semi-volatile organics (625)		samp	\$208.33	\$104			nits = 0.5 samples				analytical price: average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33	\$104			nits = 0.5 samples				analytical price: average of three quotes
Oil & Grease (1631)		samp	\$21.67	\$11			nits = 0.5 samples				analytical price: average of three quotes
total Phenols		samp	\$26.67	\$13			nits = 0.5 samples				analytical price: average of three quotes
Priority Pollutant Metals (200.7) *	0.5		\$188.00	\$94			nits = 0.5 samples				analytical price: average of three quotes
Mercury (245.1)		samp	\$188.00	\$13			nits = 0.5 samples				analytical price: average of three quotes
Mercury (1631B)		samp	\$111.67	\$56			nits = 0.5 samples				analytical price: average of three quotes
Acute Toxicity/Bioassy		samp	\$3.800.00	\$570			its = 0.15 samples				One quote: actual cost for 2010
Subt - Ponds' Sampling & Analysis	0.15	samp	\$3,000.00	\$1,353			harge (batch) requiring	samplina & analysis nri	or to discharae		One quote, actual cost for 2010
Sast 1 Shas Sumpling & Analysis	+			Ç1,555	72,333	one pona dist	ge (baten) requiring	camping & analysis pri	o. to alberiarge		
PCC-2.7e Pond S&A Certification & Report						one event ner	vear for divers to check	discharge pine: one pre	discharge qualification re	eport	
Divers (Sr. Technicians)	0.0	hours	\$0.00	\$0			derwater inspection belo			-p	
SCBA Gear (2 units)		hours	\$0.00	\$0			derwater inspection belo				
Laborer (Surface Support)		hours	\$0.00	\$0			derwater inspection belo				
Underwater Inspection	_	each	\$4,000.00	\$600		\$4,000 per eve			7 units = 0.15 events		Based on 2010 site rate of \$3,500
Engineer (Report)		hours	\$130.00	\$741		1 events @	40 hrs/event =	40.0 hours @	1 units/crew =	40.0 hours/7 units = 5.7	Eng Rate: rate 2011 3rd party quote
Subt - S&A Cert'n & Report	1 3.7		Ţ150.50	\$1,341			eck discharge pipe; also				Fac Pond 8 out of service empty
	1			7-,312	7-,3:2				4 J		
4											<u> </u>

PCC-2: SLF 7											
Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Producti	on and Quantities for In	l-house Estimate			In-house Pricing References
_			1	1		1					
PCC-2.7f Empty (Pump) FAC Pond to Outfall 001									per facility est @ 16 hrs,	/day O&M	Treated wastewater from all 7 units
FAC Pond 1/2 Inventory in Gallons	2750618.0		n/a			45.8 total hours	req'd	to pump			& site waters
Labor to pump/discharge		day hrs	n/a	\$0		Included in PCC-2					
Tech/Sampler (day shift only)		day hrs	\$38.00	\$0		Included in PCC-2					
Settleable Solids		samp	\$13.33	\$21			sample per 4.0 hours = 1				analytical price: average of three quotes
Dissolved Oxygen		samp	-	\$0			sample per 80.0 hours =		Field Measurement		analytical price: average of three quotes
Sulfide (total)		samp	\$25.00	\$25			sample per 80.0 hours =	•			analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)		total hrs	\$12.34	\$80		45.8 tot hrs @	100% total time =	45.8 hours @	1 units/crew =	45.8 hrs/ 7 units = 6.5 hrs	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)	19628.0	foot-hrs	\$0.0110	\$216		45.8 tot hrs @	100% total time =	45.8 hours @	3000 LF/crew =	137400 ft-hrs/7 units = 19,628	RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2 (Subt: Assemb PCC-2.7 thru 2.7f)		1		\$342 \$149.820			s of FAC Pond to discharg			osure & perpetual care frequency are	a aqual
(Subt: Assemb PCC-2.7 thru 2.7J)				\$149,820	\$149,820	SEF / Share of an	inuai O&ivi ana capitai ci	osts for leachate collec	tion & treatment: post-ci	osure & perpetual care frequency and	e equal
PCC-2.8 N/A (See Note 2)						SLF-7 leachate pu	mped directly to tankers	for offsite disposal			
Subt - N/A				\$0	\$0						
PCC-2.9 N/A (See Note 2)											
Subt - N/A				\$0	\$0						
DCC 2 40 N/A /C N-+- 2)											
PCC-2.10 N/A (See Note 2)				60	60						
Subt - N/A (Subt: Assemb PCC-2.8 thru 2.10)				\$0 \$0	\$0 \$0						
(Subt. Assemb FCC-2.8 till a 2.10)				ŞU	\$0						
		1	,								
PCC-2.11 Tank Assessments									every five years by 1 PE		
Internal & External Inspections			6422.00	6404	4404	16 tanks @	5 yr inspect =	3.2 tnks/yr @	7 areas =	0.5 tnks/yr	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Engineer - Inspection		Hour	\$130.00	\$481		0.5 tanks/yr x	8 hrs/tnk x	1.0 per crew =	3.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$277		0.5 tanks/yr x	8 hrs/tnk x	2.0 per crew =	7.3 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.8	Hour	\$130.00	\$234		0.5 tanks/yr x	4 hrs/tnk x	1.0 per crew =	1.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments				\$992	\$992	inspection of 16	tanks				
PCC-2.12 Tank Assessments						thirty /22 tanks ro	equiring only external ins	nactions ance every fix	yo yoars by 1 DE		
External Only Inspections						32 tanks @	5 yr inspect =	6.4 tnks/yr @	7 areas =	0.9 tnks/yr	
Engineer - Inspection	3 /	Hour	\$130.00	\$442	\$412	0.9 tanks/yr x	4 hrs/tnk x	1.0 per crew =	3.4 hours	U.S tilks/yi	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$0		0.9 tanks/yr x	4 hrs/tnk x	0.0 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%		Hour	\$130.00	\$221		0.9 tanks/yr x	2 hrs/tnk x	1.0 per crew =	1.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments	1.7		Ģ130.00	\$663		inspection of 32	•	1.0 per crew =	1.7 110013		roaded labor rates louded labor rate 2011 5rd party quote
(Subt: Assemb PCC-2.11 thru 2.12)				\$1,655				osts: post-closure & per	petual care frequency ar	e equal	
· · · · · · · · · · · · · · · · · · ·		1	<u> </u>	Ţ-,300	7-,000	.,,,,			. , , , , , ,		
PCC-2.13 Replace Mon Well Pump		1	İ	<u> </u>	1						
Replace Mon Well Pumps	0.20	pump	\$900.00	\$252	ĆZEZ	11 numps @ 2 Fo	6 per year = 0.28 pumps/	hur			Site experience third party costs
Technician		Hour	\$38.00	\$76		2 hours per year	per year - 0.20 pullips/	y:			third party labor costs
Disposal of Pumps	0.55		\$12.45	\$76			0 CF/pump = 0.55 CF				DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Concrete Pads		pad	\$131.50	\$37			per year = 0.28 pads/yr				DEC 2004 rate * deflator (2004-2010)
Disposal of Well Surface Concrete	0.28	•	\$131.30	\$37		0.28 pads @ 2.3%					DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Covers		each	\$371.63	\$104			6 per year = 0.28 covers/	/vr			DEC 2004 closure rate for raige debits
Disposal of Mon Well Covers	0.28		\$12.45	\$104			5 CF/cover = 0.14 CF	1.			DEC 2004 rate deflator (2004-2010)  DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Replace Mon Well Pumps	0.17		Ψ12.43	\$484			pump maintenance and	replacement			The second secon
(Subt: Assemb PCC-2.13 thru 2.13)				\$484					& perpetual care freque	ncy are equal	
,	1	L		Ţ.J-1	Ţ. <b>5</b> -	· · · · · · · · · · · · · · · · · · ·		,			1

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	and Quantities for In-	-house Estimate			In-house Pricing References
		ı									
PCC-2.14 Drainage Ditch Repair						ditches estimated to	be 10 feet in width				1 1 10 1 10 10 10 10 10 10 10 10 10 10 1
SLF 7 Drainage Ditches Facility-wide Drainage Ditches						2800 LF 22600 LF div by	8 units =	2825 LF			drainage ditches specific to SLF 7 unit drainage ditches in non-specific areas of facility
Drainage Ditch Repair	0.013	acro	\$5,698.00	\$74	¢74	5,625 LF x	10 ft/LF =	1.291 acres @	1.0% per year =	0.013 acres	unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Rip-Rap Downchute Channel Repair		SY	\$5,698.00	\$1,551		420 LF x	15 FT/LF @	9.0 SF/SY @	5.0% per year =	35.0 SY	unit price based upon \$5,698/acre (RMO-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
Subt - Drainage Ditch Repair	33	31	Ş44.30	\$1,625		stormwater drainag		3.0 31/31 @	3.0% per year =	33.031	unic price based upon 244.30/31 (histo 1 Assembly 14.13)
DCC 2.45 Dunium - Ditab Classica						dia di a a a ai a a a a di a a	h = 40 f = +	annot retire to the least of	to also and a sec		
PCC-2.15 Drainage Ditch Cleaning SLF 7 Drainage Ditches						2800 LF	be 10 feet wide; sedii	ment estimated to be 4	inches deep.		drainage ditches specific to SLF 7 unit
Facility-wide Drainage Ditches						@	8 units =	2825 LF			drainage ditches in non-specific areas of facility
Drainage Ditch Sediment Cleaning	6.0	CY	\$2.38	\$16	¢16	5,625.0 LF x	10.0 ft/LF x	0.333 feet (4") =	693.8 CY @ 1%/yr =	6.9 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
Transportation of Ditch Sediment		miles	\$3.25	\$16		9.4 tons @	20 tons/load =	0.333 feet (4 ) = 0.48 loads @	5 miles per load =	5 miles	unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
Disposal of Ditch Sediment		ton	\$35.00	\$329		6.9 CY @	1.35 ton/CY =	9.4 tons	5 miles per load =	5 miles	unit price based upon FAC Ponds 1/2 disposal (6.14)
Subt - Drainage Ditch Cleaning	5.4	ton	\$33.00	\$362		stormwater drainag		3.4 (01)3			unic price based aport rice rollas 1/2 disposal (0.14)
PCC-2.16 Basin Cleaning						sediment estimated	<u>'</u>				
Basin No. 1						140625 SF div by	8 units =	17578 SF			
Basin No. 2						150000 SF div by	8 units =	18750 SF			
Basin Sediment Cleaning	89.6		\$2.38	\$213		36,328 SF x	0.333 feet (4") =	448.0 CY @	20% per year =	89.6 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
Transportation of Basin Sediment		miles	\$3.25	\$98		121.0 tons @	20 tons/load =	6.0 loads @	5 miles/load =	30 miles	unit price based upon FAC Ponds 1/2 excavation (6.13)
Disposal of Basin Sediment	121.0	ton	\$35.00	\$4,235		89.6 CY @	1.35 ton/CY =	121.0 tons			unit price based upon FAC Ponds 1/2 excavation (6.14)
SubtBasin Cleaning				\$4,546	\$4,546	facility stormwater b	asın cleaning				
PCC-2.17 Culvert Maint/Replace						avg culvert = 25' (SLF	7) & 40' (sitewide); v	arious diameters			
SLF 7 Culverts						12 culverts x	25 feet long =	300 LF		<u> </u>	culverts specific to SLF 7 unit
Facility-wide Culverts						20 culverts x	40 feet long =	800 LF div by	8 units =	100 LF	culverts in non-specific areas of facility
Culvert Cleaning - 8" diameter avg	400		\$2.14	\$855		400.0 LF					DEC 2004 rate * deflator (2004-2010)
Repl Culvert - 8" diam avg (SLF 7)		LF	\$11.61	\$290		25.0 LF					DEC 2004 rate * deflator (2004-2010)
Repl Culv't - 18" diam avg (sitewide)		LF	\$22.35	\$894		40.0 LF					DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Ditch Excavation	48.8		\$2.96	\$145		65.0 LF x	0.75 CY/LF =	48.8 CY			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Bkfill/Compaction	48.8	CY	\$3.86	\$189		48.8 CY					DEC 2004 rate * deflator (2004-2010)
Subt - Culvert Maint/Replacement (Subt: Assemb PCC-2.14 thru 2.17)		-		\$2,373		culvert maintenanc		lacament: noct closure	a perpetual care frequency are	a aqual	
Subt. Assemb PCC-2.14 (III U 2.17)		l		\$8,905	\$8,905	3LF / Stoffil arainag	е типпенинсе & гері	iacement, post-ciosure &	с регресииг сиге јгециенсу аге	счии	
PCC-2.18 Road Maint/Replace							t wide; asphalt roads				
SLF 7 Gravel Roads						1540 LF x	15 feet wide =	2566.7 SY @	5% per year =	256.7 SY	gravel roads specific to SLF 7 unit
Facility-wide Asphalt Roads						21120 LF x	20 feet wide =	422400 SF @	1% per year =	4224.0 SF	asphalt roads in non-specific areas of facility
SLF 7 Gravel Road Repair	256.7		\$3.12	\$801		600.0 SY					DEC 2004 rate * deflator (2004-2010)
Facility-wide Asphalt Roads	528	SF	\$1.35	\$712		4,224.0 SF div by	8 units =	528.0 SF			DEC 2004 rate * deflator (2004-2010)
Subt - Road Maint/Replacement				\$1,514		road maintenance					
(Subt: Assemb PCC-2.18 thru 2.18)				\$1,514	\$1,514	SLF 7 road mainten	ance & replacement				

Total Non-Super hours

174.5

#### PCC-2: SLF 7

Basic Closure Activities: Direct Costs	Estimated Quantity		Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	n and Quantities for In	house Estimate			In-house Pricing References
PCC-2.19 PPE Use/H&S Planning					Level C @ 10%; Mc	d Level C @ 15%; Level	D @ 75% for tot non-su	pv hrs for all tasks; HASP @ 2	.5% of non-supv hrs	
PPE Usage - Level D	16.4	days	\$0.00	\$0	\$0 174.5 hours @	8 hr/day =	21.8 days @	75% "D" days =	16.4 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
PE Usage - Mod Level C	3.3	days	\$9.00	\$30	\$30 174.5 hours @	8 hr/day =	21.8 days @	15% "C" days =	3.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PPE Usage - Level C	2.1	days	\$25.00	\$53	\$53 174.5 hours @	8 hr/day =	21.8 days @	10% "C" days =	2.1 days	10% of non-supv hrs in Level C (used facility price: \$25/day)
Health & Safety Officer	4.4	hours	\$75.00	\$330	\$330 174.5 hours @	2.5% hr/hr =	4.4 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$412	\$412					
PCC-2.20 Supervision										
oreman	0	hours	\$65.00	\$0	\$0 Included in PCC-2.7	a AWTS Operation				loaded labor rate: loaded labor rate 2011 3rd party quote
ite Project Manager	0	hours	\$75.00	\$0	\$0 Included in Gen'l C	Contractor G&A/Home C	Office indirect costs			loaded labor rate: loaded labor rate 2011 3rd party quote
ite i roject ivianagei				\$0	ŚO					
Subtotal - Supervision				Şυ	70					

Note 2: A leachate transportation cost has been added for SLF 7 to account for present practice of completing treatment and disposal at an HW facility in Vickery, Ohio. Cost of treatment is assumed to be the same as on-site treatment costs.

PCC-2: SLF 7				
Total Cost Summary				
		1	1	
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	<b>,</b>
		Period	Care	<b>,</b>
			Care	· · · · · · · · · · · · · · · · · · ·
Direct Costs		\$184,342	\$179,711	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$5,530		Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$7,374		5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$1,843	\$1,797.11	For post-closure, design costs minimal and included in Assb 2.20. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$1,843	\$1,797.11	For post-closure, design costs minimal and included in Assb 2.20. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$11,060	\$10,783	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$27,651	\$26,957	
Subtotal - Direct/Indirect Costs		\$211,993	\$206,668	
Phys Courtin course	15.00%	¢24.700	624.000	December 47% and in the second control of th
Plus Contingency	15.00%	\$31,799	\$31,000	DEC uses 15% applied to total cost
Total - PCC-2: SLF 7		\$243,792	\$237,668	
		7=10,10=	4=0.7000	

SLF 7 Years of Post Closure 27 Post Closure Years Remaining 3

Post Closure Costs Remaining Years	\$731,375
Post Closure Costs 30-Years	\$7,313,752

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Basis of Production and Quantities for In-house Estimate	In-house Pricing References			
LF 10 Parameters - Area						6.9 acres = 33333 SY = 300000 SF = 300 MSF 31680 LF (6 Mi.) = total est'd	perimeter fencing for eight (8) SLFs
SLF 10 Parameters - Fencing						3960 LF = portion of perimet	
LF 10 Years of Post Closure	Closure	1987	Years Since C	Closure 24		6	
PCC-3.1 Annual Visual Inspections						make visual inspections and log results; two persons required	
Post-Closure						Post-Closure Frequencies according to Page 11 of Site-Wide Post-Closure Plan	
echnician - Landfill	6.8	hours	\$38.00	\$258		2 hrs/insp x 1.7 insp/year x 2 per crew = 6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Landfill Leachate Syst	6.8	hours	\$38.00	\$258		2 hrs/insp x 1.7 insp/year x 2 per crew = 6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.5	hours	\$38.00	\$57		3 hrs/insp x 2.0 insp/year x 2 per crew/ 8 facility units = 1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	7.2	hours	\$38.00	\$274		2 hrs/insp x 1.8 insp/year x 2 per crew = 7.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0		included above	this activity s/b included with annual storm water inspect'ns
ubtotal - Annual Inspections Post-Cls			,	\$847		SLF 10 post-closure inspections	, , , , , , , , , , , , , , , , , , , ,
erpetual Care			1	· ·		Perpetual Care Frequencies according to Page 11 of Site-Wide Post-Closure Plan	
echnician - Landfill	4.0	hours	\$38.00	\$0	\$152	2 hrs/insp x 1.0 insp/year x 2 per crew = 4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Landfill Leachate Syst	4.0	hours	\$38.00	\$0		2 hrs/insp x 1.0 insp/year x 2 per crew = 4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.0	hours	\$38.00	\$0		4 hrs/insp x 1.0 insp/year x 2 per crew/ 8 facility units = 1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	4.2	hours	\$38.00	\$0		2 hrs/insp x 1.04 insp/year x 2 per crew = 4.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0		included above	this activity s/b included with annual storm water inspect'ns
ubtotal - Annual Inspections Perp-Care				\$0		SLF 10 perpetual care inspections	
Subt: Assemb PCC-3.1 thru 3.1)				\$847		SLF 10 visual inspections	
PCC-3.2 Perimeter Fence Maint.						one-eighth of total perimeter fencing allocated per SLF unit; 2% annual replacement projected	
eplacement of Fencing	79.2	LF	\$20.00	\$1,584		31680 LF div by 8 units x 2% per year = 79.2 LF	Site Experience 2010 Rate
ubt - Perimeter Fence Maint.			1	\$1,584		SLF 10 share of perimeter fence inspection & replacement	
Subt: Assemb PCC-3.2 thru 3.2)				\$1,584	\$1,584	SLF 10 share of perimeter fence inspection & replacement: post-closure & perpetual care frequency are equal	
CC-3.3 Groundwater Monitoring						sampling crew composed of two technicians; 8 monitoring wells (7 for unit + 1 upgradient)	
Nonit'g Events & Samples/Event						0.0 quart'ly + 16.0 semi-ann + 0.0 b-ann'l x 1.05 each = 16.8 samp	includes 5% QA sampling
st-Closure							
echnician	33.6	hours	\$38.00	\$1,277	\$0	16.8 samps @ 1.0 hrs/samp x 2 per crew = 33.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies	16.8	samp	\$25.00	\$420	\$0	16.8 samples	bottles, shipping supplies
OCs .	16.8	samp	\$105.00	\$1,764	\$0	16.8 samples	Average of three quotes
ubt - GW Monitoring				\$3,461	\$0	post closure groundwater monitoring	
Nonit'g Events & Samples/Event						8.0 wells @ sample/5 years 1.05 each = 1.7 samp/yr	
erpetual Care						Perpetual care groundwater monitoring once every five years	
echnician		hours	\$38.00	\$0		1.7 samps @ 1.0 hrs/samp x 2 per crew = 3.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies	1.7		\$25.00	\$0		1.7 samples	bottles, shipping supplies
/OCs	1.7	samp	\$105.00	\$0	\$179	1.7 samples	Average of three quotes
ubt - GW Monitoring		<u> </u>		\$0		perpetual care groundwater monitoring	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price		2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	n and Quantities for In-house	e Estimate			In-house Pricing References
PCC-3.4 Outfalls 002,003,004 SPDES Mon	1					production rate = 1	hours nor cample for a one n	orcon crows oach woar	of monitoring during closur	2	T
Weekly Sampling Events						12 months =	hours per sample for a one-p 52 weeks @	3 outfalls @	1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician	20	hours	\$38.00	\$1,482		156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	sampling & analysis according to 3PDE3 Permit
Pickup Truck		hours	\$10.45	\$408		39.0 hours	2.0 III 5/ Sallip =	312.0 Hours @	1 units/crew/o units -	39.0 110013	
Sampling Equipment	39		\$5.00	\$195		156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	samplers, meters, etc.
Sampling Supplies	19.5		\$5.00	\$98		19.5 samples	2.0 ms/samp =	312.0 Hours @	1 units/crew/8 units -	39.0 110013	bottles, shipping supplies
nH		samp	\$10.67	\$208		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Specific Conductance	19.5		\$13.33	\$260		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Total Suspended Solids (TSS)	16.2		\$13.33	\$216		2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @	52 weeks =	•	weekly: Average of three quotes
Total Dissolved solids	16.2		\$15.00	\$243		2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @	52 weeks =		weekly: Average of three quotes
Settleable Solids	76.1		\$13.33	\$1,015		3 outfalls @		52 weeks =	608.4 samples/8 units	76.1 samples	daily during flow assume 3.9/week: Average of three quotes
BOD-5	4.5		\$31.67	\$1,013		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Dissolved Oxygen	4.5	r	\$17.50	\$79		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Ammonia (NH3)	4.5	p	\$22.67	\$102		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
VOCs (624)	9.5	samp	\$105.00	\$945		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Oil & Grease (1631)	9	samp	\$40.00	\$360		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Copper	45	samp	\$17.67	\$80		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Zinc	4.5		\$17.67	\$80		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Phenols	4.5	p	\$26.67	\$120		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33	\$2,600		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
2-Chloroethyl vinyl ether		samp	\$86.67	\$0		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane	9	samp	\$75.00	\$675		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Methylene chloride	0	samp	\$75.00	\$0		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Shipping		samp	\$5.00	\$98	\$98						
Subt - SPDES Outfall Sampling & Analysis			70.00	\$9,403		three outfalls requ	iring weekly sampling & anal	ysis for each year during	g post-closure		
PCC-3.4a Discharge Monitoring Report	2	la accora	6430.00	6200			Monitoring Reports	24.0 h 0	dia ha O andre	2.0.5	leaded become to be dead become a 2011 2nd months when
Engineer (Report)	3	hours	\$130.00 \$45.00	\$390 \$270		12 months @ 12 months @	2 hrs/event = 4 hrs/event =	24.0 hours @ 48.0 hours @	div by 8 units =	3.0 hours 6.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical	ь	hours	\$45.00	\$270 <b>\$660</b>			,		div by 8 units =	6.0 nours	
Subt - Discharge Monitoring Report (Subt: Assemb PCC-3.3 thru 3.4a)				\$13.524			Permit required Discharge Mer & stormwater monitoring of				
Subt. Assettib FCC-5.5 till a 5.4a)				\$13,524	\$10,414	3Li 10 groundwate	er & stormwater monitoring to	ictivities			<u> </u>
PCC-3.5 Landfill Cover Maint.			I								
Replacement of Cover	0.069	acre	\$20,973.33	\$1,447	\$1,447	6.9 acre @	1.0% per year =	0.069 acres/yr			unit price based upon vegetation, topsoil, from RMU-1,
Subt - Landfill Cover Maint.				\$1,447	\$1,447	SLF 10 upper cap r	naintenance and replacement	t			Assemblies 14.17 thru 14.18
PCC-3.6 Mowing/Grooming											
Mowing	300.0	MSF	\$3.21	\$964	\$964	300.0 MSF @	1.0 per year =	300.0 MSF			DEC 2004 rate * deflator (2004-2010)
Fertilizing	60.0	MSF	\$3.82	\$229	\$229	300.0 MSF @	1.0 per	5.0 years =	60.0 MSF		DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming				\$1,193	\$1,193	SLF 10 mowing and	d fertilizing				
(Subt: Assemb PCC-3.5 thru 3.6)				\$2,640	\$2,640	SLF 10 cap mainte	nance activities: post-closure	& perpetual care freque	ency are equal		

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price		2011 CWM Extended Price - Annual B Cost Perpetual Care	Basis of Production an	d Quantities for In-hous	se Estimate			In-house Pricing References
PCC-3.7 Leachate System Mgmt		1	ı	1	0	noration time - 9 hour	rs/day x 5 days/week x 5	0 wooks/voor = 2 000 l	hours		
Leachate Treatment - Post Closure	59774.2	gal	\$0.2195	\$13,118			l annual leachate volum	., .			
Leachate Treatment - Perpetual Care	59774.2	0.	\$0.2195	\$0		•	annual leachate volume	• '			
Leach Treat Syst. Capital Repl Cost		LS	\$17,642.00				r life = \$123,495/yr div b				DEC estimate of AWTS capital replacement costs @ 25 yrs
Laborer		hours	\$39.00	\$936		hrs/mon x	12 mon/year =	24 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Technician		hours	\$38.00			hrs/mon x	12 mon/year =	24 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Electrical Costs - Pumps	64.9	KWH	\$0.086			58.0 hr/yr x	1.5 hp/hr x	0.746 kw/hp =	64.9 KWH/yr		2004 DEC Rate * Implicit Deflator
Replacement of Main Pump T-110	1	pump	\$2,456.00	\$2,456	\$2,456 1	pump per 5 years =	0.2 pumps		•		250 gpm, 5 hp pump, Site Experience
Replacement of Pumps	1	pump	\$1,382.00	\$1,382	\$1,382 5	pumps x	20.0% pu/yr =	1.0 pumps			1.5 hp submersible pump, site experience
Replacement of Pump Dischg Hose	1	hose	\$211.54	\$212	\$212 5	pumps x	20.0% per pump =	1.0 hoses			DEC 2004 rate * deflator (2004-2010)
Disposal of Pumps/Hoses	10	CF	\$12.45	\$125	\$125 1	pu/hos @	10 CF/pump =	10 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replacement of Piping - 2"/4"	11	LF	\$53.25	\$586	\$586 1	,100 LF @	1.0% per year =	11.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 2"/4"	3.6	CF	\$12.45		\$45 1	1.0 LF @	0.33 CF/LF =	3.6 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 4"/8" & 6"/10"	1.1	LF	\$73.50	\$81	\$81 1	10 LF @	1.0% per year =	1.1 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 4"/8" & 6"/10"	0.6	CF	\$12.45			.1 LF @	0.50 CF/LF =	0.6 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt Leachate Coll Syst Mgmt				\$37,507	<b>\$37,507</b> a	nnual O&M costs plus	capital replacement of t	reatment system, pum	ps, and piping		
PCC-3.7a AWTS Operation						hift operation of the A	WTS for 12 months				no DEC estimate for this activity: DEC Estimate included in unit rate
Material handler/basic labor	274.3	hours	\$39.00		\$10,698 24		8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	548.6	hours	\$39.00	. ,	\$21,395 2		8 hours/day =	1920.0 hours @	2 units/crew/7 units =	548.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	834.3	hours	\$38.00		\$31,703 30		8 hours/day =	2920.0 hours @	2 units/crew/7 units =	834.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	274.3	hours	\$38.00		\$10,423 24		8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	274.3	hours	\$65.00	\$17,830	\$17,830 24		8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - AWTS Operation				\$92,049	\$92,049 A	WTS Operation - oper	ation of AWTS for twelve	e (12) months during p	ost closure or perpetual care	e of the site	
PCC-3.7b Site Waters Treatment											
Leachate Treatment - Post Closure	201193.00	Ü	\$0.0313				of past 5 years/ 7 units =				unit price derived from AWTS model
Leachate Treatment - Perpetual Care	201193.00	0.	\$0.0313	\$0		, , ,	of past 5 years/ 7 units =	, ,			unit price derived from AWTS model
Tank Trailer (5,500 gals) Collect	121.90	hours	\$6.31			,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Road Tractor (4 x 2, 30 ton) Transport	18.30	hours	\$32.45			,408,349 gals @	5500 gals/load =	256.1 loads @	0.5 hrs/trip =	128 hrs/7 units = 18.3 hrs	RSM/HC p. 472 (line item 01 54 33 40 7410)
Tank Trailer (5,500 gals) Transport	121.90	hours	\$6.31 \$6.31			,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Fill T-100 Subt - Site Waters Treatment	121.90	hours	\$6.31	\$769 <b>\$9,199</b>		,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew = e & perpetual care frequency	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)  Labor included in PCC-1.7a
Supt - Site Waters Healffielit				\$9,199	\$2,123 31	LI -10 SHUTE OJ UHHUAT	one waters collection &	realment, post-ciosure	: « регрешинсите <u>ј</u> тециепсу	ure equui	Labor included III PCC-1.7d
PCC-3.7c Batch Tank Qualification			4	4			nks prior to discharge to				To Meet LDR requirements
VOCs (624)		samp	\$105.00			tanks @	1 samp/tank/month @		24 samples/7 units =	3.4 samples	ill A Cil
Semi-volatile organics (625)		samp	\$208.33	\$715			1 samp/tank/month @		24 samples/7 units =	3.4 samples	monthly: Average of three quotes
PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33				1 samp/tank/month @		24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Priority Pollutant Metals (200.7)		samp samp	\$188.00			tanks @	1 samp/tank/month @		24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Mercury (245.1) Sulfides		samp	\$25.00 \$25.00	\$86 \$86		tanks @ tanks @	1 samp/tank/month @		24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Cyanide		samp	\$35.00			tanks @	1 samp/tank/month @ 1 samp/tank/month @		24 samples/7 units = 24 samples/7 units =	3.4 samples 3.4 samples	monthly: Average of three quotes monthly: Average of three quotes
Subt - Batch Tank Qualification	3.4	samp	\$55.00	\$2,465				ı yeai -	24 samples/ / units =	5.4 Samples	
Subt - Dattil Talik Qualification		<del>                                     </del>	<del>                                     </del>	\$2,465	<b>\$2,405</b> SI	FI -TO 211916 OI 91111091	batch tank qualification				Samples collected by lab technician

Basic Closure Activities: Direct Costs	Estimated Quantity	Basis of Production and Quantities for In-house Estimate In-house Pricing References				
	1					
PCC-3.7d Pond Sampling & Analysis (Outfall 001)						production rate = 2.0 hours per composite sample for a three-person crew  SPDES PreQual Sampling of Outfall 001 prior to discharge
Batch Sampling Events	2.6	la accora	620.00	ćoo	ćo	1 events @ 3 samp/evnt= 3 samples sampling & analysis prior to pond discharge
echnician ampling Equipment		hours hours	\$38.00 \$25.00	\$99 \$23	\$99	
1 0 1 1		samp	\$25.00	\$13		23 3 samps @ 2.0 hrs/samp = 6.0 hours @ 1 units/crew = 6.0 hrs/ 7 units = 0.9 hrs boat, samplers, meters, etc.  13 3 samples/ 7 units = 0.5 samples bottles, shipping supplies
Sampling Supplies		samp	\$25.00	\$13		\$5 3 samples/ 7 units = 0.5 samples analytical price: average of three quotes
pecific Conductance		samp	\$10.67	\$5		57 3 samples/ 7 units = 0.5 samples analytical price: average of three quotes analytical price: average of three quotes
emperature		samp	\$13.33	\$1		50 3 samples obtained using field equipment Obtained using field equipment
rissolved Oxygen		samp	-	\$0		50 3 samples obtained using field equipment Obtained using field equipment Obtained using field equipment
otal Dissolved solids (TDS)		samp	\$15.00			\$8 3 samples obtained using field equipment analytical price: average of three quotes
DVS (total dissolved volatile solids)		samp	\$15.00	\$12		12 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
lkalinity as CaCO3		samp	\$23.33 \$15.33			\$8   3 samples/ 7 units = 0.5 samples analytical price: average of three quotes analytical price: average of three quotes
OC		samp	\$15.33			16 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
Ca/Mg Hardness (200.7)		samp	\$31.67			12 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
otal Suspended Solids (TSS)		samp	\$13.33			57 3 samples/ 7 units = 0.5 samples analytical price: average of three quotes analytical price: average of three quotes
ettleable Solids		samp	\$13.33			57 3 samples/ 7 units = 0.5 samples analytical price: average of three quotes analytical price: average of three quotes
mmonia (NH3)		samp	\$13.33	\$11		11 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
hosphorous		samp	\$20.00			10 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
ON (TKN-NH3)		samp	\$20.00			21 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
yanide		samp	\$35.00			18 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
ulfates		samp	\$21.00			11 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes  analytical price: average of three quotes
ulfides		samp	\$25.00			13 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
urfactants (MBAS)		samp	\$28.33			14 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
OD-5		samp	\$30.00			15 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
luoride		samp	\$30.00	\$15		10 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
hlorine		samp	\$19.33	\$10		10   3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
Residual Chlorine		samp	\$15.00			88 3 samples/ 7 units = 0.5 samples analytical price: average of three quotes analytical price: average of three quotes
NO2		samp	\$21.00			11 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes  analytical price: average of three quotes
103		samp	\$19.33	\$10		10 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
OCs (624)		samp	\$19.55	\$53		53 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes  analytical price: average of three quotes
emi-volatile organics (625)		samp	\$208.33	\$104		24 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes  analytical price: average of three quotes
resticides/PCBs (608) (MDL 65 PPT (ng/l))		samp	\$208.33	\$104		74 3 samples/ 7 units = 0.5 samples analytical price: average of three quotes analytical price: average of three quotes
vil & Grease (1631)		samp	\$133.33	\$11		11 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
otal Phenols		samp	\$21.67	\$11		13 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
riority Pollutant Metals (200.7) *		samp	\$188.00			24 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
fercury (245.1)		samp	\$25.00			13 3 samples/ 7 units = 0.5 samples  analytical price: average of three quotes analytical price: average of three quotes
lercury (245.1)		samp	\$25.00			56 3 samples/ 7 units = 0.5 samples analytical price: average of three quotes analytical price: average of three quotes
cute Toxicity/Bioassy		samp	\$3,800.00			70 1 sample/ 7 units = 0.15 samples  One quote: actual cost for 2010
ubt - Pond Sampling & Analysis	0.15	запір	00.000,60	\$1,353		33 one pond discharge (batch) requiring sampling & analysis prior to discharge
PCC-3.7e Pond S&A Certification & Report						one event per year for divers to check discharge pipe; one predischarge qualification report
ivers (Sr. Technicians)	0.0	hours	\$0.00	\$0	Ś	Sollincluded in underwater inspection below
CBA Gear (2 units)	0.0	hours	\$0.00	\$0		So Included in underwater inspection below
aborer (Surface Support)	0.0		\$0.00			50 Included in underwater inspection below
nderwater Inspection		each	\$4,000.00			30 \$4,000 per event @ 1 event per year/ 7 units = 0.15 events Based on 2010 site rate of \$3,500
Engineer (Report)		hours	\$130.00			11 1 events @ 40 hrs/event = 40.0 hours @ 1 units/crew = 40.0 hours/7 units = 5.7 Eng Rate: rate 2011 3rd party quote
0 (	J.,	,	7-23.00	\$1,341		11 diver(s) to check discharge pipe; also engineer's predischarge qualification report  Fac Pond 8 out of service empty

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price		2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	and Quantities for In-ho	use Estimate			In-house Pricing References
PCC-3.7f Empty (Pump) FAC Pond to Outfall 001						prod'n rato - 960 0	00 gals/day = 60 000 gals/	hr = 1 000 gals/min par f	acility est @ 16 hrs/day O&I	M	Treated wastewater from all 7 units
FAC Pond 1/2 Inventory in Gallons	2750618.0	aals	n/a	I		45.8 total hours	reg'd	to pump	acility est @ 10 ilis/day Oki	VI	& site waters
Labor to pump/discharge	2730010.0	day hrs	n/a	\$0		Included in PCC-3.7		το ραπρ			& site waters
Fech/Sampler (day shift only)		day hrs	\$38.00	\$0		Included in PCC-3.7					
Settleable Solids	1.6	samp	\$13.33	\$21			mple per 4.0 hours = 11.5	samples /7 units = 1.6 sa	amples		analytical price: average of three quotes
Dissolved Oxygen		samp	-	\$0			mple per 80.0 hours = 1.0		Field Measurement		analytical price: average of three quotes
Sulfide (total)		samp	\$25.00	\$25			mple per 80.0 hours = 1.0				analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)	6.5	total hrs	\$12.34	\$80		45.8 tot hrs @	100% total time =	45.8 hours @	1 units/crew =	45.8 hrs/ 7 units = 6.5 hrs	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)	19628.0	foot-hrs	\$0.0110	\$216		45.8 tot hrs @	100% total time =	45.8 hours @	3000 LF/crew =	137400 ft-hrs/7 units = 19,628	RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2				\$342			f FAC Pond to discharge p	ipe to Niagara River (3,0		,	
(Subt: Assemb PCC-3.7 thru 3.7f)				\$144,256						a perpetual care frequency are equal	
											•
PCC-3.8 Empty Tank T-109											
Laborer	0	Hour	\$39.00	\$0	ŚŊ	Labor included in th	ird party operation of AW	/TS			
Pumping Equipment		Hour	\$0.00	\$0		Existing equipment					
Tank Trailer (5,500 gals) Post Closure Period		Hour	\$6.31	\$228		59,774.2 gals @	1650 gals/hr =	36.2 per crew =	1.0 unit/crew =	36.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period		Hour	\$6.31	\$0		59,774.2 gals @	1650 gals/hr =	36.2 per crew =	1.0 unit/crew =	36.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank T-109			,	\$228		, , ,	from Tank T-109 for trans	•			, , , ,
. ,					·			•			
PCC-3.9 Transp't Leachate Onsite						production rate = 0.	5 hours for on-site transp	ort			
Road Tractor (4 x 2, 30 ton) Post Closure Period	5.4	Hour	\$32.45	\$175	\$175	59,774.2 gals @	5500 gals/load =	10.8 loads @	0.5 hrs/trip =	5.4 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Road Tractor (4 x 2, 30 ton) Perpetual Care Period	5.4	Hour	\$32.45	\$175	\$175	59,774.2 gals @	5500 gals/load =	10.8 loads @	0.5 hrs/trip =	5.4 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0	Hour	\$45.00	\$0	\$0	Labor included in th	ird party operation of AW	'TS			
Tank Trailer (5,500 gals) Post Closure Period	5.4	Hour	\$6.31	\$34		59,774.2 gals @	5500 gals/load =	10.8 loads @	0.5 hrs/trip =	5.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period	5.4		\$6.31	\$0		59,774.2 gals @	5500 gals/load =	10.8 loads @	0.5 hrs/trip =	5.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transp Leachate Onsite				\$385	\$385	onsite transport of	leachate from Tank T-109	to Tank T-158			
200 2 10 5 11 7 1 7 1 7 1							CEO 1 1 DC14/1	10. 0.474 (20.40.0404)			
PCC-3.10 Fill Tank T-158			<b>.</b>	do	40		650 gals per hour; RSM/U				
Laborer		Hour	\$39.00	\$0 \$0			ird party operation of AW	115			
Pumping Equipment Took Trailor (5, 500 gale), Root Clasure Paried		Hour	\$0.00 \$6.31	\$0 \$228		Existing equipment		26.2 man ana –	1 0it/ono –	26.2 haum	DCM/UC = 472/line item 01 F4 22 40 (000)
Tank Trailer (5,500 gals) Post Closure Period		Hour Hour	\$6.31	\$228 \$0		59,774.2 gals @ 59,774.2 gals @	1650 gals/hr = 1650 gals/hr =	36.2 per crew =	1.0 unit/crew = 1.0 unit/crew =	36.2 hours 36.2 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period Subt - Fill Tank T-158	36.2	nour	\$0.31	\$0 <b>\$228</b>			taken from Tank T-109 int	36.2 per crew =	1.0 unit/crew =	30.2 110015	RSM/HC p. 472 (line item 01 54 33 40 6900)
(Subt: Assemb PCC-3.8 thru 3.10)				\$228 \$841			nual leachate transport co				
ושטני השכוווט דככישה נוווע ש.בען				3041	<i>3</i> 041	2FI TO SHALE OF ALL	iuui leaciiate transport co	313			
											_
PCC-3.11 Tank Assessments									five years by 1 PE + 2 Techs		
Internal & External Inspections			6430.55	4	A	16 tanks @	5 yr inspect =	3.2 tnks/yr @	7 areas =	0.5 tnks/yr	
Engineer - Inspection		Hour	\$130.00	\$481		0.5 tanks/yr x	8 hrs/tnk x	1.0 per crew =	3.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$277		0.5 tanks/yr x	8 hrs/tnk x	2.0 per crew =	7.3 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.8	Hour	\$130.00	\$234 <b>\$992</b>		0.5 tanks/yr x inspection of 16 tai	4 hrs/tnk x	1.0 per crew =	1.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments											

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	and Quantities for In-hou	se Estimate	In-house Pricing References		
PCC-3.12 Tank Assessments			1 1			thirty (32) tanks regu	uiring only external inspec	tions once every five ve	ars by 1 PE		
External Only Inspections			1			30 tanks @	5 yr inspect =	6.0 tnks/yr @	7 areas =	0.9 tnks/yr	
Engineer - Inspection	3.4	Hour	\$130.00	\$442	\$442	0.9 tanks/yr x	4 hrs/tnk x	1.0 per crew =	3.4 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$0		0.9 tanks/yr x	4 hrs/tnk x	0.0 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.7	Hour	\$130.00	\$221	\$221	0.9 tanks/yr x	2 hrs/tnk x	1.0 per crew =	1.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments				\$663		inspection of 32 tan	ks				
(Subt: Assemb PCC-3.11 thru 3.12)				\$1,655	\$1,655	SLF 10 share of ann	ual tank assessment costs.	: post-closure & perpet	ual care frequency are equal		
PCC-3.13 Replace Mon Well Pump											
Replace Mon Well Pumps	0.2	pump	\$900.00	\$180	\$180	8 pumps @	2.5% per year =	0.20 pumps/yr			Site experience third party costs
echnician		Hour	\$38.00	\$76		2 hours per year	p - /				third party labor costs
Disposal of Pumps		CF	\$12.45	\$2	•	0.20 pumps @	1.0 CF/pump =	0.20 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Concrete Pads		pad	\$131.50	\$26		8 pads @	2.5% per year =	0.20 pads/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Well Surface Concrete	0.4	CF	\$12.45	\$5		0.20 pads @	2.0 CF/pad =	0.40 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Covers		each	\$371.63	\$74		8 covers @	2.5% per year =	0.20 covers/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Mon Well Covers	0.1	CF	\$12.45	\$1	\$1	0.20 covers @	0.5 CF/cover =	0.10 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Replace Mon Well Pumps				\$365			np maintenance and repla	cement			
(Subt: Assemb PCC-3.13 thru 3.13)				\$365		SLF 10 mon well pur			arnatual cara fraguancy ara	agual	
······································				<b>7303</b>	3303	52. 10 men wen pur	пр тателансе & геріасо	ement: post-ciosure & p	erpetual care frequency are	equui	
PCC-3.14 Drainage Ditch Repair				,303	,303	ditches estimated to 2200 LF		ement: post-ciosure & p	erpetuur cure frequency ure	equui	drainage ditches specific to SLF 10 unit
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches				3303	,330 <i>3</i>	ditches estimated to		2825 LF	erpetual care frequency are	equui	drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches	0.012	acre	\$5,698.00	\$68		ditches estimated to 2200 <i>LF</i>	be 10 feet in width		1.0% per year =	0.012 acres	, , ,
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair		acre SY	\$5,698.00 \$44.30			ditches estimated to 2200 LF 22600 LF div by 5,025 LF x	be 10 feet in width  8 units =	2825 LF			drainage ditches in non-specific areas of facility
PCC-3.14 Drainage Ditch Repair  SLF 10 Drainage Ditches  Facility-wide Drainage Ditches  Drainage Ditch Repair  Rip-Rap Downchute Channel Repair				\$68	\$68 \$886	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x	be 10 feet in width  8 units =  10 ft/LF =  15 FT/LF @	2825 LF 1.154 acres @	1.0% per year =	0.012 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair				\$68	\$68 \$886	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ ie ditch repair	2825 LF 1.154 acres @ 9.0 SF/SY =	1.0% per year = 5.0% per year =	0.012 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches Orainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair				\$68	\$68 \$886	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to	be 10 feet in width  8 units =  10 ft/LF =  15 FT/LF @	2825 LF 1.154 acres @ 9.0 SF/SY =	1.0% per year = 5.0% per year =	0.012 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
PCC-3.14 Drainage Ditch Repair  SLF 10 Drainage Ditches  Facility-wide Drainage Ditches  Drainage Ditch Repair  Rip-Rap Downchute Channel Repair  Subt - Drainage Ditch Repair  PCC-3.15 Drainage Ditch Cleaning  SLF 10 Drainage Ditches				\$68	\$68 \$886	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 1e ditch repair  be 10 feet wide; sedimen	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch	1.0% per year = 5.0% per year =	0.012 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-3.15 Drainage Ditch Cleaning SLF 10 Drainage Ditches Facility-wide Drainage Ditches	20		\$44.30	\$68 \$886 <b>\$954</b>	\$68 \$886 <b>\$954</b>	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ ie ditch repair	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch	1.0% per year = 5.0% per year = nes deep.	0.012 acres 20.0 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility
PCC-3.14 Drainage Ditch Repair  SLF 10 Drainage Ditches  Focility-wide Drainage Ditches  Drainage Ditch Repair  Rip-Rap Downchute Channel Repair  Subt - Drainage Ditch Repair  PCC-3.15 Drainage Ditch Cleaning  SLF 10 Drainage Ditches  Facility-wide Drainage Ditches  Drainage Ditch Sediment Cleaning	6.2	SY		\$68	\$68 \$886 <b>\$954</b>	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 16 ditch repair  be 10 feet wide; sedimen  8 units =	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch	1.0% per year = 5.0% per year =	0.012 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-3.15 Drainage Ditch Cleaning SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment	6.2	SY	\$44.30	\$68 \$886 <b>\$954</b> \$15 \$15	\$68 \$886 <b>\$954</b> \$15 \$15	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x 8.4 tons @	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ re ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") =	1.0% per year = 5.0% per year = nes deep.	0.012 acres 20.0 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair Subt - Drainage Ditch Cleaning SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment	6.2	SY  CY miles	\$44.30 \$2.38 \$3.25	\$68 \$886 <b>\$954</b>	\$68 \$886 \$954 \$15 \$16 \$294	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ te ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY =	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") = 0.42 loads @	1.0% per year = 5.0% per year = nes deep.	0.012 acres 20.0 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11)
PCC-3.14 Drainage Ditch Repair  SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-3.15 Drainage Ditch Cleaning SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning Facility-Wide Drainage Ditches Drainage Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning	6.2	SY  CY miles	\$44.30 \$2.38 \$3.25	\$68 \$886 \$954 \$15 \$16 \$294	\$68 \$886 \$954 \$15 \$16 \$294	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x 8.4 tons @ 6.2 CY @ stormwater drainag sediment estimated	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 16 ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 11.25 ton/CY = 12 ditch cleaning  15 ton/CY = 16 ditch cleaning  16 be 4 inches deep.	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") = 0.42 loads @ 8.4 tons	1.0% per year = 5.0% per year = nes deep.	0.012 acres 20.0 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
PCC-3.14 Drainage Ditch Repair  SLF 10 Drainage Ditches  Facility-wide Drainage Ditches  Drainage Ditch Repair  Rip-Rap Downchute Channel Repair  Subt - Drainage Ditch Repair  PCC-3.15 Drainage Ditch Cleaning  SLF 10 Drainage Ditches  Facility-wide Drainage Ditches  Drainage Ditch Sediment Cleaning  Transportation of Ditch Sediment  Disposal of Ditch Sediment  Subt - Drainage Ditch Cleaning  PCC-3.16 Basin Cleaning  Basin No. 1	6.2	SY  CY miles	\$44.30 \$2.38 \$3.25	\$68 \$886 \$954 \$15 \$16 \$294	\$68 \$886 \$954 \$15 \$16 \$294	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x 8.4 tons @ 6.2 CY @ stormwater drainag sediment estimated 140625 SF div by	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 16 ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 10 ditch cleaning  to be 4 inches deep. 8 units =	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") = 0.42 loads @ 8.4 tons	1.0% per year = 5.0% per year = nes deep.	0.012 acres 20.0 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
PCC-3.14 Drainage Ditch Repair SEF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair Facility-wide Drainage Ditch Repair SEF 10 Drainage Ditch Cleaning SEF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Fransportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning Facility-Wide Drainage Ditch Cleaning Fransportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning FCC-3.16 Basin Cleaning Basin No. 1 Basin No. 2	6.2 5 8.4	CY miles	\$2.38 \$3.25 \$35.00	\$68 \$886 \$954 \$15 \$16 \$294 \$325	\$68 \$886 \$954 \$15 \$16 \$294 \$325	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x 8.4 tons @ 6.2 CY @ stormwater drainag sediment estimated 140625 SF div by 150000 SF div by	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @  re ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = re ditch cleaning  to be 4 inches deep. 8 units = 8 units = 8 units =	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") = 0.42 loads @ 8.4 tons 17578 SF 18750 SF	1.0% per year = 5.0% per year =  nes deep.  619.8 CY @ 1%/yr = 5 miles per load =	0.012 acres 20.0 SY 6.2 CY 5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13) unit price based upon FAC Ponds 1/2 disposal (6.14)
PCC-3.14 Drainage Ditch Repair SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-3.15 Drainage Ditch Cleaning SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-3.16 Basin Cleaning Basin No. 1 Basin No. 2 Basin Sediment Cleaning	6.2 5 8.4	CY miles ton	\$2.38 \$3.25 \$35.00 \$2.38	\$68 \$886 \$954 \$15 \$16 \$294 \$325	\$68 \$886 \$954 \$15 \$16 \$294 \$325	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x 8.4 tons @ 6.2 CY @ stormwater drainag sediment estimated 140625 SF div by 150000 SF div by 36,328 SF x	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 16 ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 16 ditch cleaning  to be 4 inches deep. 8 units = 8 units = 8 units = 0.333 feet (4") =	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") = 0.42 loads @ 8.4 tons 17578 SF 18750 SF 448.0 CY @	1.0% per year = 5.0% per year = 619.8 CY @ 1%/yr = 5 miles per load =	0.012 acres 20.0 SY  6.2 CY 5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 excavation (6.11)
PCC-3.14 Drainage Ditch Repair  SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-3.15 Drainage Ditch Repair  PCC-3.15 Drainage Ditch Cleaning SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-3.16 Basin Cleaning Basin No. 1 Basin No. 2 Basin Sediment Cleaning Transportation of Basin Sediment	6.2 5 8.4 89.6 30.0	CY miles ton CY miles	\$2.38 \$3.25 \$35.00 \$2.38 \$3.25	\$68 \$886 \$954 \$15 \$16 \$294 \$325	\$68 \$886 \$954 \$15 \$16 \$294 \$325	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag  ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x 8.4 tons @ 6.2 CY @ stormwater drainag  sediment estimated to 140625 SF div by 36,328 SF x 121.0 tons @	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 1e ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 1.35 ton/CY = 1.36 ton/CY = 1.37 ton/CY = 1.38 units = 1.38 units = 1.39 ton/CY = 1.30 ton/CY = 1.30 ton/C	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") = 0.42 loads @ 8.4 tons 17578 SF 18750 SF 448.0 CY @ 6.0 loads @	1.0% per year = 5.0% per year =  nes deep.  619.8 CY @ 1%/yr = 5 miles per load =	0.012 acres 20.0 SY 6.2 CY 5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13) unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 excavation (6.13)
PCC-3.14 Drainage Ditch Repair  SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-3.15 Drainage Ditch Cleaning SLF 10 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-3.16 Basin Cleaning Basin No. 1 Basin No. 2 Basin Sediment Cleaning	6.2 5 8.4	CY miles ton CY miles	\$2.38 \$3.25 \$35.00 \$2.38	\$68 \$886 \$954 \$15 \$16 \$294 \$325	\$68 \$886 \$954 \$15 \$16 \$294 \$325 \$213 \$98 \$4,235	ditches estimated to 2200 LF 22600 LF div by 5,025 LF x 240 LF x stormwater drainag ditches estimated to 2200 LF 22600 LF div by 5,025.0 LF x 8.4 tons @ 6.2 CY @ stormwater drainag sediment estimated 140625 SF div by 150000 SF div by 36,328 SF x	be 10 feet in width  8 units = 10 ft/LF = 15 FT/LF @ 1e ditch repair  be 10 feet wide; sedimen  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 1e ditch cleaning to be 4 inches deep. 8 units = 8 units = 8 units = 0.333 feet (4") = 20 tons/load = 1.35 ton/CY =	2825 LF 1.154 acres @ 9.0 SF/SY = t estimated to be 4 inch 2825 LF 0.333 feet (4") = 0.42 loads @ 8.4 tons 17578 SF 18750 SF 448.0 CY @	1.0% per year = 5.0% per year = 619.8 CY @ 1%/yr = 5 miles per load =	0.012 acres 20.0 SY  6.2 CY 5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 10 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 excavation (6.11)

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit Price   Price - Annual   Price - Annual   Basis of Production and Quantities for In-house Estimate									In-house Pricing References
PCC-3.17 Culvert Maint/Replace						avg culvert = 25' (SI	F 10) & 40' (sitewide); vario	ous diameters			
SLF 10 Culverts						7 culverts x	25 feet long =	175 LF			culverts specific to SLF 10 unit
Facility-wide Culverts						20 culverts x	40 feet long =	800 LF div by	8 units =	100 LF	culverts in non-specific areas of facility
Culvert Cleaning - 8" diameter avg	275	16	\$2.14	\$588		275.0 LF	40 Jeet long -	800 LI UIV DY	o units –	100 E	DEC 2004 rate * deflator (2004-2010)
Repl Culvert - 8" diam avg (SLF 10)		LF	\$11.61	\$290		25.0 LF					DEC 2004 rate * deflator (2004-2010)
Repl Culv't - 18" diam avg (sitewide)		LF	\$22.35	\$894		40.0 LF					DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Ditch Excavation	48.8		\$2.33	\$145		65.0 LF x	0.75 CY/LF =	48.8 CY			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Bitch Excavation  Replace Culvert - Bkfill/Compaction	48.8	_	\$3.86	\$145		48.8 CY	U./3 CT/LF =	40.0 (1			DEC 2004 rate * deflator (2004-2010)  DEC 2004 rate * deflator (2004-2010)
Subt - Culvert Maint/Replacement	40.0	Ci	\$3.80	\$2,106		culvert maintenan	co and ronlacoment				DEC 2004 rate deflator (2004-2010)
(Subt: Assemb PCC-3.14 thru 3.17)				\$7,931				ement: nost-closure & ni	erpetual care frequency are	eaual	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				<i>\$7,551</i>	77,551		-9				L
PCC-3.18 Road Maint/Replace						gravel roads = 15 fe	et wide; asphalt roads = 20	feet wide			
SLF 10 Gravel Roads						1800 LF x	15 feet wide =	3000 SY @	5 % per year =	150.0 SY	gravel roads specific to SLF 10 unit
Facility-wide Asphalt Roads						21120 LF x	20 feet wide =	422400 SF @	1% per year =	4224.0 SF	asphalt roads in non-specific areas of facility
SLF 10 Gravel Road Repair	150	SY	\$3.12	\$468	\$468	150.0 SY					DEC 2004 rate * deflator (2004-2010)
Facility-wide Asphalt Roads	528	SF	\$1.35	\$712	\$712	4,224.0 SF div by	8 units =	528.0 SF			DEC 2004 rate * deflator (2004-2010)
Subt - Road Maint/Replacement				\$1,181	\$1,181	road maintenance	and replacement				
(Subt: Assemb PCC-3.18 thru 3.18)				\$1,181	\$1,181	SLF 10 road mainte	enance & replacement				
Total Non-Super hours	161.9										
PCC-3.19 PPE Use/H&S Planning							d Level C @ 15%; Level D @	75% for tot non-supv h	rs for all tasks; HASP @ 2.59	•	
PPE Usage - Level D	15.2	days	\$0.00	\$0		161.9 hours @	8 hr/day =	20.2 days @	75% "D" days =	15.2 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
PPE Usage - Mod Level C	3	days	\$9.00	\$27		161.9 hours @	8 hr/day =	20.2 days @	15% "C" days =	3.0 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PPE Usage - Level C	2	days	\$25.00	\$50		161.9 hours @	8 hr/day =	20.2 days @	10% "C" days =	2.0 days	10% of non-supv hrs in Level C (used facility price: \$25/day)
Health & Safety Officer	4	hours	\$75.00	\$300		161.9 hours @	2.5% hr/hr =	4.0 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$377	\$377						
PCC-3.20 Supervision											
Foreman	0	hours	\$65.00	\$0	\$0	Included in PCC-3.7	a AWTS Operation				loaded labor rate: loaded labor rate 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0			ontractor G&A/Home Offic	e indirect costs			loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Supervision				\$0	\$0						
(Subt: Assemb PCC-3.19 thru 3.20)				\$377	\$377	supervision, health	& safety, and certification				
PCC 3: SLF 10 Direct Cost		Ī		\$175,203	\$171,746						

PCC-3: SLF 10				
Total Cost Summary - Basic Opt.				
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	
		Period	Care	
Direct Costs		\$175,203	\$171,746	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$5,256	\$5,152.39	Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$7,008	\$6,870	5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$1,752	\$1,717.46	For post-closure, design costs minimal and included in Assb 3.20. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$1,752	\$1,717.46	For post-closure, design costs minimal and included in Assb 3.20. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$10,512	\$10,305	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$26,280	\$25,762	
		4204 400	4407.500	
Subtotal - Direct/Indirect Costs		\$201,483	\$197,508	
Plus Contingency	15.00%	\$30,222	\$29,626	DEC uses 15% applied to total cost
			,	··
Total - PCC-3: SLF 10		\$231,706	\$227,134	

Post Closure Years Remaining

5

25

Years Since Closure

\$1,158,528 \$6,951,166 Post Closure Costs Remaining Years Post Closure Costs 30-Years

SLF 10 Years of Post Closure

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price		2011 CWM Extended rice - Annual Basis of Production and Quantities for In-house Estimate ost Perpetual Care	In-house Pricing References
SLF 11 Parameters - Area					6.9 acres = 33333 SY = 300000 SF = 300 MSF 31680 LF (6 Mi.	i.) = total est'd perimeter fencing for eight (8) SLFs
SLF 11 Parameters - Fencing						ion of perimeter fencing for SLF 10
					5550. ps.	
SLF 11 Years of Post Closure	Closure	1992	Years Since Cl	osure	20 Post Closure Years Remaining 10	
PCC-4.1 Annual Visual Inspections					make visual inspections and log results; two persons required	
ost-Closure					Post-Closure Frequencies according to Page 11 of Site-Wide Post-Closure Plan	
Technician - Landfill	6.8	hours	\$38.00	\$258	\$0 2 hrs/insp x 1.7 insp/year x 2 per crew = 6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	6.8	hours	\$38.00	\$258	\$0 2 hrs/insp x 1.7 insp/year x 2 per crew = 6.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.5	hours	\$38.00	\$57	\$0 3 hrs/insp x 2.0 insp/year x 2 per crew/ 8 facility units = 1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	7.2	hours	\$38.00	\$274	\$0 2 hrs/insp x 1.8 insp/year x 2 per crew = 7.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0	\$0 included above	this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Post-Cls				\$847	\$0 SLF 10 post-closure inspections	
erpetual Care					Perpetual Care Frequencies according to Page 11 of Site-Wide Post-Closure Plan	
echnician - Landfill	4.0	hours	\$38.00	\$0	\$152 2 hrs/insp x 1.0 insp/year x 2 per crew = 4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Landfill Leachate Syst	4.0	hours	\$38.00	\$0	\$152 2 hrs/insp x 1.0 insp/year x 2 per crew = 4.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.0	hours	\$38.00	\$0	\$38 4 hrs/insp x 1.0 insp/year x 2 per crew/ 8 facility units = 1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	4.2	hours	\$38.00	\$0	\$160 2 hrs/insp x 1.04 insp/year x 2 per crew = 4.2 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0	\$0 included above	this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Perp-Care			700.00	\$0	\$502 SLF 11 perpetual care inspections	
(Subt: Assemb PCC-4.1 thru 4.1)				\$847	\$502 SLF 11 visual inspections	
· · · · · · · · · · · · · · · · · · ·	<u> </u>	<u>I</u>	<u>'</u>			
PCC-4.2 Perimeter Fence Maint.					one-eighth of total perimeter fencing allocated per SLF unit; 2% annual replacement projected	
Replacement of Fencing	79.2	LF	\$20.00	\$1,584	\$1,584 31680 LF div by 8 units x 2% per year = 79.2 LF	Site Experience 2010 Rate
Subt - Perimeter Fence Maint.				\$1,584	\$1,584 SLF 11 share of perimeter fence inspection & replacement	
Subt: Assemb PCC-4.2 thru 4.2)				\$1,584	\$1,584 SLF 11 share of perimeter fence inspection & replacement: post-closure & perpetual care frequency are equal	
PCC-4.3 Groundwater Monitoring			1		and the second of the stabilities 22 and being a 11 (22 for with 4 annualises)	
· ·					sampling crew composed of two technicians; 23 monitoring wells (22 for unit + 1 upgradient)  0.0 quart'ly + 46.0 semi-ann + 0.0 b-ann'l x 1.05 each = 48	23 samm includes 50/ OA sammling
Nonit'g Events & Samples/Event Opt-Closure					0.0 quart'ly + 46.0 semi-ann + 0.0 b-ann'l x 1.05 each = 48.	3.3 samp includes 5% QA sampling
echnician	96.6	hours	\$38.00	\$3,671	\$0 48.3 samps @ 1.0 hrs/samp x 2 per crew = 96.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies	48.3	samp	\$25.00	\$1,208	\$0 48.3 samples	bottles, shipping supplies
/OCs	48.3		\$105.00	\$5,072	\$0 48.3 samples	Average of three quotes
Subt - GW Monitoring	10.5		7=22.00	\$9,950	\$0 post closure groundwater monitoring	
Nonit'g Events & Samples/Event					23.0 wells @ sample/5 years 1.05 each = 4.8 samp/yr	
erpetual Care					Perpetual care groundwater monitoring once every five years	
echnician	9.7	hours	\$38.00	\$0	\$369 4.8 samps @ 1.0 hrs/samp x 2 per crew = 9.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies		samp	\$25.00	\$0	\$120 4.8 samples	bottles, shipping supplies
OCs	4.8		\$105.00	\$0	\$504 4.8 samples	Average of three quotes
ubt - GW Monitoring	4.0	Samp	7103.00	\$0	\$993 perpetual care groundwater monitoring	preciage of times quotes
and are resolutioning	1			ŞŪ	perpetual care groundwater monitoring	

2011 CWM

2011 CWM

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure			Extended Price - Annual Cost Perpetual Care		ion and Quantities for In-	house Estimate			In-house Pricing References
PCC-4.4 Outfalls 002,003,004 SPDES Mon	ı					nundustion unto	2 have not comple for a	ana nawan araw asah	user of accritoring during al		
Weekly Sampling Events			1			12 months =	52 weeks @	3 outfalls @	year of monitoring during cl 1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician	20	hours	\$38.00	\$1,482	¢1 402	156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	sampling & analysis according to SPDES Permit
Pickup Truck	39		\$10.45	\$408		39.0 hours	2.0 III 5/5dIII p =	312.0 Hours @	1 units/crew/8 units =	39.0 110013	+
Sampling Equipment	39		\$5.00	\$195	•	156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	samplers, meters, etc.
Sampling Supplies	19.5	110 01 0	\$5.00	\$98		19.5 samples	2.0 ms/samp =	312.0 Hours @	1 dilits/crew/8 dilits =	39.0 110013	bottles, shipping supplies
Sampling Supplies	19.5		\$10.67	\$208	•	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Specific Conductance	19.5		\$13.33	\$260		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Fotal Suspended Solids (TSS)	16.2		\$13.33	\$216		2 outfalls @	1 samp/OF/week #	1 OF @ 2/month @		130 samp/8 units = 16.2 samp	weekly: Average of three quotes
Total Dissolved solids	16.2		\$15.33	\$210		2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @		130 samp/8 units = 16.2 samp	weekly: Average of three quotes
Settleable Solids	76.1		\$13.33	\$1,015	•	3 outfalls @	3.9 samp/OF/week @		608.4 samples/8 units	76.1 samples	daily during flow assume 3.9/week: Average of three quotes
BOD-5	4.5		\$13.33	\$1,015		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Dissolved Oxygen	4.5		\$17.50	\$143 \$79		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes monthly: Average of three quotes
Ammonia (NH3)	4.5		\$17.50	\$102	•	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes monthly: Average of three quotes
VOCs (624)	4.5	samp	\$105.00	\$102		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Oil & Grease (1631)	9	samp	\$40.00	\$360		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Copper	4.5		\$17.67	\$80		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Zinc	4.5		\$17.67	\$80	•	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Phenols	4.5		\$26.67	\$120		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))	19.5		\$133.33	\$2,600	•	3 outfalls @	1 samp/OF/month @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
2-Chloroethyl vinyl ether	19.5	samp	\$86.67	\$2,600 \$0		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane	0	samp	\$75.00	\$675		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc voc 024 analysis)
Methylene chloride	9	samp	\$75.00	\$075		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Shipping	10.5	samp	\$5.00	\$98	\$98		2 samp/Or/month @	12 111011(113 -	72 samples/6 units –	3.0 samples	2/11011th: Average of three quotes (inc voc 024 analysis)
Subt - SPDES Outfall Sampling & Analysis	19.3	Samp	\$5.00	\$9.403			quiring weekly sampling &	2 analysis for each year	during nost-closure		
Subt - St DES Outrait Sampling & Allarysis				\$5,403	75,403	tillee outlans re	quiring weekly sampling e	k analysis for each year	during post-closure		
PCC-4.4a Discharge Monitoring Report			1			Monthly Dischars	ge Monitoring Reports				
Engineer (Report)	3	hours	\$130.00	\$390	\$390	12 months @	2 hrs/event =	24.0 hours @	div by 8 units =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical	6	hours	\$45.00	\$270	•	12 months @	4 hrs/event =	48.0 hours @	div by 8 units =	6.0 hours	and the second s
Subt - Discharge Monitoring Report			7 :	\$660			S Permit required Dischar				
(Subt: Assemb PCC-4.3 thru 4.4a)			†	\$20,013			ater & stormwater monito		,		
,		ı	<u>l</u>	7-5,520	Ŧ,000			-			1
PCC-4.5 Landfill Cover Maint.		1				<u> </u>					T
Replacement of Cover	0.257	acre	\$20,973.33	\$5,390	\$5 390	25.7 acre @	1.0% per year =	0.257 acres/yr			unit price based upon vegetation, topsoil, from RMU-1
Subt - Landfill Cover Maint.	5.257	30.0	7=0,575.55	\$5,390			maintenance and replace				Assemblies 14.17 thru 14.18
						,,,					
PCC-4.6 Mowing/Grooming											
Mowing	1120.0		\$3.21	\$3,599		1,120.0 MSF @	1.0 per year =	1,120.0 MSF			DEC 2004 rate * deflator (2004-2010)
Fertilizing	224.0	MSF	\$3.82	\$856	•	1,120.0 MSF @	1.0 per	5.0 years =	224.0 MSF		DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming				\$4,454		SLF 10 mowing o					
(Subt: Assemb PCC-4.5 thru 4.6)			1	\$9,844	\$9,844	SLF 10 cap main	tenance activities: post-cl	osure & perpetual care	frequency are equal		

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price		2011 CWM Extended Price - Annual Cost Perpetual Care	n and Quantities for In-h	ouse Estimate			In-house Pricing References
	1	1								_
PCC-4.7 Leachate System Mgmt Leachate Treatment	147659	1	\$0.3532	ĆE2.455		hours/day x 5 days/week				unit price derived from AWTS O&M model
Leachate Treatment Leachate Treatment - Perpetual Care	147659	0.	\$0.3532	\$52,155 \$0	\$52,155 147,659 gals estim			revious 5-years post closure		unit price derived from AWTS O&M model
Leach Treat Syst. Capital Repl Cost		LS	\$17,642.00	\$17,642	\$17,642 \$3,087 K div by 25					DEC estimate of AWTS capital replacement costs @ 25 yrs
Laborer		hours	\$39.00	\$936	\$936 2 hrs/mon x	12 mon/year =	24 hours	317,042 Each		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician		hours	\$39.00	\$912	\$912 2 hrs/mon x	12 mon/year =	24 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Leachate VOC Samp & Analysis	10.5		\$105.00	\$1,103	\$1,103 10 sumps x	1 sampl/yr =	1.05 per sample =	10.5 samples		average of 3 third party quotes
Leachate Organic Priority Pollutant	10.5		\$633.33	\$6,650	\$6,650 10 sumps x	1 sampl/yr =	1.05 per sample =			average of 3 third party quotes
Leachate Metals Samp & Analysis	10.5	sample	\$155.00	\$1,628	\$1,628 10 sumps x	1 sampl/yr =	1.05 per sample =			average of 3 third party quotes
Electrical Costs - Pumps		KWH	\$0.086	\$1,028	\$1,028 10 sumps x \$19 198.4 hr/yr x	1.5 hp/hr x	0.746 kw/hp =	222.0 KWH		2004 DEC Rate * Implicit Deflator
Replacement of Main Pump T-111		pump	\$2,456.00	\$491	\$491 1 pump per	5 years =	0.2 pumps	222.0 ((***))		250 gpm, 5 hp pump, Site Experience
Replace Primary Sump Pumps		pump	\$1.382.00	\$1,382	\$1,382 14 pumps x	1.0 pu/yr =	1.0 pumps			1.5 hp submersible pump, site experience
Replace Secondary Sump Pumps		pump	\$850.00	\$850	\$850 10 pumps x	1.0 pu/yr =	1.0 pumps			4" subm pump, 0.5 hp., site experience
Replacement of Pump Dischg Hose		hose	\$211.54	\$423	\$423 2 pumps x	1 per pump =	2 hoses			DEC 2004 rate * deflator (2004-2010)
Disposal of Pumps/Hoses	20.0		\$12.45	\$249	\$249 2 pu/hos @	10 CF/pump =	20 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replacement of Piping - 2"/4"	62.3		\$53.25	\$3,318	\$3,318 6,225 LF @	1.0% per year =	62.3 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 2"/4"	20.5		\$12.45	\$255	\$255 62 LF @	0.33 CF/LF =	20.5 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 4"/8" & 6"/10"	11.2	LF	\$73.50	\$823	\$823 11 LF @	0.50 CF/LF =	5.6 CF			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 4"/8" & 6"/10"	5.6	CF	\$12.45	\$70	\$70 11 LF @ 0.50 CF/L	F = 5.6 CF				DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Leachate Coll Syst Mgmt				\$88,905	\$88,905 annual O&M cost	s plus capital replacemen	t of treatment system	, pumps, and piping		•
PCC-4.7a AWTS Operation					Shift operation of t	he AWTS for 12 months				no DEC estimate for this activity: DEC Estimate included in unit rate
Material handler/basic labor	274.3	hours	\$39.00	\$10,698	\$10,698 240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	548.6	hours	\$39.00	\$21,395	\$21,395 240 days @	8 hours/day =	1920.0 hours @	2 units/crew/7 units =	548.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	834.3	hours	\$38.00	\$31,703	\$31,703 365 days @	8 hours/day =	2920.0 hours @	2 units/crew/7 units =	834.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	274.3	hours	\$38.00	\$10,423	\$10,423 240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	274.3	hours	\$65.00	\$17,830	\$17,830 240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - AWTS Operation				\$92,049	\$92,049 AWTS Operation -	operation of AWTS for tw	relve (12) months duri	ing post closure or perpetual	care of the site	. , , .
PCC-4.7b Site Waters Treatment										_
Leachate Treatment - Post Closure	201193.00	gal	\$0.0313	\$6,297	\$0.1.408.349 gals ave	rage of past 5 years/ 7 un	its = 201 193 gallone			unit price derived from AWTS model
Leachate Treatment - Perpetual Care	201193.00	Ü	\$0.0313	\$0,237	\$6,297 1,408,349 gals ave					unit price derived from AWTS model
Tank Trailer (5,500 gals) Collect	121.90	hours	\$6.31	\$769	\$769 1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Road Tractor (4 x 2, 30 ton) Transport	18.30	hours	\$32.45	\$594	\$594 1,408,349 gals @	5500 gals/load =	256.1 loads @	0.5 hrs/trip =	128 hrs/7 units = 18.3 hrs	RSM/HC p. 472 (line item 01 54 33 40 0300)
Tank Trailer (5,500 gals) Transport	121.90	hours	\$6.31	\$769	\$769 1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Fill T-100	121.90	hours	\$6.31	\$769	\$769 1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Site Waters Treatment			70.02	\$9,199	. , , , , ,	•		osure & perpetual care frequ		Labor included in PCC-1.7a
DCC 4.7a Batch Tank Conditions					2.0-4-6.0-100-11	na tanka najar ta diad	a to foodbath a second			To Most IDD requirements
PCC-4.7c Batch Tank Qualification	2.4		Ć10F.00	ćara		on tanks prior to discharg			2.4 samples	To Meet LDR requirements
VOCs (624)		samp samp	\$105.00 \$208.33	\$357 \$715	\$357 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	washibu Ayaran of thusa ayatas
Semi-volatile organics (625) PCBs (608) (MDL 65 PPT (ng/l))		samp	\$208.33	\$/15 \$457	\$715 2 tanks @ \$457 2 tanks @	1 samp/tank/month @ 1 samp/tank/month @	1 year =	24 samples/7 units = 24 samples/7 units =	3.4 samples 3.4 samples	monthly: Average of three quotes
Priority Pollutant Metals (200.7)		samp	\$133.33	\$457 \$645	\$457 2 tanks @ \$645 2 tanks @	1 samp/tank/month @	1 year = 1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes monthly: Average of three quotes
Mercury (245.1)		samp	\$188.00	\$645 \$86	\$86 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes monthly: Average of three quotes
Sulfides		samp	\$25.00	\$86	\$86 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Cyanide		samp	\$35.00	\$120	\$120 2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Subt - Batch Tank Qualification	3.4	Jump	733.00	\$2,465	\$2,465 SLF-11 share of an			= + Jumpies/ / umis =	5.4 samples	Samples collected by lab technician
Sator rain Qualification	+	<b> </b>		72,403	<del>,</del> 11 3 mare of ann	vacon cann quanneau				

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure		2011 CWM Extended Price - Annual Cost Post Closure Period	Cost Perpetua	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
PCC-4.7d Pond Sampling & Analysis (Outfall 001)	1	ı				20h ann an an an an an an an an an an an an	SPDES PreQual Sampling of Outfall 001 prior to discharge
Batch Sampling Events						production rate = 2.0 hours per composite sample for a three-person crew  1 events @ 3 samp/evnt= 3 samples	sampling & analysis prior to pond discharge
Technician	2.6	hours	\$38.00	\$99	ĊO	3 samps @ 2.0 hrs/samp = 6.0 hours @ 3 units/crew = 18.0 hrs/7 units = 2.6 hrs	technician rate: rate 2011 3rd party quote
Sampling Equipment	0.9		\$25.00	\$23		3 samps @ 2.0 hrs/samp = 6.0 hours @ 1 units/crew = 6.0 hrs/ 7 units = 2.0 hrs	boat, samplers, meters, etc.
Sampling Supplies	0.5		\$25.00	\$13		3 samples / 7 units = 0.5 samples	bottles, shipping supplies
nH	0.5		\$10.67	\$5		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Specific Conductance	0.5		\$13.33	\$7		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Temperature	0.5		713.33	\$0		samples obtained using field equipment	Obtained using field equipment
Dissolved Oxygen	0.5		_	\$0		samples obtained using field equipment	Obtained using field equipment
Total Dissolved solids (TDS)	0.5		\$15.00	\$8		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
TDVS (total dissolved volatile solids)		samp	\$23.33	\$12		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Alkalinity as CaCO3	0.5		\$15.33	\$12		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
TOC	0.5		\$31.67	\$16		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Ca/Mg Hardness (200.7)	0.5		\$24.33	\$10		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Total Suspended Solids (TSS)	0.5		\$13.33	\$12		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Settleable Solids	0.5		\$13.33	\$7		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Ammonia (NH3)	0.5		\$22.67	\$11		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Phosphorous	0.5		\$20.00	\$10		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
TON (TKN-NH3)	0.5		\$41.67	\$21		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Cyanide	0.5		\$35.00	\$18		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Sulfates	0.5		\$33.00	\$11		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Sulfides	0.5		\$25.00	\$13		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Surfactants (MBAS)	0.5		\$28.33	\$14		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
BOD-5	0.5	<del></del>	\$30.00	\$15		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Fluoride	0.5		\$19.33	\$10		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Chlorine	0.5	samp	\$19.33	\$10		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Residual Chlorine	0.5		\$15.00	\$8		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
NO2	0.5		\$21.00	\$11		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
NO3	0.5		\$19.33	\$10		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
VOCs (624)	0.5		\$105.00	\$53		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Semi-volatile organics (625)	0.5		\$208.33	\$104		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))	0.5	<del></del>	\$133.33	\$67		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Oil & Grease (1631)	0.5		\$21.67	\$11		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
total Phenols	0.5	samp	\$26.67	\$13		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Priority Pollutant Metals (200.7) *	0.5		\$188.00	\$94		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Mercury (245.1)	0.5	<del></del>	\$25.00	\$13		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Mercury (1631B)	0.5		\$111.67	\$56		samples/ 7 units = 0.5 samples	analytical price: average of three quotes
Acute Toxicity/Bioassy	0.15		\$3,800.00	\$570		sample/ 7 units = 0.15 samples	One quote: actual cost for 2010
Subt - Pond Sampling & Analysis	5.15		+=,555.50	\$1,353		one pond discharge (batch) requiring sampling & analysis prior to discharge	
PCC-4.7e Pond S&A Certification & Report						one event per year for divers to check discharge pipe; one predischarge qualification report	
Divers (Sr. Technicians)	0.0	hours	\$0.00	\$0	\$1	ncluded in underwater inspection below	
SCBA Gear (2 units)	0.0	hours	\$0.00	\$0	\$1	ncluded in underwater inspection below	
Laborer (Surface Support)	0.0	hours	\$0.00	\$0	\$1	ncluded in underwater inspection below	
Underwater Inspection	0.15	each	\$4,000.00	\$600	\$60	4,000 per event @ 1 event per year/ 7 units = 0.15 events	Based on 2010 site rate of \$3,500
Engineer (Report)	5.7	hours	\$130.00	\$741	\$74	1 events @ 40 hrs/event = 40.0 hours @ 1 units/crew = 40.0 hours/7 units = 5.7	Eng Rate: rate 2011 3rd party quote
Subt - S&A Cert'n & Report				\$1,341	¢1 2/	diver(s) to check discharge pipe; also engineer's predischarge qualification report	Fac Pond 8 out of service empty

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure			2011 CWM Extended Price - Annual Cost Perpetual Care		n and Quantities for In-	-house Estimate			In-house Pricing References
PCC-4.7f Empty (Pump) FAC Pond to Outfall 001						prod'n rate = 960.0	00 gals/day = 60 000 ga	als/hr = 1 000 gals/mir	per facility est @ 16 hrs/day	v O&M	Treated wastewater from all 7 units
FAC Pond 1/2 Inventory in Gallons	2750618.0	gals	n/a	<del>                                     </del>		45.8 total hours	req'd	to pump	i per ruentey est @ 10 ms/ uu	y Odivi	& site waters
abor to pump/discharge	275001010	day hrs	n/a	\$0	Śſ	Included in PCC-4.		to pamp			a site waters
rech/Sampler (day shift only)		day hrs	\$38.00			Included in PCC-4.					-
Settleable Solids	1.6	samp	\$13.33	\$21			imple per 4.0 hours = 11	1.5 samples /7 units =	1.6 samples		analytical price: average of three quotes
Dissolved Oxygen		samp	-	\$0			imple per 80.0 hours = 1		Field Measurement		analytical price: average of three quotes
Sulfide (total)		samp	\$25.00	\$25			imple per 80.0 hours = 1				analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)	6.5		\$12.34	\$80		45.8 tot hrs @	100% total time =	45.8 hours @	1 units/crew =	45.8 hrs/ 7 units = 6.5 hrs	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)	19628.0		\$0.0110	\$216		45.8 tot hrs @	100% total time =	45.8 hours @	3000 LF/crew =	137400 ft-hrs/7 units = 19,628	RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2				\$342			of FAC Pond to discharge		'	,	
(Subt: Assemb PCC-4.7 thru 4.7f)			[	\$195,654						ure & perpetual care frequency are ed	qual
<u> </u>				<u> </u>							
						1					
PCC-4.8 Empty Tank T-108		<u>                                     </u>	100								
aborer	0	Hour	\$39.00				nird party operation of A	AWTS			
Pumping Equipment	0	Hour	\$0.00			Existing equipment		00.5	10 "/	00.51	DCS4/UG 472 (III III 04 54 22 40 5000)
Tank Trailer (5,500 gals) Post Closure Period	89.5		\$6.31			147,659 gals @	1650 gals/hr =	89.5 per crew =	1.0 unit/crew =	89.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period	89.5	Hour	\$6.31			147,659 gals @	1650 gals/hr =	89.5 per crew =	1.0 unit/crew =	89.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Empty Tank T-108			<u> </u>	\$565	\$565	pumping leachate	from Tank T-108 for tra	ansport to Tank T-158			
PCC-4.9 Transp't Leachate Onsite			<del>                                     </del>	<del>                                     </del>		production rate = 0	.5 hours for on-site tran	nsport			
Road Tractor (4 x 2, 30 ton) Post Closure Period	13.4	Hour	\$32.45	\$435	\$435	147,659 gals @	5500 gals/load =	26.8 loads @	0.5 hrs/trip =	13.4 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Road Tractor (4 x 2, 30 ton) Perpetual Care Period		Hour	\$32.45			147,659 gals @	5500 gals/load =	26.8 loads @	0.5 hrs/trip =	13.4 hours	RSM/HC p. 472 (line item 01 54 33 40 7410)
Driver	0	Hour	\$45.00			, , ,	nird party operation of A		0.5 5/ cp =	25	1.2 m. 1.2 m.
Tank Trailer (5,500 gals) Post Closure Period	13.4		\$6.31			147,659 gals @	5500 gals/load =	26.8 loads @	0.5 hrs/trip =	13.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period	13.4		\$6.31			147,659 gals @	5500 gals/load =	26.8 loads @	0.5 hrs/trip =	13.4 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Transp Leachate Onsite			72.52	\$954			f leachate from Tank T-1		···- · · · · · · · · · · · · · · ·		- , - , - , - , - , - , - , - , - , - ,
				723.							
PCC-4.10 Fill Tank T-158						production rate = 1	,650 gals per hour; RSM	1/UP p. 9-171 (33-19-0	0101)		
aborer	0	Hour	\$39.00	\$0	ŚC		nird party operation of A		· · · · · · · · · · · · · · · · · · ·		<u> </u>
Pumping Equipment	0	Hour	\$0.00	\$0		Existing equipment					<u> </u>
Tank Trailer (5,500 gals) Post Closure Period	89.5	Hour	\$6.31	\$565		147,659 gals @	1650 gals/hr =	89.5 per crew =	1.0 unit/crew =	89.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Perpetual Care Period	89.5		\$6.31			147,659 gals @	1650 gals/hr =	89.5 per crew =	1.0 unit/crew =	89.5 hours	RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Fill Tank T-158				\$565		, ,	taken from Tank T-108		,		
(Subt: Assemb PCC-4.8 thru 4.10)				\$2,084			nual leachate transport				
•				·		•					
PCC-4.11 Tank Assessments						sixteen (16) tanks r	equiring internal & exte	ernal inspections once	every five years by 1 PE + 2	Techs	
Internal & External Inspections						16 tanks @	5 yr inspect =	3.2 tnks/yr @	7 areas =	0.5 tnks/yr	
Engineer - Inspection	3.7	Hour	\$130.00	\$481	\$481	0.5 tanks/yr x	8 hrs/tnk x	1.0 per crew =	3.7 hours	• •	loaded labor rate: loaded labor rate 2011 3rd party quote
						0.5 tanks/yr x	8 hrs/tnk x	2.0 per crew =	7.3 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Inspection	7.3	'l Hour	538.00.	52//1	32//	I U.S Latiks/Vt X	& HIS/LIIK X	2.0 Del clew =	7.3 HUUI S		Hodueu Idbol Tale, lodueu Idbol Tale 2011 Stu Darry Guore
Fechnician - Inspection Engineer - Reporting @ 50%		Hour Hour	\$38.00 \$130.00			0.5 tanks/yr x	4 hrs/tnk x	1.0 per crew =	1.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote

Basic Closure Activities: Direct Costs	Estimated Quantity Unit of Quantity Measure Unit Price Unit Price - Annual Cost Post Closure Period Care Unit Price - Annual Cost Post Closure Period Care										In-house Pricing References
PCC-4.12 Tank Assessments					thirty (30) tanks red	uiring only external in	spections once every fi	ve years by 1 PE			
External Only Inspections					32 tanks @	5 yr inspect =	6.4 tnks/yr @	7 areas =		0.9 tnks/yr	
Engineer - Inspection	3.4 Hour	\$130.00	\$442	\$442	0.9 tanks/yr x	4 hrs/tnk x	1.0 per crew =	3.4 hours		.,,	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection	0 Hour	\$38.00	\$0	\$0	0.9 tanks/yr x	4 hrs/tnk x	0.0 per crew =	0.0 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.7 Hour	\$130.00	\$221	\$221	0.9 tanks/yr x	2 hrs/tnk x	1.0 per crew =	1.7 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments			\$663	\$663	inspection of 32 to	inks	•				
(Subt: Assemb PCC-4.11 thru 4.12)			\$1,655	\$1,655	SLF 11 share of an	nual tank assessment (	costs: post-closure & pe	rpetual care frequency are e	equal		
PCC-4.13 Replace Mon Well Pump											
Replace Mon Well Pumps	0.58 pump	\$900.00	\$522	\$522	23 pumps @	2.5% per year =	0.58 pumps/yr				Site experience third party costs
Technician	2.0 Hour	\$38.00	\$76		2 hours per year	, - , -	F - F//-				third party labor costs
Disposal of Pumps	0.58 CF	\$12.45	\$7		0.58 pumps @	1.0 CF/pump =	0.58 CF				DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Concrete Pads	0.58 pad	\$131.50	\$76		23 pads @	2.5% per year =	0.58 pads/yr				DEC 2004 rate * deflator (2004-2010)
Disposal of Well Surface Concrete	1.15 CF	\$12.45	\$14		0.58 pads @	2.0 CF/pad =	1.15 CF				DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Covers	0.58 each	\$371.63	\$216		23 covers @	2.5% per year =	0.58 covers/yr				DEC 2004 rate * deflator (2004-2010)
Disposal of Mon Well Covers	0.29 CF	\$12.45	\$4		0.58 covers @	0.5 CF/cover =	0.29 CF				DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Replace Mon Well Pumps			\$915	\$915	monitoring well pu	ımp maintenance and	replacement				
(Subt: Assemb PCC-4.13 thru 4.13)			\$915					e & perpetual care frequenc	y are equal		
PCC-4.14 Drainage Ditch Repair					ditches estimated t	o be 10 feet in width					
						o be to recent whath					
					4400 LF						drainage ditches specific to SLF 11 unit
Facility-wide Drainage Ditches					4400 LF 22600 LF div by	8 units =	2825 LF				drainage ditches in non-specific areas of facility
Facility-wide Drainage Ditches Drainage Ditch Repair	0.017 acre	\$5,698.00	\$97		4400 LF 22600 LF div by 7,225 LF x	8 units = 10 ft/LF =	1.659 acres @	1.0% per year =		0.017 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair	0.017 acre 60 SY	\$5,698.00 \$44.30	\$2,658	\$2,658	4400 LF 22600 LF div by 7,225 LF x 720 LF x	8 units = 10 ft/LF = 15 FT/LF @		1.0% per year = 5.0% per year =	60.0 SY	0.017 acres	drainage ditches in non-specific areas of facility
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair		1 - 7		\$2,658	4400 LF 22600 LF div by 7,225 LF x	8 units = 10 ft/LF = 15 FT/LF @	1.659 acres @		60.0 SY	0.017 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair		1 - 7	\$2,658	\$2,658	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater drains	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair	1.659 acres @	5.0% per year =	60.0 SY	0.017 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-4.15 Drainage Ditch Cleaning		1 - 7	\$2,658	\$2,658	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater drains	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair	1.659 acres @ 9.0 SF/SY @	5.0% per year =	60.0 SY	0.017 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches		1 - 7	\$2,658	\$2,658	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draina	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair	1.659 acres @ 9.0 SF/SY @	5.0% per year =	60.0 SY	0.017 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches		1 - 7	\$2,658	\$2,658 <b>\$2,755</b>	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair to be 10 feet wide; sedi	1.659 acres @ 9.0 SF/SY @ ment estimated to be 4	5.0% per year =	60.0 SY 8.9 CY	0.017 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit
Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning	60 SY	\$44.30	\$2,658 <b>\$2,755</b>	\$2,658 <b>\$2,755</b> \$21	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair o be 10 feet wide; sed	1.659 acres @ 9.0 SF/SY @ ment estimated to be 4 2825 LF	5.0% per year =		0.017 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment	60 SY 8.9 CY	\$44.30	\$2,658 <b>\$2,755</b>	\$2,658 <b>\$2,755</b> \$21 \$16	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x	8 units = 10 ft/LF = 15 FT/LF @ ige ditch repair o be 10 feet wide; sedi	1.659 acres @ 9.0 SF/SY @ ment estimated to be 4 2825 LF 0.333 feet (4") =	5.0% per year =  4 inches deep.  891.1 CY @ 1%/yr =			drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment	8.9 CY 5 miles	\$44.30 \$2.38 \$3.25	\$2,658 \$2,755 \$2,755 \$21 \$16	\$2,658 <b>\$2,755</b> \$21 \$16	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x 12.0 tons @ 8.9 CY @	8 units = 10 ft/LF = 15 FT/LF @ 15 editch repair o be 10 feet wide; seding 8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY =	1.659 acres @ 9.0 SF/SY @  ment estimated to be 4  2825 LF  0.333 feet (4") = 0.60 loads @	5.0% per year =  4 inches deep.  891.1 CY @ 1%/yr =			drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning PCC-4.16 Basin Cleaning	8.9 CY 5 miles	\$44.30 \$2.38 \$3.25	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420	\$2,658 <b>\$2,755</b> \$2,755 \$21 \$16 \$420	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x 12.0 tons @ 8.9 CY @ stormwater draine sediment estimated	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair to be 10 feet wide; sed  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = age ditch cleaning to be 4 inches deep.	1.659 acres @ 9.0 SF/SY @ ment estimated to be 4 2825 LF 0.333 feet (4") = 0.60 loads @ 12.0 tons	5.0% per year =  4 inches deep.  891.1 CY @ 1%/yr =			drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning  PCC-4.16 Basin Cleaning Basin No. 1	8.9 CY 5 miles	\$44.30 \$2.38 \$3.25	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420	\$2,658 <b>\$2,755</b> \$2,755 \$21 \$16 \$420	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x 12.0 tons @ 8.9 CY @ stormwater draine sediment estimated 140625 SF div by	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair to be 10 feet wide; sed  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = age ditch cleaning to be 4 inches deep. 8 units =	1.659 acres @ 9.0 SF/SY @  ment estimated to be 4  2825 LF 0.333 feet (4") = 0.60 loads @ 12.0 tons	5.0% per year =  4 inches deep.  891.1 CY @ 1%/yr =			drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning  PCC-4.16 Basin Cleaning  Basin No. 1  Basin No. 2	8.9 CY 5 miles 12 ton	\$44.30 \$2.38 \$3.25 \$35.00	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x 12.0 tons @ 8.9 CY @ stormwater draine sediment estimated 140625 SF div by 150000 SF div by	8 units = 10 ft/LF = 15 FT/LF @ age ditch repair to be 10 feet wide; sedi  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = age ditch cleaning to be 4 inches deep. 8 units = 8 units = 8 units =	1.659 acres @ 9.0 SF/SY @  ment estimated to be 2 2825 LF 0.333 feet (4") = 0.60 loads @ 12.0 tons  17578 SF 18750 SF	5.0% per year =  4 inches deep.  891.1 CY @ 1%/yr =  5 miles per load =		5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13) unit price based upon FAC Ponds 1/2 disposal (6.14)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning  PCC-4.16 Basin Cleaning  Basin No. 1  Basin No. 2  Basin Sediment Cleaning	8.9 CY 5 miles 12 ton 89.6 CY	\$2.38 \$3.25 \$35.00	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457 \$213	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x 12.0 tons @ 8.9 CY @ stormwater draine sediment estimatee 140625 SF div by 150000 SF div by 36,328 SF x	8 units = 10 ft/LF = 15 FT/LF @ 1ge ditch repair  to be 10 feet wide; sedi  8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = 1.35 ton/CY = 1.36 ditch cleaning  1 to be 4 inches deep. 8 units = 8 units = 0.333 feet (4") =	1.659 acres @ 9.0 SF/SY @  ment estimated to be 4  2825 LF 0.333 feet (4") = 0.60 loads @ 12.0 tons  17578 SF 18750 SF 448.0 CY @	5.0% per year =  1 inches deep.  891.1 CY @ 1%/yr =     5 miles per load =  20% per year =		5 miles 89.6 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13) unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 excavation (6.11)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning  PCC-4.16 Basin Cleaning  Basin No. 1 Basin No. 2  Basin Sediment Cleaning Transportation of Basin Sediment	8.9 CY 5 miles 12 ton  89.6 CY 30.0 miles	\$2.38 \$3.25 \$35.00 \$2.38 \$3.25	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457 \$213 \$98	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457 \$213 \$98	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x 12.0 tons @ 8.9 CY @ stormwater draine sediment estimated 140625 SF div by 150000 SF div by 36,328 SF x 121.0 tons @	8 units = 10 ft/LF = 15 FT/LF @ inge ditch repair to be 10 feet wide; sedi 8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = inge ditch cleaning if to be 4 inches deep. 8 units = 8 units = 0.333 feet (4") = 20 tons/load =	1.659 acres @ 9.0 SF/SY @  ment estimated to be 4  2825 LF 0.333 feet (4") = 0.60 loads @ 12.0 tons  17578 SF 18750 SF 448.0 CY @ 6.0 loads @	5.0% per year =  4 inches deep.  891.1 CY @ 1%/yr =  5 miles per load =		5 miles	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13) unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 excavation (6.13)
Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Subt - Drainage Ditch Repair  PCC-4.15 Drainage Ditch Repair  PCC-4.15 Drainage Ditch Cleaning SLF 11 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Sediment Cleaning Transportation of Ditch Sediment Disposal of Ditch Sediment Subt - Drainage Ditch Cleaning  PCC-4.16 Basin Cleaning  Basin No. 1  Basin No. 2  Basin Sediment Cleaning	8.9 CY 5 miles 12 ton 89.6 CY	\$2.38 \$3.25 \$35.00	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457 \$213	\$2,658 \$2,755 \$2,755 \$21 \$16 \$420 \$457 \$213 \$98 \$4,235	4400 LF 22600 LF div by 7,225 LF x 720 LF x stormwater draine ditches estimated t 4400 LF 22600 LF div by 7,225.0 LF x 12.0 tons @ 8.9 CY @ stormwater draine sediment estimatee 140625 SF div by 150000 SF div by 36,328 SF x	8 units = 10 ft/LF = 15 FT/LF @ ige ditch repair to be 10 feet wide; sedi 8 units = 10.0 ft/LF x 20 tons/load = 1.35 ton/CY = ige ditch cleaning to be 4 inches deep. 8 units = 8 units = 0.333 feet (4") = 20 tons/load = 1.35 ton/CY =	1.659 acres @ 9.0 SF/SY @  ment estimated to be 4  2825 LF 0.333 feet (4") = 0.60 loads @ 12.0 tons  17578 SF 18750 SF 448.0 CY @	5.0% per year =  1 inches deep.  891.1 CY @ 1%/yr =     5 miles per load =  20% per year =		5 miles 89.6 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to SLF 11 unit drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 transportation (6.13) unit price based upon FAC Ponds 1/2 disposal (6.14)  unit price based upon FAC Ponds 1/2 excavation (6.11)

Basic Closure Activities: Direct Costs	Estimated Unit of Quantity Measure	Unit Price	2011 CWM Extended Price - Annual P Cost Post Closure Period	2011 CWM Extended rice - Annual ost Perpetual Care	Basis of Production	on and Quantities for In	-house Estimate				In-house Pricing References
PCC-4.17 Culvert Maint/Replace			1		ava culvort = 3E! /	SLF 11) & 40' (sitewide);	various diameters				
SLF 11 Culverts					12 culverts x	25 feet long =	300 LF				culverts specific to SLF 11 unit
Facility-wide Culverts					20 culverts x	40 feet long =	800 LF div by	8 units =		100 LF	culverts in non-specific areas of facility
Culvert Cleaning - 8" diameter avg	400 LF	\$2.14	\$855	ĆOEE	400.0 LF	40 Jeet long -	800 LI UIV DY	8 units -		100 Li	DEC 2004 rate * deflator (2004-2010)
Repl Culvert - 8" diam avg (SLF 10)	25 LF	\$11.61	\$290		25.0 LF						DEC 2004 rate * deflator (2004-2010)
Repl Culv't - 18" diam avg (sitewide)	40 LF	\$22.35	\$894		40.0 LF						DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Ditch Excavation	48.8 CY	\$2.33	\$145	,	65.0 LF x	0.75 CY/LF =	48.8 CY				DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Bkfill/Compaction	48.8 CY	\$3.86	\$189		48.8 CY	0.75 CT/LF =	40.0 CT				DEC 2004 rate * deflator (2004-2010)
Subt - Culvert Maint/Replacement	46.8 Cf	\$5.00	\$2,373			nce and replacement					DEC 2004 Tate * dellator (2004-2010)
(Subt: Assemb PCC-4.14 thru 4.17)			\$10,131				nlacement: nost-closure	& perpetual care frequenc	ry are equal		
(Subt. 7 (Settle 1 CC 4.14 till 4.17)			\$10,131	310,131	SEI 11 Storm arai	nage mantenance & re	oracement. post crosure	a perpetual care frequent	y are equar		
PCC-4.18 Road Maint/Replace					gravel roads = 15 f	eet wide; asphalt roads	= 20 feet wide				
SLF 11 Gravel Roads					1450 LF x	15 feet wide =	2416.7 SY @	5% per year =	120.8 SY		
Facility-wide Asphalt Roads					21120 LF x	20 feet wide =	422400 SF @	1% per year =		4224.0 SF	asphalt roads in non-specific areas of facility
SLF 11 Gravel Road Repair	120.8 SY	\$3.12	\$377	\$377	120.8 SY	, , , , , , , , , , , , , , , , , , ,		' '			DEC 2004 rate * deflator (2004-2010)
Facility-wide Asphalt Roads	528 SF	\$1.35	\$712	\$712	4,224.0 SF div by	8 units =	528.0 SF				DEC 2004 rate * deflator (2004-2010)
Subt - Road Maint/Replacement			\$1,090	\$1,090	road maintenanc	e and replacement					
(Subt: Assemb PCC-4.18 thru 4.18)			\$1,090	\$1,090	SLF 11 road main	tenance & replacement					
Total Non-Super hours	224.9										
PCC-4.19 PPE Use/H&S Planning						od Level C @ 15%; Leve	D @ 75% for tot non-s	upv hrs for all tasks; HASP (	@ 2.5% of non-	supv hrs	
PPE Usage - Level D	21.1 days	\$0.00	\$0		224.9 hours @	8 hr/day =	28.1 days @	75% "D" days =		21.1 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
PPE Usage - Mod Level C	4.2 days	\$9.00	\$38		224.9 hours @	8 hr/day =	28.1 days @	15% "C" days =		4.2 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PPE Usage - Level C	2.8 days	\$25.00	\$70		224.9 hours @	8 hr/day =	28.1 days @	10% "C" days =		2.8 days	10% of non-supv hrs in Level C (used facility price: \$25/day)
Health & Safety Officer	5.6 hours	\$75.00	\$420	\$420	224.9 hours @	2.5% hr/hr =	5.6 hours				loaded labor rate: loaded labor rate 2011 3rd party quote
			\$528	\$528							
Subt - PPE Usage/H&S Planning			1		I						
PCC-4.20 Supervision	0 hours	\$65.00	\$0	\$0	Included in PCC-4.	7a AWTS Operation					loaded labor rate: loaded labor rate 2011 3rd party quote
PCC-4.20 Supervision Foreman	0 hours 0 hours	\$65.00 \$75.00	\$0 \$0			7a AWTS Operation Contractor G&A/Home	Office indirect costs				loaded labor rate: loaded labor rate 2011 3rd party quote loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning  PCC-4.20 Supervision  Foreman  Site Project Manager  Subtotal - Supervision					Included in Gen'l		Office indirect costs				1 / 1

PCC-4: SLF 11				
Total Cost Summary				
		1		
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	
		Period	Care	
Direct Costs		\$244,346	\$235,043	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$7,330	\$7.051	Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$9,774		5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$2,443		For post-closure, design costs minimal and included in Assb 4.20. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$2,443	\$2,350	For post-closure, design costs minimal and included in Assb 4.20. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$14,661	\$14,103	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$36,652	\$35,256	
Subtotal - Direct/Indirect Costs		\$280,998	\$270,299	
Plus Contingency	15.00%	\$42,150	\$40,545	DEC uses 15% applied to total cost
Total - PCC-4: SLF 11		\$323,147	\$310,844	
i	l	ı	I	

Post Closure Years Remaining

10

20

Years Since Closure

\_\_\_\_\_

SLF 11 Years of Post Closure

Post Closure Costs Remaining Years \$3,231,472
Post Closure Costs 30-Years \$9,694,415

#### PCC-5: SI F 12

PCC-5: SLF 12	<del></del>	_								1
			2011 CWM	2011 CWM						
			Extended	Extended						
Basic Closure Activities: Direct Costs	Estimated Unit of	Unit Price	Price - Annual	Price - Annual	Basis of Production	on and Quantities for In-h	nouse Estimate			
busic closure Activities. Birect costs	Quantity Measur	e   Oille i i i i	Cost Post	Cost	busis of Froudetin	m and quantities for in it	louse Estimate			In-house Pricing References
			Closure	Perpetual						
			Period	Care						
SLF 12 Parameters - Area					22.1 acres =	: 106889 SY =	962000 SF =	962 MSF		perimeter fencing for eight (8) SLFs
SLF 12 Parameters - Fencing									3960 LF = portion of perimete	r fencing for SLF 12
SLF 12 Years of Post Closure	Closure 1996	Years Since (	Closure	15		15				
PCC-5.1 Annual Visual Inspections					make visual inspec	ctions and log results; two	persons required			
Post-Closure										
Technician - Landfill	6.8 hours	\$38.00	\$258		2 hrs/insp x	1.7 insp/year x	2 per crew =	6.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	6.8 hours	\$38.00	\$258		2 hrs/insp x	1.7 insp/year x	2 per crew =	6.8 hours	<u> </u>	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Perimeter Fencing	1.5 hours	\$38.00	\$57		3 hrs/insp x	2.0 insp/year x	2 per crew/	8 facility units =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Storm Water Mgt Syst	7.2 hours	\$38.00	\$274		2 hrs/insp x	1.8 insp/year x	2 per crew =	7.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - 25-Yr Storm Event	0 hours	\$38.00	\$0		included above					this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections			\$847	\$0	SLF 12 post-closu					
Perpetual Care						equencies according to Pag	•			
Technician - Landfill	4.0 hours	\$38.00	\$0		2 hrs/insp x	1.0 insp/year x	2 per crew =	4.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	4.0 hours	\$38.00	\$0		2 hrs/insp x	1.0 insp/year x	2 per crew =	4.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Perimeter Fencing	1.0 hours	\$38.00	\$0		4 hrs/insp x	1.0 insp/year x	2 per crew/	8 facility units =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Storm Water Mgt Syst	4.2 hours	\$38.00	\$0		2 hrs/insp x	1.04 insp/year x	2 per crew =	4.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - 25-Yr Storm Event	0.0 hours	\$38.00	\$0		included above					this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Perp-Care			\$0		SLF 12 perpetual					
(Subt: Assemb PCC-5.1 thru 5.1)			\$847	\$502	SLF 12 visual insp	ections				
PCC-5.2 Perimeter Fence Maint.	1		1	1	ana aighth of tota	l norimator fancing alloca	tad par CLF unit, 20/ an	nnual replacement projected		T
Replacement of Fencing	79.2 LF	\$20.00	\$1,584	¢1 E04	31680 LF div by	8 units x	2% per year =	79.2 LF		Site Experience 2010 Rate
Subt - Perimeter Fence Maint.	79.2 LF	\$20.00	\$1,584			erimeter fence inspection		79.2 LF		Site Experience 2010 Nate
(Subt: Assemb PCC-5.2 thru 5.2)			\$1,584					losure & perpetual care freq	iency are eatia	
[345t.765cm57 cc 3.2 tm 4 3.2]			31,364	31,364	SET 12 SHALE OF P	inneter jence inspection	a replacement, post ci	osure a perpetuur cure freq	seriey are equa	
PCC-5.3 Groundwater Monitoring					sampling crew cor	nposed of two technicians	s; 21 monitoring wells (	20 for unit + 1 upgradient)		
Monit'q Events & Samples/Event					0.0 quart'ly +	34.0 semi-ann +	4.0 b-ann'l x	1.05 each =	37.8 samp	includes 5% QA sampling
Post-Closure					1,				· ·	. · · · · · · · · · · · · · · · · · · ·
Technician	75.6 hours	\$38.00	\$2,873	\$0	37.8 samps @	1.0 hrs/samp x	2 per crew =	75.6 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Sampling Supplies	37.8 samp	\$25.00	\$945	\$0	37.8 samps		•			bottles, shipping supplies
VOCs	37.8 samp	\$105.00	\$3,969		37.8 samps					Average of three quotes
Subt - GW Monitoring			\$7,787	\$0	post closure grou	ındwater monitoring				
Mary Mar Franch O. Commission (Franch					24.0		4.05	4.4		
Monit'g Events & Samples/Event		+			21.0 wells @	sample/5 years	1.05 each =	4.4 samp/yr		
Perpetual Care	0.0 h	¢20.00	60	6224		oundwater monitoring onc		0.0 hauns		looded labourets, looded labourets 2011 2nd north, much
Technician	8.8 hours	\$38.00	\$0		4.4 samps @	1.0 hrs/samp x	2 per crew =	8.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Sampling Supplies	4.4 samp	\$25.00	\$0 \$0		4.4 samples					bottles, shipping supplies
VOCs Subt - GW Monitoring	4.4 samp	\$105.00	\$0 <b>\$0</b>		4.4 samples perpetual care gr					Average of three quotes

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Produc	ction and Quantities for In-h	ouse Estimate	In-house Pricing References		
PCC-5.4 Outfalls 002.003.004 SPDES Mon		1	Ī	ı		production rate	= 2 hours per sample for a o	no norson crow: oach vo	oar of monitoring during cla	cure	
Weekly Sampling Events						12 months =	52 weeks @	3 outfalls @	1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician	30	hours	\$38.00	\$1,482		156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	sampling & analysis according to St DEST errific
Pickup Truck		hours	\$10.45	\$408		39.0 hours	2.0 m 3/3amp =	312.0 Hours @	1 dilita/crew/o dilita =	33.0 110013	
Sampling Equipment		hours	\$5.00	\$195		156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	samplers, meters, etc.
Sampling Supplies		samp	\$5.00	\$98		19.5 samples	210 1115/ 501119	512.0 1104.5 @	1 41110) 01011/0 41110	33.0	bottles, shipping supplies
nH	19.5	samp	\$10.67	\$208		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Specific Conductance	19.5	samp	\$13.33	\$260		3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Total Suspended Solids (TSS)	16.2		\$13.33	\$216		2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @	52 weeks =		weekly: Average of three quotes
Total Dissolved solids	16.2		\$15.00	\$243		2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @	52 weeks =		weekly: Average of three quotes
Settleable Solids	76.1		\$13.33	\$1,015		3 outfalls @	3.9 samp/OF/week @	52 weeks =	608.4 samples/8 units	76.1 samples	daily during flow assume 3.9/week: Average of three quotes
BOD-5		samp	\$31.67	\$143	1 /	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Dissolved Oxygen		samp	\$17.50	\$79		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Ammonia (NH3)	4.5	samp	\$22.67	\$102		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
VOCs (624)	9	samp	\$105.00	\$945		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Oil & Grease (1631)	9	samp	\$40.00	\$360		3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Copper	4.5	samp	\$17.67	\$80	\$80	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Zinc	4.5	samp	\$17.67	\$80		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Phenols	4.5	samp	\$26.67	\$120	\$120	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))	19.5	samp	\$133.33	\$2,600	\$2,600	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
2-Chloroethyl vinyl ether	0	samp	\$86.67	\$0	\$0	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane	9	samp	\$75.00	\$675	\$675	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Methylene chloride	0	samp	\$75.00	\$0	\$0	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Shipping	19.5	samp	\$5.00	\$98	\$98						
Subt - SPDES Outfall Sampling & Analysis				\$9,403	\$9,403	three outfalls	equiring weekly sampling &	analysis for each year du	uring post-closure		
PCC-5.4a Discharge Monitoring Report						Monthly Discha	rge Monitoring Reports				
Engineer (Report)	3	hours	\$130.00	\$390		12 months @	2 hrs/event =	24.0 hours @	div by 8 units =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical		hours	\$45.00	\$270		12 months @	4 hrs/event =	48.0 hours @	div by 8 units =	6.0 hours	and the state of t
Subt - Discharge Monitoring Report				\$660			DES Permit required Discharg				
(Subt: Assemb PCC-5.3 thru 5.4a)				\$17,850	\$10,970	SLF 12 ground	vater & stormwater monitor	ing activities	•		
PCC-5.5 Landfill Cover Maint.											
Replacement of Cover	0.211	acre	\$20,973.33	\$4,425		22.1 acre @	1.0% per year =	0.221 acres/yr			unit price based upon vegetation, topsoil, from RMU-1,
Subt - Landfill Cover Maint.				\$4,425	\$4,425	SLF 12 upper c	ap maintenance and replacer	ment			Assemblies 14.17 thru 14.18
PCC-5.6 Mowing/Grooming											
Mowing	962.0	MSF	\$3.21	\$3,091	\$3,091	962.0 MSF @	1.0 per year =	962.0 MSF			DEC 2004 rate * deflator (2004-2010)
Fertilizing	192.4	MSF	\$3.82	\$735	\$735	962.0 MSF @	1.0 per	5.0 years =	192.4 MSF		DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming				\$3,826	\$3,826	SLF 12 mowing	and fertilizing				
(Subt: Assemb PCC-5.5 thru 5.6)				\$8,251	\$8,251	SLF 12 cap ma	intenance activities: post-clos	sure & perpetual care fre	equency are equa		

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Productio	n and Quantities for In-ho	use Estimate			In-house Pricing References
PCC-5.7 Leachate System Mgmt				I		oneration time = 8	hours/day x 5 days/week x	(50 weeks/year = 2 00	10 hours		
Leachate Treatment	47280	gal	\$0.1526	\$7,214			ted annual leachate volume				unit price derived from AWTS O&M model
Leachate Treatment - Perpetual Care	47280	0	\$0.1526	\$0		•	ted annual leachate volume				
Leach Treat Syst. Capital Repl Cost		LS	\$17,642.00	\$17,642			year life = \$123,495/yr div				DEC estimate of AWTS capital replacement costs @ 25 yrs
Laborer		hours	\$39.00	\$936		2 hrs/mon x	12 mon/year =	24 hours	,		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician	24	hours	\$38.00	\$912	\$912	2 hrs/mon x	12 mon/year =	24 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Leachate VOC Samp & Analysis	4.2	sample	\$105.00	\$441	\$441	4 sumps x	1.05 per sump =	4.2 samples			average of 3 third party quotes
Leachate Organic Priority Pollutant		sample	\$633.33	\$2,660	\$2,660	4 sumps x	1.05 per sump =	4.2 samples			average of 3 third party quotes
Leachate Metals Samp & Analysis		sample	\$155.00	\$651	\$651	4 sumps x	1.05 per sump =	4.2 samples			average of 3 third party quotes
Electrical Costs - Pumps	32.1	KWH	\$0.086	\$3	\$3	28.7 hr/yr x	1.5 hp/hr x	0.746 kw/hp =	32.1 KWH		2004 DEC Rate * Implicit Deflator
Replacement of Main Pump T-150		pump	\$12,000	\$2,400		1 pump per	5 years =	0.2 pumps			250 gpm, 5 hp pump, Site Experience
Replace Primary Sump Pumps	0.5	pump	\$1,382	\$691	\$691	4 pumps x	12.5% pu/yr =	0.5 pumps			1.5 hp submersible pump, site experience
Replace Secondary Sump Pumps	0.5	pump	\$850	\$425	\$425	4 pumps x	12.5% pu/yr =	0.5 pumps			4" subm pump, 0.5 hp, , site experience
Replacement of Pump Dischg Hose		hose	\$211.54	\$212		1 pumps x	1 per pump =	1 hoses			DEC 2004 rate * deflator (2004-2010)
Disposal of Pumps/Hoses		CF	\$12.45	\$125		1 pu/hos @	10 CF/pump =	10 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replacement of Piping - 2"/4"	26		\$53.25	\$1,385		2,600 LF @	1.0% per year =	26.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 2"/4"	8.6		\$12.45	\$107		26.0 LF @	0.33 CF/LF =	8.6 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 4"/8" & 6"/10"	26		\$73.50	\$1,911		2,600 LF @	1.0% per year =	26.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 4"/8" & 6"/10"		CF	\$12.45	\$162	\$162		0.50 CF/LF =	13.0 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 6" Steel		LF	\$89.45	\$358	\$358	400 LF @	1.0% per year =	4.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 6" Steel	2	CF	\$12.45	\$25		4.0 LF @	0.50 CF/LF =	2.0 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Leachate Coll Syst Mgmt				\$38,258	\$38,258	annual O&M costs	plus capital replacement of	of treatment system, p	umps, and piping		
PCC-5.7a AWTS Operation						Shift operation of t	he AWTS for 12 months				no DEC estimate for this activity: DEC Estimate included in unit rate
Material handler/basic labor	274.3	hours	\$39.00	\$10,698		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	548.6	hours	\$39.00	\$21,395		240 days @	8 hours/day =	1920.0 hours @	2 units/crew/7 units =	548.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	834.3	hours	\$38.00	\$31,703		365 days @	8 hours/day =	2920.0 hours @	2 units/crew/7 units =	834.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	274.3	hours	\$38.00	\$10,423		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	274.3	hours	\$65.00	\$17,830		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - AWTS Operation	27.115	1.00.0	ψ05.00	\$92,049					g post closure or perpetual of		Todaca labor rater loaded labor rate 2011 5rd party quote
PCC-5.7b Site Waters Treatment											
Leachate Treatment - Post Closure	201193.00	0.	\$0.0313	\$6,297		, , ,	rage of past 5 years/ 7 unit	, ,			unit price derived from AWTS model
Leachate Treatment - Perpetual Care	201193.00	gal	\$0.0313	\$0 \$769		, , ,	rage of past 5 years/ 7 unit	, ,	1 0	953 5 hrs/7 units = 424 0 km	unit price derived from AWTS model
Tank Trailer (5,500 gals) Collect Road Tractor (4 x 2, 30 ton) Transport	121.90 18.30	hours hours	\$6.31 \$32.45	\$769 \$594		1,408,349 gals @ 1,408,349 gals @	1650 gals/hr = 5500 gals/load =	853.5 per crew = 256.1 loads @	1.0 unit/crew = 0.5 hrs/trip =	853.5 hrs/7 units = 121.9 hrs 128 hrs/7 units = 18.3 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900) RSM/HC p. 472 (line item 01 54 33 40 7410)
Tank Trailer (5,500 gals) Transport	121.90			\$594 \$769						853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 7410)  RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Transport Tank Trailer (5,500 gals) Fill T-100	121.90	hours hours	\$6.31 \$6.31	\$769 \$769		1,408,349 gals @ 1,408,349 gals @	1650 gals/hr = 1650 gals/hr =	853.5 per crew = 853.5 per crew =	1.0 unit/crew = 1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs 853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)  RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Site Waters Treatment	121.90	Hours	\$0.51	\$9,199					ure & perpetual care freque		Labor included in PCC-1.7a
Subt - Site Waters Treatment				33,133	33,133	3LI -12 SHUTE OJ UH	idal site waters collection e	x treatment. post-cios	ure & perpetuur cure freque	ncy are equa	Labor included in FCC-1.7a
PCC-5.7c Batch Tank Qualification						2 Batch Qualification	on tanks prior to discharge	to facultative ponds			To Meet LDR requirements
VOCs (624)	3.4	samp	\$105.00	\$357	\$357	2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	
Semi-volatile organics (625)	3.4	samp	\$208.33	\$715	\$715	2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
PCBs (608) (MDL 65 PPT (ng/l))	3.4	samp	\$133.33	\$457	\$457	2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Priority Pollutant Metals (200.7)	3.4	samp	\$188.00	\$645	\$645	2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Mercury (245.1)	3.4	samp	\$25.00	\$86	\$86	2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Sulfides	3.4	samp	\$25.00	\$86	\$86	2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Cyanide	3.4	samp	\$35.00	\$120	\$120	2 tanks @	1 samp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
				\$2,465	_	SLF-12 share of ani					Samples collected by lab technician

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	f Production and Quantities for In-house Estimate In-house Pricing Refere	nces
CC-5.7d Pond Sampling & Analysis (Outfall 001)						cion rate = 2.0 hours per composite sample for a three-person crew SPDES PreQual Samplin	g of Outfall 001 prior to discharge
Batch Sampling Events						ts @ 3 samp/evnt= 3 samples sampling & analysis pric	r to pond discharge
Technician Technician	2.6	hours	\$38.00	\$99	\$99	s @ 2.0 hrs/samp = 6.0 hours @ 3 units/crew = 18.0 hrs/7 units = 2.6 hrs technician rate: rate 20	11 3rd party quote
Sampling Equipment	0.9	hours	\$25.00	\$23	\$23	s @ 2.0 hrs/samp = 6.0 hours @ 1 units/crew = 6.0 hrs/ 7 units = 0.9 hrs boat, samplers, meters,	etc.
Sampling Supplies	0.5	samp	\$25.00	\$13	\$13	les/ 7 units = 0.5 samples bottles, shipping suppli	es
Н	0.5	samp	\$10.67	\$5	\$5	es/ 7 units = 0.5 samples analytical price: average	of three quotes
pecific Conductance	0.5	samp	\$13.33	\$7	\$7	les/ 7 units = 0.5 samples analytical price: average	of three quotes
emperature	0.5	samp	-	\$0	\$0	es obtained using field equipment Obtained using field eq	ipment
issolved Oxygen		samp	-	\$0	\$0		ipment
otal Dissolved solids (TDS)	0.5	samp	\$15.00	\$8	\$8	les/ 7 units = 0.5 samples analytical price: average	of three quotes
DVS (total dissolved volatile solids)	0.5	samp	\$23.33	\$12	\$12	les/ 7 units = 0.5 samples analytical price: average	of three quotes
Ikalinity as CaCO3		samp	\$15.33	\$8	\$8	les/ 7 units = 0.5 samples analytical price: average	of three quotes
OC		samp	\$31.67	\$16		les/ 7 units = 0.5 samples analytical price: average	of three quotes
a/Mg Hardness (200.7)	0.5	samp	\$24.33	\$12	\$12	les/ 7 units = 0.5 samples analytical price: average	of three quotes
otal Suspended Solids (TSS)	0.5	samp	\$13.33	\$7	\$7	les/ 7 units = 0.5 samples analytical price: average	of three quotes
ettleable Solids	0.5	samp	\$13.33	\$7	\$7	les/ 7 units = 0.5 samples analytical price: average	of three quotes
mmonia (NH3)	0.5	samp	\$22.67	\$11	\$11	les/ 7 units = 0.5 samples analytical price: average	of three quotes
nosphorous	0.5	samp	\$20.00	\$10	\$10	les/ 7 units = 0.5 samples analytical price: average	of three quotes
ON (TKN-NH3)	0.5	samp	\$41.67	\$21	\$21	les/ 7 units = 0.5 samples analytical price: average	of three quotes
yanide	0.5	samp	\$35.00	\$18	\$18	les/ 7 units = 0.5 samples analytical price: average	of three quotes
ulfates	0.5	samp	\$21.00	\$11		les/ 7 units = 0.5 samples analytical price: average	
ulfides	0.5	samp	\$25.00	\$13	\$13	les/ 7 units = 0.5 samples analytical price: average	of three quotes
urfactants (MBAS)		samp	\$28.33	\$14		les/ 7 units = 0.5 samples analytical price: average	
OD-5	0.5	samp	\$30.00	\$15		les/ 7 units = 0.5 samples analytical price: average	of three quotes
luoride		samp	\$19.33	\$10	\$10	les/ 7 units = 0.5 samples analytical price: average	of three quotes
hlorine	0.5	samp	\$19.33	\$10	\$10	les/ 7 units = 0.5 samples analytical price: average	of three quotes
esidual Chlorine	0.5	samp	\$15.00	\$8		les/ 7 units = 0.5 samples analytical price: average	of three quotes
02		samp	\$21.00	\$11		les/ 7 units = 0.5 samples analytical price: average	
03	0.5	samp	\$19.33	\$10	\$10	les/ 7 units = 0.5 samples analytical price: average	of three quotes
OCs (624)		samp	\$105.00	\$53		les/ 7 units = 0.5 samples analytical price: average	
emi-volatile organics (625)	0.5	samp	\$208.33	\$104	\$104	les/ 7 units = 0.5 samples analytical price: average	of three quotes
esticides/PCBs (608) (MDL 65 PPT (ng/l))	0.5	samp	\$133.33	\$67		es/ 7 units = 0.5 samples analytical price: average	
il & Grease (1631)		samp	\$21.67	\$11		les/ 7 units = 0.5 samples analytical price: average	
tal Phenols		samp	\$26.67	\$13		es/ 7 units = 0.5 samples analytical price: average	
riority Pollutant Metals (200.7) *	0.5	samp	\$188.00	\$94		es/ 7 units = 0.5 samples analytical price: average	
lercury (245.1)		samp	\$25.00	\$13		es/ 7 units = 0.5 samples analytical price: average	
ercury (1631B)	0.5	samp	\$111.67	\$56		es/ 7 units = 0.5 samples analytical price: average	
cute Toxicity/Bioassy	0.15	samp	\$3,800.00	\$570		e/ 7 units = 0.15 samples One quote: actual cost	or 2010
ubt - Pond Sampling & Analysis				\$1,353	\$1,353	and discharge (batch) requiring sampling & analysis prior to discharge	
CC-5.7e Pond S&A Certification & Report						ent per year for divers to check discharge pipe; one predischarge qualification report	
ivers (Sr. Technicians)		hours	\$0.00	\$0		d in underwater inspection below	
CBA Gear (2 units)		hours	\$0.00	\$0		d in underwater inspection below	
aborer (Surface Support)		hours	\$0.00	\$0		d in underwater inspection below	
Inderwater Inspection	0.15		\$4,000.00	\$600		per event @ 1 event per year/ 7 units = 0.15 events Based on 2010 site rate	
Engineer (Report)	5.7	hours	\$130.00	\$741	\$741		. , .
Subt - S&A Cert'n & Report				\$1,341	\$1,341	to check discharge pipe; also engineer's predischarge qualification report Fac Pond 8 out of service	e empty

PCC-5: SLF 12							
Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production and Quantities for In-house Estimate	In-house Pricing References
PCC-5.7f Empty (Pump) FAC Pond to Outfall 001						rod'n rate = 960,000 gals/day = 60,000 gals/hr = 1,000 gals/min per facility est @ 16 hrs/day O&M	Treated wastewater from all 7 units
FAC Pond 1/2 Inventory in Gallons	2750618.0	gals	n/a			5.8 total hours req'd to pump	& site waters
Labor to pump/discharge		day hrs	n/a	\$0	\$0	ncluded in PCC-5.7a above	
Tech/Sampler (day shift only)		day hrs	\$38.00	\$0	\$0	ncluded in PCC-5.7a above	
Settleable Solids	_	samp	\$13.33	\$21		5.8 hours @ 1.0 sample per 4.0 hours = 11.5 samples /7 units = 1.6 samples	analytical price: average of three quotes
Dissolved Oxygen	_	samp	-	\$0		5.8 hours @ 1.0 sample per 80.0 hours = 1.0 samples Field Measurement	analytical price: average of three quotes
Sulfide (total)	_	samp	\$25.00	\$25		5.8 hours @ 1.0 sample per 80.0 hours = 1.0 samples	analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)		total hrs	\$12.34	\$80		5.8 tot hrs @ 100% total time = 45.8 hours @ 1 units/crew = 45.8 hrs/ 7 units = 6.5 hrs	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)	19628.0	foot-hrs	\$0.0110	\$216		5.8 tot hrs @ 100% total time = 45.8 hours @ 3000 LF/crew = 137400 ft-hrs/7 units = 19,628	RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2				\$342		transfer contents of FAC Pond to discharge pipe to Niagara Rivei (3,000 ft)	
(Subt: Assemb PCC-5.7 thru 5.7F)				\$145,008	\$145,008	SLF 12 share of annual O&M and capital costs for leachate collection & treatment: post-closure & perpetual care frequency are	equa
PCC-5.8 N/A							
Subt - N/A				\$0	ŚO		
Subt 14/11				ŢÜ.	ŢŪ		
PCC-5.9 N/A							
Subt - N/A				\$0	\$0		
5450 1471				Ţ.	Ţ		
PCC-5.10 N/A							
Subt - N/A				\$0	\$0		
(Subt: Assemb PCC-5.8 thru 5.10)				\$0		LF 12 share of annual leachate transport costs - n/a, as leachate pumped directly to the AWTS	
ļ:	1		ı				<u> </u>
PCC-5.11 Tank Assessments						ixteen (16) tanks requiring internal & external inspections once every five years by 1 PE + 2 Techs	
Internal & External Inspections						16 tanks @ 5 yr inspect = 3.2 tnks/yr @ 7 areas = 0.5 tnks/yr	
Engineer - Inspection	3.7	Hour	\$130.00	\$481	\$481	0.5 tanks/yr x 8 hrs/tnk x 1.0 per crew = 3.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$277		0.5 tanks/yr x 8 hrs/tnk x 2.0 per crew = 7.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.8	Hour	\$130.00	\$234	\$234	0.5 tanks/yr x 4 hrs/tnk x 1.0 per crew = 1.8 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments				\$992	\$992	inspection of 16 tanks	
PCC-5.12 Tank Assessments						hirty (32) tanks requiring only external inspections once every five years by 1 PE	
External Only Inspections						30 tanks @ 5 yr inspect = 6.0 tnks/yr @ 7 areas = 0.9 tnks/yr	
Engineer - Inspection	3.4	Hour	\$130.00	\$442	\$442	0.9 tanks/yr x 4 hrs/tnk x 1.0 per crew = 3.4 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection	0	Hour	\$38.00	\$0	\$0	0.9 tanks/yr x 4 hrs/tnk x 0.0 per crew = 0.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.7	Hour	\$130.00	\$221	\$221	0.9 tanks/yr x 2 hrs/tnk x 1.0 per crew = 1.7 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments				\$663	\$663	inspection of 32 tanks	
(Subt: Assemb PCC-5.11 thru 5.12)				\$1,655	\$1,655	SLF 12 share of annual tank assessment costs: post-closure & perpetual care frequency are equa	
DCC E 12 Bankso Man Mail Burner	1			1			
PCC-5.13 Replace Mon Well Pump Replace Mon Well Pumps	0.53	pump	\$900.00	\$468	¢4C0	1 pumps @ 2.5% per year = 0.52 pumps/yr	Site experience third party costs
Technician		Hour	\$900.00	\$468 \$76		1 pumps @ 2.5% per year = 0.52 pumps/yr hours per year	third party labor costs
	0.52		\$38.00	\$76		0.52 pumps @ 1.0 CF/pump = 0.52 CF	DEC 2004 closure rate for large debris * deflator (2004-2010)
Disposal of Pumps Repair Mon Well Concrete Pads		pad	\$12.45	\$68		1.52 pamps @ 1.0 Cr/pamp = 0.52 Cr 1 pads @ 2.5% per year = 0.52 pads/yr	DEC 2004 rate * deflator (2004-2010)
Disposal of Well Surface Concrete	1.04		\$131.50	\$13		1 pads @ 2.5% per year = 0.52 pads/yr  .52 pads @ 2.0 CF/pad = 1.04 CF	DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Covers	_	each	\$371.63	\$13		1 covers @ 2.5% per year = 0.52 covers/yr	DEC 2004 closure rate for large debris * deflator (2004-2010)
Disposal of Mon Well Covers	0.52		\$371.63	\$193		1 covers @ 2.5% per year = 0.52 covers/yr  .52 covers @ 0.5 CF/cover = 0.26 CF	DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Replace Mon Well Pumps	0.20	CI	712.43	\$828	\$828	monitoring well pump maintenance and replacement	DEC 2004 Closure rate for large debits deflator (2004-2010)
(Subt: Assemb PCC-5.13 thru 5.13)	+			\$828		SLF 12 mon well pump maintenance & replacement: post-closure & perpetual care frequency are equa	
10000000			l	30Z0	<del>3</del> 020	22. 12 men men pamp mannendre a reprocediment post closure a perpetuar cure prequency are equa	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Producti	ion and Quantities for In-	-house Estimate	In-house Pricing References		
	•			ı							
PCC-5.14 Drainage Ditch Repair							to be 10 feet in width				
SLF 12 Drainage Ditches						10280 LF					drainage ditches specific to SLF 12 unit
Facility-wide Drainage Ditches	0.00		45 600 00	44.74	4474	22600 LF div by	8 units =	2825 LF	4.00/	0.000	drainage ditches in non-specific areas of facility
Drainage Ditch Repair		acre	\$5,698.00	\$171		13,105 LF x	10 ft/LF =	1.659 acres @	1.0% per year =	0.030 acres	unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Rip-Rap Downchute Channel Repair	33.3	SY	\$44.30	\$1,475		400 LF x	15 FT/LF @	6000.0 sf (1' dp) x	5.0% per year =	33.3 SY	unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
Subt - Drainage Ditch Repair				\$1,646	\$1,646	stormwater drai	nage ditch repair				
PCC-5.15 Drainage Ditch Cleaning						ditches estimated	d to be 10 feet wide; sedi	ment estimated to be 4 i	inches deep.		
SLF 12 Drainage Ditches						10280 LF					drainage ditches specific to SLF 12 unit
Facility-wide Drainage Ditches						22600 LF div by	8 units =	2825 LF			drainage ditches in non-specific areas of facility
Drainage Ditch Sediment Cleaning	16.2	CY	\$2.38	\$39		13,105.0 LF x	10.0 ft/LF x	0.333 feet (4") =	1616 CY @ 1%/yr =	16.2 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
Fransportation of Ditch Sediment		miles	\$3.25	\$18		21.9 tons @	20 tons/load =	1.1 loads @	5 miles per load =	5.5 miles	unit price based upon FAC Ponds 1/2 transportation (6.13)
Disposal of Ditch Sediment	21.9	ton	\$35.00	\$767	\$767	16.2 CY @	1.35 ton/CY =	21.9 tons			unit price based upon FAC Ponds 1/2 disposal (6.14)
Subt - Drainage Ditch Cleaning				\$823	\$823	stormwater drai	nage ditch cleaning				
PCC-5.16 Basin Cleaning							ed to be 4 inches deep.				
Basin No. 1						140625 SF div by		17578 SF			
Basin No. 2	00.6	CV	ć2.20	6242	6242	150000 SF div by		18750 SF 448.0 CY @	200/	00.6.674	with animal based on an EAC Daniel A (2) are subtime (C 44)
Basin Sediment Cleaning	89.6	miles	\$2.38 \$3.25	\$213 \$98		36,328 SF x 121.0 tons @	0.333 feet (4") = 20 tons/load =	6.0 loads @	20% per year = 5 miles/load =	89.6 CY	unit price based upon FAC Ponds 1/2 excavation (6.11) unit price based upon FAC Ponds 1/2 excavation (6.13)
Transportation of Basin Sediment Disposal of Basin Sediment	121.0		\$35.00	\$4,235		89.6 CY @	1.35 ton/CY =	121.0 tons	5 miles/load =	30 miles	unit price based upon FAC Ponds 1/2 excavation (6.13) unit price based upon FAC Ponds 1/2 excavation (6.14)
ubtBasin Cleaning	121.0	ton	\$55.00	\$4,235 <b>\$4,546</b>		facility stormwate	,	121.0 (01)\$			unit price based upon FAC Ponus 1/2 excavation (6.14)
PCC-5.17 Culvert Maint/Replace						avg culvert = 25' (	(SLF 11) & 40' (sitewide);	various diameters			
SLF 12 Culverts						10 culverts x	25 feet long =	250 LF			culverts specific to SLF 12unit
acility-wide Culverts						20 culverts x	40 feet long =	800 LF div by	8 units =	100 LF	culverts in non-specific areas of facility
Culvert Cleaning - 8" diameter avg	350	LF	\$2.14	\$748	\$748	350.0 LF	· · · · · ·	,			DEC 2004 rate * deflator (2004-2010)
Repl Culvert - 8" diam avg (SLF 10)	25	LF	\$11.61	\$290	\$290	25.0 LF					DEC 2004 rate * deflator (2004-2010)
tepl Culv't - 18" diam avg (sitewide)	40	LF	\$22.35	\$894	\$894	40.0 LF					DEC 2004 rate * deflator (2004-2010)
eplace Culvert - Ditch Excavation	48.8	CY	\$2.96	\$145	\$145	65.0 LF x	0.75 CY/LF =	48.8 CY			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Bkfill/Compaction	48.8	CY	\$3.86	\$189	\$189	48.8 CY					DEC 2004 rate * deflator (2004-2010)
Subt - Culvert Maint/Replacement				\$2,266	\$2,266		ance and replacement		·	·	
(Subt: Assemb PCC-5.14 thru 5.17)				\$9,281	\$9,281	SLF 12 storm dro	ainage maintenance & rep	placement: post-closure	& perpetual care frequency	are equa	
PCC-5.18 Road Maint/Replace						gravel roads = 15	feet wide; asphalt roads	= 20 feet wide			
SLF 12 Gravel Roads						6080 LF x	15 feet wide =	10133 SY @	5% per year =	506.65 SY	
Facility-wide Asphalt Roads						21120 LF x	20 feet wide =	422400 SF @	1% per year =	4224.0 SF	asphalt roads in non-specific areas of facility
SLF 12 Gravel Road Repair	506.65	SY	\$3.12	\$1,582	\$1,582	506.65 SY	•		, ,		DEC 2004 rate * deflator (2004-2010)
Facility-wide Asphalt Roads	528		\$1.35	\$712		4,224.0 SF div by	8 units =	528.0 SF			DEC 2004 rate * deflator (2004-2010)
Subt - Road Maint/Replacement				\$2,294	\$2,294		ce and replacement				
(Subt: Assemb PCC-5.18 thru 5.18)				\$2,294	\$2,294	SLF 12 road mai	ntenance & replacement				

Total Non-Super hours

203.9

#### PCC-5: SLF 12

PCC 5: SLF 12 Direct Cost

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production and Quantities for In-house Estimate				In-house Pricing References	
		ı	1	1 1	1						
PCC-5.19 PPE Use/H&S Planning						Level C @ 10%; Mo	d Level C @ 15%; Level [	0 @ 75% for tot non-supv	hrs for all tasks; HASP @ 2.5%	of non-supv hrs	
PPE Usage - Level D	19.1	days	\$0.00	\$0		203.9 hours @	8 hr/day =	25.5 days @	75% "D" days =	19.1 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
PPE Usage - Mod Level C	3.8	days	\$9.00	\$34	\$34	203.9 hours @	8 hr/day =	25.5 days @	15% "C" days =	3.8 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PPE Usage - Level C	2.6	days	\$25.00	\$65	\$65	203.9 hours @	8 hr/day =	25.5 days @	10% "C" days =	2.6 days	10% of non-supv hrs in Level C (used facility price: \$25/day)
Health & Safety Officer	5.1	hours	\$75.00	\$383	\$383	203.9 hours @	2.5% hr/hr =	5.1 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning				\$482	\$482						
PCC-5.20 Supervision											
Foreman	0	hours	\$65.00	\$0	\$0	Included in PCC-5.7a AWTS Operation					loaded labor rate: loaded labor rate 2011 3rd party quote
Site Project Manager	0	hours	\$75.00	\$0	\$0	Included in Gen'l Contractor G&A/Home Office indirect costs				loaded labor rate: loaded labor rate 2011 3rd party quote	
Subtotal - Supervision				\$0	\$0						
(Subt: Assemb PCC-5.19 thru 5.20)				\$482	\$482	supervision, health	& safety, and certification	on .			

\$188,081

\$180,855

PCC-5: SLF 12				
Total Cost Summary				
·				
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	
		Period	Care	
Direct Costs		\$188,081	\$180,855	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$5,642	\$5,426	Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$7,523	\$7,234	5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$1,881		For post-closure, design costs minimal and included in Assb 5.20. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$1,881	\$1,809	For post-closure, design costs minimal and included in Assb 5.20. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$11,285	\$10,851	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$28,212	\$27,128	
Subtotal - Direct/Indirect Costs		\$216,293	\$207,983	
Plus Contingency	15.00%	\$32,444	\$31,197	DEC uses 15% applied to total cost
Total - PCC-5: SLF 12		\$248,737	\$239,180	

14

SLF 12 Years of Post Closure Years Since Closure 16 Post Closure Years Remaining

Post Closure Costs Remaining Years		\$3,482,318
Post Closure Costs 30-Years	-	\$7,462,111

PCC-6: KIVIU-1											
Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production a	nd Quantities for In-	-house Estimate			In-house Pricing References
			ı								
RMU-1 Parameters - Area						47.35 acres =	229172 SY	= 2062550 SF =	2063 MSF	31680 LF (6 Mi.) = total est'd p	perimeter fencing for eight (8) SLFs
RMU-1 Parameters - Fencing										3960 LF = portion of perimete	
RMU-1 Years of Post Closure	Closure	N/A	Years Since Cl	osure	N/A	30	)			· ·	
PCC-6.1 Annual Visual Inspections						make visual inspection	ns and log results; tw	o persons required			
Post-Closure											
Technician - Landfill	6.8	hours	\$38.00	\$258	\$0	2 hrs/insp x	1.7 insp/year x	2 per crew =	6.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	6.8	hours	\$38.00	\$258	\$0	2 hrs/insp x	1.7 insp/year x	2 per crew =	6.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Perimeter Fencing	1.5	hours	\$38.00	\$57	\$0	3 hrs/insp x	2.0 insp/year x	2 per crew/	8 facility units =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Storm Water Mgt Syst	7.2	hours	\$38.00	\$274		2 hrs/insp x	1.8 insp/year x	2 per crew =	7.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - 25-Yr Storm Event	0	hours	\$38.00	\$0		included above		•			this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections				\$847		RMU-1 post-closure in	spections				,
Perpetual Care								age 11 of Site-Wide Pos	st-Closure Plar		
Technician - Landfill	4.0	hours	\$38.00	\$0	\$152	2 hrs/insp x	1.0 insp/year x	2 per crew =	4.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	4.0		\$38.00	\$0		2 hrs/insp x	1.0 insp/year x	2 per crew =	4.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Perimeter Fencing	1.0	hours	\$38.00	\$0		4 hrs/insp x	1.0 insp/year x	2 per crew/	8 facility units =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Storm Water Mgt Syst	4.2		\$38.00	\$0		2 hrs/insp x	1.04 insp/year x	2 per crew =	4.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - 25-Yr Storm Event	0.0		\$38.00	\$0		included above		- po: 0:0::			this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Perp-Care	0.0	nours	<b>\$30.00</b>	\$0		RMU-1 perpetual care	inspections				this detivity 3/5 included with diffidal storm water hispect his
(Subt: Assemb PCC-6.1 thru 6.1)				\$847		RMU-1 visual inspecti					
(Subtrisseller de dia tina dia)				ψ	ŢJU-	mire I visual mopeum	5115				
PCC-6.2 Perimeter Fence Maint.						one eighth of total no	rimotor foncing alloc	ated per SIE unit: 2% a	nnual replacement projected	4	
Replacement of Fencing	79.2	1.5	\$20.00	\$1,584	¢1 E9/	31680 LF div by	8 units x	2% per year =	79.2 LF	u	Site Experience 2010 Rate
Subt - Perimeter Fence Maint.	79.2	LF	\$20.00	\$1,584		RMU-1 share of perim			/9.2 LF		Site Experience 2010 Nate
(Subt: Assemb PCC-6.2 thru 6.2)				\$1,584		,			losure & perpetual care freq	uoneu ara agua	
(Subt. Assembliec-0.2 till a 0.2)				\$1,564	\$1,564	KIVIO-1 STILITE OJ PETITI	eter jence mspection	i & replucement, post-c	iosure & perpetuui cure jreq	uency are equa	
PCC-6.3 Maint. Benchmarks/Surv						Annual inspection only	/				
Maint of Benchmarks & Surveying	0	acres	\$0.00	\$0	\$0	Included in PCC-6.1					
Subt - Benchmarks & Surveying				\$0	\$0						
(Subt: Assemb PCC-6.3 thru 6.3)				\$0	\$0						
			•								
				1			1.6	" " "			
PCC-6.4 Groundwater Monitoring						, , ,		ns; 51 monitoring wells			
Monit'g Events & Samples/Event			ļ			0.0 quart'ly +	102.0 semi-ann +	0.0 b-ann'l x	1.05 each =	107.1 samp	includes 5% QA sampling
Post-Closure			ļ			_					
Technician	214.2		\$38.00	\$8,140			.0 hrs/samp x	2 per crew =	214.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Sampling Supplies	107.1		\$25.00	\$2,678		107.1 samps					bottles, shipping supplies
VOCs	107.1	samp	\$105.00	\$11,246		107.1 samps					Average of three quotes
Subt - GW Monitoring				\$22,063	\$0	post closure groundy	ater monitoring				
Monit'g Events & Samples/Event						51.0 wells @	sample/5 years	1.05 each =	10.7 samp/yr		
Perpetual Care						Perpetual care ground					
Technician	21.4	hours	\$38.00	\$0		10.7 samps @	1.0 hrs/samp x	2 per crew =	21.4 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
						10.7 samples	-			<del></del>	bottles, shipping supplies
Sampling Supplies	10.7	samp	\$25.00	\$0		10.7 Samples					bottles) simpling supplies
Sampling Supplies VOCs		samp samp	\$25.00 \$105.00	\$0 \$0		10.7 samples					Average of three quotes
					\$1,124		dwater monitoring				

PCC-0. RIVIO-1						
				2011 CWM	2011 CWM	vm
				Extended	Extended	ed .
	Estimated	Unit of		Price - Annual		
Basic Closure Activities: Direct Costs	Quantity	Measure	Unit Price	Cost Post	Cost	Basis of Production and Quantities for In-house Estimate In-house Pricing References
	Qualitity	ivieasure				· · · · · · · · · · · · · · · · · · ·
				Closure	Perpetual	at a second of the second of t
				Period	Care	
PCC-6.5 Outfalls 002,003,004 SPDES Mon						production rate = 2 hours per sample for a one-person crew: each year of monitoring during closure
Weekly Sampling Events						12 months = 52 weeks @ 3 outfalls @ 1 sample/OF = 156 samples sampling & analysis according to SPDES Permit
Technician	39	hours	\$38.00	\$1,482	\$1,482	,482 156 samples 2.0 hrs/samp = 312.0 hours @ 1 units/crew/8 units = 39.0 hours
Pickup Truck	39	hours	\$10.45	\$408	\$408	\$408 39.0 hours
Sampling Equipment	39	hours	\$5.00	\$195	\$195	195 156 samples 2.0 hrs/samp = 312.0 hours @ 1 units/crew/8 units = 39.0 hours samplers, meters, etc.
Sampling Supplies		samp	\$5.00	\$98	\$98	\$98 19.5 samples bottles, shipping supplies
pH		samp	\$10.67	\$208		3208 3 outfalls @ 1 samp/OF/week @ 52 weeks = 156 samples/8 units = 19.5 samples weekly: Average of three quotes
Specific Conductance		samp	\$13.33	\$260		2260 3 outfalls @ 1 samp/OF/week @ 52 weeks = 156 samples/8 units = 19.5 samples weekly: Average of three quotes
Total Suspended Solids (TSS)		samp	\$13.33	\$216		3216 2 outfalls @ 1 samp/OF/week + 1 OF @ 2/month @ 52 weeks = 130 samp/8 units = 16 samp   weekly: Average of three quotes
Total Dissolved solids		samp	\$15.00	\$243		5243 2 outfalls @ 1 samp/OF/week + 1 OF @ 2/month @ 52 weeks = 130 samp/8 units = 16 samp   weekly: Average of three quotes
Settleable Solids		samp	\$13.33	\$1,015		,015 3 outfalls @ 3.9 samp/OF/week @ 52 weeks = 608.4 samples/8 units 76.1 samples daily during flow assume 3.9/week: Average of three quotes
BOD-5		samp	\$31.67	\$143	. ,	5143 3 outfalls @ 1 samp/OF/month @ 12 months = 36 samples/8 units = 4.5 samples monthly: Average of three quotes
Dissolved Oxygen		samp	\$17.50	\$79		\$79 3 outfalls @ 1 samp/OF/month @ 12 months = 36 samples/8 units = 4.5 samples monthly: Average of three quotes
Ammonia (NH3)		samp	\$22.67	\$102		\$102 3 outfalls @ 1 samp/OF/month @ 12 months = 36 samples/8 units = 4.5 samples monthly: Average of three quotes
VOCs (624)		samp	\$105.00	\$945		945 3 outfalls @ 2 samp/OF/month @ 12 months = 72 samples/8 units = 9.0 samples 2/month: Average of three quotes
Oil & Grease (1631)		samp	\$40.00	\$360		3360 3 outfalls @ 2 samp/OF/month @ 12 months = 72 samples/8 units = 9.0 samples 2/month: Average of three quotes
Copper		samp	\$17.67	\$80		\$80 3 outfalls @ 1 samp/OF/month @ 12 months = 36 samples/8 units = 4.5 samples monthly: Average of three quotes
Zinc		samp	\$17.67	\$80		\$80 3 outfalls @ 1 samp/OF/month @ 12 months = 36 samples/8 units = 4.5 samples monthly: Average of three quotes
Phenols		samp	\$26.67	\$120		5120 3 outfalls @ 1 samp/OF/month @ 12 months = 36 samples/8 units = 4.5 samples   monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))		samp	\$133.33	\$2,600		,600 3 outfalls @ 1 samp/OF/week @ 52 weeks = 156 samples/8 units = 19.5 samples weekly: Average of three quotes
2-Chloroethyl vinyl ether		samp	\$86.67	\$0		\$0 3 outfalls @ 2 samp/0F/month @ 12 months = 72 samples/8 units = 9.0 samples 2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane		samp	\$75.00	\$675		3675 3 outfalls @ 2 samp/OF/month @ 12 months = 72 samples/8 units = 9.0 samples 2/month: Average of three quotes
Methylene chloride		samp	\$75.00	\$0		\$0 3 outfalls @ 2 samp/OF/month @ 12 months = 72 samples/8 units = 9.0 samples 2/month: Average of three quotes (inc VOC 624 analysis)
Shipping	19.5		\$5.00	\$98	\$98	
Subt - SPDES Outfall Sampling & Analysis	15.5	эар	φ3.00	\$9,403		403 three outfalls requiring weekly sampling & analysis for each year during post-closure
and the second s				40,100	70,100	, and the state of
PCC-6.5a Discharge Monitoring Report						Monthly Discharge Monitoring Reports
Engineer (Report)	3	hours	\$130.00	\$390	\$390	3390 12 months @ 2 hrs/event = 24.0 hours @ div by 8 units = 3.0 hours   loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical		hours	\$45.00	\$270		2270 12 months @ 4 hrs/event = 48.0 hours @ div by 8 units = 6.0 hours
Subt - Discharge Monitoring Report	1 1		Ţ .2.00	\$660		5660 submittal of SPDES Permit required Discharge Monitoring Report (DMR)
(Subt: Assemb PCC-6.4 thru 6.5a)				\$32,126		,268 RMU-1 groundwater & stormwater monitoring activities
	ı l			+ 5-,0	÷==;=30	
PCC-6.6 Landfill Cover Maint.						
Replacement of Cover	0.2365	acre	\$20,973.33	\$4,960	\$4,960	,960 47.35 acre @ 0.5% per year = 0.2365 acres/yr unit price based upon vegetation, topsoil, from RMU-1,
Subt - Landfill Cover Maint.				\$4,960		,960 RMU-1 upper cap maintenance and replacement  Assemblies 14.17 thru 14.18
				. ,	. ,,,,,	
PCC-6.7 Mowing/Grooming						
Mowing	2062.2	MSF	\$3.21	\$6,626	\$6,626	,626 2,062.6 MSF @ 1.0 per year = 2,062.2 MSF DEC 2004 rate * deflator (2004-2010)
Fertilizing	412.5		\$3.82	\$1,575		,575 2,062.6 MSF @ 1.0 per 5.0 years = 412.5 MSF DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming			72.22	\$8,202		202 RMU-1 mowing and fertilizing
(Subt: Assemb PCC-6.6 thru 6.7)				\$13,162		162 RMU-1 cap maintenance activities: post-closure & perpetual care frequency are equal
				7-0,-02	710,102	

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Productio	n and Quantities for In-hoo	use Estimate			In-house Pricing References
PCC-6.8 Leachate System Mgmt	ſ					amanatian tima - 0	hours/dav x 5 davs/week x	- FO	00 have		ı
Leachate Treatment	145867.1	gal	\$0.0178	\$2,596					rediction 0-30 years post clo	- III-O	unit price derived from AWTS O&M model
Leachate Treatment  Leachate Treatment - Perpetual Care	26139.5		\$0.0178	\$2,590			care average years 31-60	ullie baseu average pi	rediction 0-30 years post cio	sure	unit price derived from AW 13 OXIVI model
Leach Treat Syst. Capital Repl Cost		LS	\$17,642.00	\$17,642			year life = \$123,495/yr div	by 7 facility units = ¢	17.642 oach		DEC estimate of AWTS capital replacement costs @ 25 yrs
Laborer		hours	\$39.00	\$17,642		4 hrs/mon x	12 mon/year =	48 hours	17,042 eacii		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician		hours	\$39.00	\$1,824		4 hrs/mon x	12 mon/year =	48 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Primary Leachate VOC Samp & Analysis		sample	\$38.00	\$1,824		10 sumps x			21.0 samples		
		sample	\$105.00	\$2,205		10 sumps x	1.05 per sump x	2.0 event/yr =	21.0 samples 21.0 samples		Avg. of three lab quotes
Primary Leachate Metals Samp & Analysis			\$188.00				1.05 per sump x	2.0 event/yr =			Avg. of three lab quotes
Primary Leachate PCBs Samp & Analysis		sample		\$2,800		10 sumps x	1.05 per sump x	2.0 event/yr =	21.0 samples		Avg. of three lab quotes
Secondary Leachate VOC Samp & Analysis		sample	\$105.00 \$188.00	\$2,205		10 sumps x	1.05 per sump x	2.0 event/yr =	21.0 samples		Avg. of three lab quotes
Secondary Leachate Metals Samp & Analysis Secondary Leachate PP Organics Samp & Analysis		sample	\$188.00	\$1,974 \$6,650		10 sumps x 10 sumps x	1.05 per sump =	1.0 event/yr =	10.5 samples		Avg. of three lab quotes
, , ,		sample KWH	\$633.33			343.7 hr/vr x	1.05 per sump =	1.0 event/yr =	10.5 samples		Avg. of three lab quotes
Electrical Costs - Pumps				\$33	,	//	1.5 hp/hr x	0.746 kw/hp =	384.6 KWH		2004 DEC Rate * Implicit Deflator
Replacement of Main Pump T-160		pump	\$14,425.00	\$2,885		1 pump per	5 years =	0.2 pumps			30 hp pump, site experience
Replacement of Secondary Pump T-160		pump	\$2,456.00	\$491 \$2,764		1 pump per	5 years =	0.2 pumps			250 gpm, 5 hp pump, Site Experience
Replace Primary Sump Pumps		pump	\$1,382.00			10 pumps x	20.0% pu/yr =	2.0 pumps			1.5 hp submersible pump, site experience
Replace Secondary Sump Pumps		pump	\$850.00	\$1,275		10 pumps x	15.0% pu/yr =	1.5 pumps			4" subm pump, 0.5 hp, , site experience
Replacement of Pump Dischg Hose		hose	\$211.54	\$825		3.9 pumps x	1 per pump =	3.9 hoses			DEC 2004 rate * deflator (2004-2010)
Disposal of Pumps/Hoses	39.0		\$12.45	\$486		3.9 pu/hos @	10 CF/pump =	39 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replacement of Piping - 2"/4"	21.0		\$53.25	\$1,118		4,200 LF @	0.5% per year =	21.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 2"/4"		CF	\$12.45	\$86		21 LF @	0.33 CF/LF =	6.9 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Replace Piping - 4"/8" & 6"/10"	27.0		\$73.50	\$1,985		5,400 LF @	0.5% per year =	27.0 LF/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Piping - 4"/8" & 6"/10"	13.5		\$12.45	\$168		27 LF @	0.50 LF/drum =	13.5 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Pipe Cleaning - 8" diameter	1150.0	LF	\$2.14	\$2,461	. , .	2,300 LF @	0.50 events/yr =	1150.0 LF			DEC 2004 rate * deflator (2004-2010)
Subt - Leachate Coll Syst Mgmt				\$58,293	\$56,162	annual O&M costs	plus capital replacement of	of treatment system, <sub>l</sub>	pumps, and piping		
PCC-6.8a AWTS Operation				1		Shift operation of t	he AWTS for 12 months				no DEC estimate for this activity: DEC Estimate included in unit rate
Material handler/basic labor	274.3	hours	\$39.00	\$10,698		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Maintenance/basic labor	548.6	hours	\$39.00	\$21,395		240 days @	8 hours/day =	1920.0 hours @	2 units/crew/7 units =	548.6 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Operator/technician	834.3	hours	\$38.00	\$31,703		365 days @	8 hours/day =	2920.0 hours @	2 units/crew/7 units =	834.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Laboratory/technician	274.3	hours	\$38.00	\$10,423		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
AWT Foreman/Supervisor	274.3	hours	\$65.00	\$17,830		240 days @	8 hours/day =	1920.0 hours @	1 units/crew/7 units =	274.3 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - AWTS Operation	27 110	110015	Ģ05.00	\$92,049					g post closure or perpetual		louded tabor rater rounded tabor rate 2011 5rd party quote
PCC-6.8b Site Waters Treatment											
Leachate Treatment - Post Closure	201193.00	ral	\$0.0313	\$6,297	¢n.	1 //08 3/10 gals aver	age of past 5 years/ 7 units	c = 201 102 gallons			unit price derived from AWTS model
Leachate Treatment - Post Closure  Leachate Treatment - Perpetual Care	201193.00		\$0.0313	\$0,297		, , ,	age of past 5 years/ 7 units	, ,			unit price derived from AWTS model
Tank Trailer (5,500 gals) Collect	121.90		\$6.31	\$769		1,408,349 gals aver	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Road Tractor (4 x 2, 30 ton) Transport	18.30		\$32.45	\$769 \$594		1,408,349 gals @	5500 gals/load =	256.1 loads @	0.5 hrs/trip =	128 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Transport	121.90		\$6.31	\$594 \$769		1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 7410) RSM/HC p. 472 (line item 01 54 33 40 6900)
Tank Trailer (5,500 gals) Transport Tank Trailer (5,500 gals) Fill T-100	121.90		\$6.31	\$769 \$769		1,408,349 gals @	1650 gals/hr =	853.5 per crew =	1.0 unit/crew =	853.5 hrs/7 units = 121.9 hrs	RSM/HC p. 472 (line item 01 54 33 40 6900)  RSM/HC p. 472 (line item 01 54 33 40 6900)
Subt - Site Waters Treatment	121.90	Hours	Ş0.31	\$769 <b>\$9,199</b>					sure & perpetual care freque		Labor included in PCC-1.7a
Subt - Site Waters Heatment		<b>-</b>		\$2,199	\$3,199	nivio-1 siluie oj ani	iuui site wuters conection o	x treatment, post-cio	sure & perpetuur cure freque	incy are equa	Labor included in PCC-1./d

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production an	nd Quantities for In-hous	se Estimate			In-house Pricing References
PCC-6.8c Batch Tank Qualification						2 Batch Qualification ta	anks prior to discharge to	facultative nonds			To Meet LDR requirements
VOCs (624)	3.4	samp	\$105.00	\$357			amp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	
Semi-volatile organics (625)		samp	\$208.33	\$715			amp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
PCBs (608) (MDL 65 PPT (ng/l))	3.4	samp	\$133.33	\$457	\$457	2 tanks @ 1 s	amp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Priority Pollutant Metals (200.7)	3.4	samp	\$188.00	\$645	\$645	2 tanks @ 1 s	amp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
Mercury (245.1)	3.4	samp	\$25.00	\$86	\$86	2 tanks @ 1 s	amp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
ulfides	3.4	samp	\$25.00	\$86	\$86	2 tanks @ 1 s	amp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
yanide	3.4	samp	\$35.00	\$120	\$120	2 tanks @ 1 s	amp/tank/month @	1 year =	24 samples/7 units =	3.4 samples	monthly: Average of three quotes
ubt - Batch Tank Qualification				\$2,465	\$2,465	RMU-1 share of annual	batch tank qualification				Samples collected by lab technician
CC-6.8d Pond Sampling & Analysis (Outfall 001)						production rate = 2.0 h	ours per composite sam	ple for a three-perso	on crew		SPDES PreQual Sampling of Outfall 001 prior to discharge
Batch Sampling Events						•		samples			sampling & analysis prior to pond discharge
echnician	2.6	hours	\$38.00	\$99	\$99		• • • • • • • • • • • • • • • • • • • •	.0 hours @	3 units/crew =	18.0 hrs/7 units = 2.6 hrs	technician rate: rate 2011 3rd party quote
Sampling Equipment	0.9		\$25.00	\$23				.0 hours @	1 units/crew =	6.0 hrs/ 7 units = 0.9 hrs	boat, samplers, meters, etc.
Sampling Supplies		samp	\$25.00	\$13		3 samples/ 7 units = 0.		-		-	bottles, shipping supplies
Н	0.5	samp	\$10.67	\$5	\$5	3 samples/ 7 units = 0.	5 samples				analytical price: average of three quotes
pecific Conductance	0.5	samp	\$13.33	\$7	\$7	3 samples/ 7 units = 0.	5 samples				analytical price: average of three quotes
emperature	0.5	samp	-	\$0	\$0	3 samples obt	tained using field equipn	nent			Obtained using field equipment
issolved Oxygen	0.5	samp	-	\$0	\$0	3 samples obt	tained using field equipn	nent			Obtained using field equipment
otal Dissolved solids (TDS)	0.5	samp	\$15.00	\$8	\$8	3 samples/ 7 units = 0.	5 samples				analytical price: average of three quotes
DVS (total dissolved volatile solids)	0.5	samp	\$23.33	\$12	\$12	3 samples/ 7 units = 0.	5 samples				analytical price: average of three quotes
lkalinity as CaCO3	0.5	samp	\$15.33	\$8	\$8	3 samples/ 7 units = 0.	5 samples				analytical price: average of three quotes
OC	0.5		\$31.67	\$16		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
Ca/Mg Hardness (200.7)		samp	\$24.33	\$12		3 samples/ 7 units = 0.					analytical price: average of three quotes
otal Suspended Solids (TSS)	0.5		\$13.33	\$7		3 samples/ 7 units = 0.					analytical price: average of three quotes
ettleable Solids		samp	\$13.33	\$7		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
Ammonia (NH3)		samp	\$22.67	\$11		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
Phosphorous		samp	\$20.00	\$10		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
ON (TKN-NH3)	0.5		\$41.67	\$21		3 samples/ 7 units = 0.					analytical price: average of three quotes
yanide	0.5		\$35.00	\$18		3 samples/ 7 units = 0.					analytical price: average of three quotes
ulfates	0.5		\$21.00	\$11		3 samples/ 7 units = 0.					analytical price: average of three quotes
ulfides	0.5		\$25.00	\$13		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
urfactants (MBAS)	0.5		\$28.33	\$14		3 samples/ 7 units = 0.					analytical price: average of three quotes
OD-5		samp	\$30.00	\$15		3 samples/ 7 units = 0.					analytical price: average of three quotes
luoride		samp	\$19.33	\$10		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
hlorine		samp	\$19.33	\$10		3 samples/ 7 units = 0.					analytical price: average of three quotes
esidual Chlorine		samp	\$15.00	\$8		3 samples/ 7 units = 0.					analytical price: average of three quotes
102	0.5		\$21.00	\$11		3 samples/ 7 units = 0.					analytical price: average of three quotes
03		samp	\$19.33	\$10		3 samples/ 7 units = 0.					analytical price: average of three quotes
OCs (624)	0.5		\$105.00	\$53		3 samples/ 7 units = 0.					analytical price: average of three quotes
emi-volatile organics (625)	0.5		\$208.33	\$104		3 samples/ 7 units = 0.					analytical price: average of three quotes
esticides/PCBs (608) (MDL 65 PPT (ng/l))	0.5		\$133.33	\$67		3 samples/ 7 units = 0.					analytical price: average of three quotes
vil & Grease (1631)		samp	\$21.67	\$11		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
otal Phenois		samp	\$26.67	\$13		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
riority Pollutant Metals (200.7) *		samp	\$188.00	\$94		3 samples/ 7 units = 0.					analytical price: average of three quotes
Mercury (245.1)		samp	\$25.00	\$13		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
Mercury (1631B)	0.5		\$111.67	\$56		3 samples/ 7 units = 0.	•				analytical price: average of three quotes
Acute Toxicity/Bioassy	0.15	samp	\$3,800.00	\$570		1 sample/ 7 units = 0.15					One quote: actual cost for 2010
Subt - Pond Sampling & Analysis				\$1,353	\$1,353	one pond discharge (b	atch) requiring sampling	& analysis prior to	discharge .		

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post	2011 CWM Extended Price - Annual Cost	Basis of Production a	nd Quantities for In-	house Estimate			In-house Pricing References
	Qualitity	ivicasuie		Closure	Perpetual						in-nouse Fricing References
				Period	Care						
	L		1								
PCC-6.8e Pond S&A Certification & Report						one event per year for	r divers to check disch	narge pipe; one predis	charge qualification report		
Divers (Sr. Technicians)	0.0	hours	\$0.00	\$0	\$0	Included in underwate	er inspection below				
SCBA Gear (2 units)	0.0	hours	\$0.00	\$0	\$0	Included in underwate	er inspection below				
Laborer (Surface Support)	0.0	hours	\$0.00	\$0	\$0	Included in underwate	er inspection below				
Underwater Inspection	0.15		\$4,000.00	\$600		\$4,000 per event @		1 event per year/ 7	units = 0.15 events		Based on 2010 site rate of \$3,500
Engineer (Report)	5.7	hours	\$130.00	\$741			0 hrs/event =	40.0 hours @	1 units/crew =	40.0 hours/7 units = 5.7	Eng Rate: rate 2011 3rd party quote
Subt - S&A Cert'n & Report				\$1,341	\$1,341	diver(s) to check disc	harge pipe; also engii	neer's predischarge qu	alification report		Fac Pond 8 out of service empty
PCC-6.8f Empty (Pump) FAC Pond to Outfall 001						nrod'n rate - 960 000	gals/day = 60 000 ga	ls/hr = 1 000 gals/min	per facility est @ 16 hrs/day	08M	Treated wastewater from all 7 units
FAC Pond 1/2 Inventory in Gallons	2750618.0	gals	n/a				eq'd	to pump	per racinty est @ 10 ms/day	Odivi	& site waters
Labor to pump/discharge		day hrs	n/a	\$0	\$0	Included in PCC-6.8a		, ,			
Tech/Sampler (day shift only)		day hrs	\$38.00	\$0		Included in PCC-6.8a	above				
Settleable Solids	1.6	samp	\$13.33	\$21	\$21	45.8 hours @ 1.0 sam	ple per 4.0 hours = 11	L.5 samples /7 units = :	1.6 samples		analytical price: average of three quotes
Dissolved Oxygen	1.0	samp	-	\$0	\$0	45.8 hours @ 1.0 sam	ple per 80.0 hours = 1	L.0 samples	Field Measurement		analytical price: average of three quotes
Sulfide (total)	1.0	samp	\$25.00	\$25	\$25	45.8 hours @ 1.0 sam	ple per 80.0 hours = 1	L.0 samples			analytical price: average of three quotes
Discharge Pump (6"/1,000 gal/min)	6.5	total hrs	\$12.34	\$80		45.8 tot hrs @ 1	00% total time =	45.8 hours @	1 units/crew =	45.8 hrs/ 7 units = 6.5 hrs	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Pipe (6" Diam/3,000 LF)	19628.0	foot-hrs	\$0.0110	\$216	\$216	45.8 tot hrs @ 1	00% total time =	45.8 hours @	3000 LF/crew =	137400 ft-hrs/7 units = 19,628	RSM/HC p. 475 (line item 01 54 33 70 0300)
Subtotal - Pump FAC Pond 1/2				\$342				e pipe to Niagara River			
(Subt: Assemb PCC-6.8 thru 6.8f)				\$165,043	\$162,911	RMU-1 share of annu	al O&M and capital c	osts for leachate colle	ction & treatment: post-closi	ure & perpetual care frequency are ed	qua
PCC-6.9 N/A											
Subt - N/A				\$0	\$0						
PCC-6.10 N/A											
Subt - N/A				\$0	\$0						
PCC-6.11 N/A											
Subt - N/A				\$0							
(Subt: Assemb PCC-6.9 thru 6.11)				\$0	\$0	RMU-1 share of annua	al leachate transport	costs - n/a, as leachate	pumped directly to the AW	TS	
PCC-6.12 Tank Assessments						civtoon (16) tanks rose	uiring internal & outo	rnal inspections case	every five years by 1 PE + 2 T	Tochs	T
Internal & External Inspections			1			16 tanks @	5 yr inspect =	3.2 tnks/yr @	7 areas =	0.5 tnks/yr	
Engineer - Inspection	2 7	Hour	\$130.00	\$481	¢/101	0.5 tanks/yr x	8 hrs/tnk x	1.0 per crew =	3.7 hours	U.3 LIIKS/YI	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$277		0.5 tanks/yr x	8 hrs/tnk x	2.0 per crew =	7.3 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%		Hour	\$130.00	\$277		0.5 tanks/yr x	4 hrs/tnk x	1.0 per crew =	1.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments	1.0	Hour	\$150.00	\$992		inspection of 16 tank		1.0 per crew -	1.0 110013		Todaca Taxor Fate. Todaca Tabor Fate 2011 Sra party quote
				,,,,,	,,,,	-,	-				
PCC-6.13 Tank Assessments						thirty (32) tanks requi	ring only external ins	pections once every fiv	ve years by 1 PE		
External Only Inspections				<u> </u>	<u> </u>	30 tanks @	5 yr inspect =	6.0 tnks/yr @	7 areas =	0.9 tnks/yr	
Engineer - Inspection		Hour	\$130.00	\$442		0.9 tanks/yr x	4 hrs/tnk x	1.0 per crew =	3.4 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Inspection		Hour	\$38.00	\$0		0.9 tanks/yr x	4 hrs/tnk x	0.0 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Engineer - Reporting @ 50%	1.7	Hour	\$130.00	\$221		0.9 tanks/yr x	2 hrs/tnk x	1.0 per crew =	1.7 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - Tank Assessments				\$663		inspection of 32 tank					
(Subt: Assemb PCC-6.12 thru 6.13)				\$1,655	\$1,655	RMU-1 share of annua	al tank assessment co	sts: post-closure & per	petual care frequency are ed	диа	

				2011 CWM	2011 CWM						
				Extended	Extended						
Basic Closure Activities: Direct Costs	Estimated	Unit of	Unit Price	Price - Annual		Basis of Production	n and Quantities for In-	house Estimate			
	Quantity	Measure		Cost Post	Cost						In-house Pricing References
				Closure	Perpetual						
				Period	Care						
PCC-6.14 Replace Mon Well Pump											
Replace Mon Well Pumps		pump	\$900.00	\$1,152		51 pumps @	2.5% per year =	1.28 pumps/yr			Site experience third party costs
Technician		Hour	\$38.00	\$76		2 hours per year					third party labor costs
Disposal of Pumps	1.28		\$12.45	\$16	\$16	1.28 pumps @	1.0 CF/pump =	1.28 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Concrete Pads	1.28	pad	\$131.50	\$168	\$168	1.28 pads @	2.5% per year =	1.28 pads/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Well Surface Concrete	2.55	CF	\$12.45	\$32	\$32	1.28 pads @	2.0 CF/pad =	2.55 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Repair Mon Well Covers	1.28	each	\$371.63	\$476	\$476	51 covers @	2.5% per year =	1.28 covers/yr			DEC 2004 rate * deflator (2004-2010)
Disposal of Mon Well Covers	0.64	CF	\$12.45	\$8	\$8	1.28 covers @	0.5 CF/cover =	0.64 CF			DEC 2004 closure rate for large debris * deflator (2004-2010)
Subt - Replace Mon Well Pumps				\$1,928	\$1,928	monitoring well pu	ump maintenance and r	eplacement			
(Subt: Assemb PCC-6.14 thru 6.14)				\$1,928	\$1,928	RMU-1 mon well p	oump maintenance & re	placement: post-closure	e & perpetual care frequency	y are equa	
PCC-6.15 Drainage Ditch Repair	1 1		1			ditches estimated t	o be 10 feet in width				
RMU-1 Drainage Ditches						17000 LF	o be 10 feet iii widtii				drainage ditches specific to RMU-1 unit
Facility-wide Drainage Ditches						22600 LF div by	8 units =	2825 LF			drainage ditches in non-specific areas of facility
· · ·	0.046		¢F C00 00	ćaca	ćaca	19,825 LF x	10 ft/LF =		1 00/	0.046 ages	
Drainage Ditch Repair	0.046		\$5,698.00	\$262		•		4.6 acres @	1.0% per year =	0.046 acres	unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Rip-Rap Downchute Channel Repair	25	SY	\$44.30	\$1,108		300 LF x	15 FT/LF @	4500.0 sf (1' dp) x	5.0% per year =	25.0 SY	unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
Subt - Drainage Ditch Repair				\$1,370	\$1,370	stormwater draind	age ditch repair				
PCC-6.16 Drainage Ditch Cleaning						ditches estimated t	o be 10 feet wide; sedir	mont actimated to be 4	inches doon		
RMU-1 Drainage Ditches						17000 LF	.o be 10 feet wide, sedii	nent estimated to be 4	inches deep.		drainage ditches specific to RMU-1 unit
Facility-wide Drainage Ditches						22600 LF div by	8 units =	2825 LF			drainage ditches in non-specific areas of facility
Drainage Ditch Sediment Cleaning	24.5	CV	\$2.38	\$58	\$58	19,825 LF x	10.0 ft/LF x	0.333 feet (4") =	2445 CY @ 1%/yr =	24.5 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
Transportation of Ditch Sediment		miles	\$3.25	\$27		33.1 tons @	20 tons/load =	1.65 loads @	5 miles per load =	8.3 miles	unit price based upon FAC Ponds 1/2 excavation (6.11)
Disposal of Ditch Sediment	33.1		\$35.00	\$1,159		24.5 CY @	1.35 ton/CY =		5 Illies per loau -	8.5 IIIIeS	
·	33.1	ton	\$35.00	\$1,159 <b>\$1,244</b>				33.1 tons			unit price based upon FAC Ponds 1/2 disposal (6.14)
Subt - Drainage Ditch Cleaning				\$1,244	\$1,244	stormwater draind	age aiten cleaning				
PCC-6.17 Basin Cleaning						sediment estimated	d to be 4 inches deep.				
Basin No. 1						140625 SF div by	8 units =	17578 SF			
Basin No. 2						150000 SF div by	8 units =	18750 SF			
Basin Sediment Cleaning	89.6	CV	\$2.38	\$213	\$212	36,328 SF x	0.333 feet (4") =	448.0 CY @	20% per year =	89.6 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
Transportation of Basin Sediment		miles	\$3.25	\$98		121.0 tons @	20 tons/load =	6.0 loads @	5 miles/load =	30 miles	unit price based upon FAC Ponds 1/2 excavation (6.11)
Disposal of Basin Sediment	121.0		\$35.00	\$4,235		89.6 CY @	1.35 ton/CY =	121.0 tons	3 IIIIIES/IUau –	30 1111163	unit price based upon FAC Ponds 1/2 excavation (6.13)
SubtBasin Cleaning	121.0	COLL	,33,00	\$4,235 <b>\$4,546</b>		facility stormwater		121.0 (0113			ante price based apon FACT onas 1/2 excavation (0.14)
Subt Bushi Cleaning				7-,540	,-,340	jacinty storniwater	Dasin ciculling				
PCC-6.18 Culvert Maint/Replace						avg culvert = 25' (SI	LF 11) & 40' (sitewide); v	various diameters			
RMU-1 Culverts						4 culverts x	40 feet long =	160 LF			culverts specific to RMU-1 unit
Facility-wide Culverts						20 culverts x	40 feet long =	800 LF div by	8 units =	100 LF	culverts in non-specific areas of facility
Culvert Cleaning - 18" diameter avg	260	LF	\$2.14	\$556	\$556	260.0 LF	, ,	•,			DEC 2004 rate * deflator (2004-2010)
Repl Culvert - 18" diam avg (RMU-1)	10		\$11.61	\$116		40.0 LF @	0.25 culvert/yr =	10 LF			DEC 2004 rate * deflator (2004-2010)
Repl Culv't - 18" diam avg (sitewide)	40		\$22.35	\$894	\$894	40.0 LF @	1.00 culvert/yr =	40 LF			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Ditch Excavation	37.5		\$2.96	\$111	\$111	50.0 LF x	0.75 CY/LF =	37.5 CY			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Bkfill/Compaction	37.5		\$3.86	\$145		37.5 CY		27.0 0.			DEC 2004 rate * deflator (2004-2010)
Subt - Culvert Maint/Replacement	37.5		Ç3.00	\$1,822	\$1,822		ce and replacement				
(Subt: Assemb PCC-6.15 thru 6.18)	_			\$8,981				lacement: post-closure	& perpetual care frequency	are equa	
1222				70,361	70,361	2 Storm aram	=g=atenance & rep	entra post crosure	a. parpetual care frequency		

### PCC-6: RMU-1

PCC 6: RMU-1 Direct Cost

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annua Cost Perpetual Care	Basis of Production	on and Quantities for In-	house Estimate			In-house Pricing References
PCC-6.19 Road Maint/Replace						gravel roads = 15 f	eet wide; asphalt roads =	= 20 feet wide			
RMU-1 Gravel Roads						1183 LF x	15 feet wide =	1971.7 SY @	5% per year =	98.6 SY	
Facility-wide Asphalt Roads						21120 LF x	20 feet wide =	422400 SF @	1% per year =	4224.0 SF	asphalt roads in non-specific areas of facility
RMU-1 Gravel Road Repair	98.6	SY	\$3.12	\$308	\$308	98.6 SY					DEC 2004 rate * deflator (2004-2010)
Facility-wide Asphalt Roads	528	SF	\$1.35	\$712	\$712	4,224.0 SF div by	8 units =	528.0 SF			DEC 2004 rate * deflator (2004-2010)
Subt - Road Maint/Replacement				\$1,020	\$1,020	road maintenance	e and replacement				
(Subt: Assemb PCC-6.19 thru 6.19)				\$1,020	\$1,020	RMU-1 road maint	enance & replacement				
Total Non-Super hours	390.5										
Total Non-Super hours	390.5					Loyal C @ 10%: M	od Loval C @ 15% Loval	D @ 75% for tot non sun	u bre for all tacke: HASD @ 2 50	of non supulars	
PCC-6.20 PPE Use/H&S Planning		dave	\$0.00	\$0	¢í				r hrs for all tasks; HASP @ 2.59		75% of non-cupy bre in Level D (used facility price; \$0/day)
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D	36.6	days	\$0.00	\$0 \$66		390.5 hours @	8 hr/day =	48.8 days @	75% "D" days =	36.6 days	75% of non-supy hrs in Level D (used facility price: \$0/day)
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C	36.6 7.3	days	\$9.00	\$66	\$60	390.5 hours @ 390.5 hours @	8 hr/day = 8 hr/day =	48.8 days @ 48.8 days @	75% "D" days = 15% "C" days =	36.6 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C	36.6 7.3 4.9	days days	\$9.00 \$25.00	\$66 \$123	\$60 \$123	390.5 hours @ 390.5 hours @ 3 390.5 hours @	8 hr/day = 8 hr/day = 8 hr/day =	48.8 days @	75% "D" days =	36.6 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day)
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C	36.6 7.3 4.9	days	\$9.00	\$66	\$66 \$123 \$733	0 390.5 hours @ 5 390.5 hours @ 8 390.5 hours @ 5 390.5 hours @	8 hr/day = 8 hr/day =	48.8 days @ 48.8 days @ 48.8 days @	75% "D" days = 15% "C" days =	36.6 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer	36.6 7.3 4.9	days days	\$9.00 \$25.00	\$66 \$123 \$735	\$66 \$123 \$73!	0 390.5 hours @ 5 390.5 hours @ 8 390.5 hours @ 5 390.5 hours @	8 hr/day = 8 hr/day = 8 hr/day =	48.8 days @ 48.8 days @ 48.8 days @	75% "D" days = 15% "C" days =	36.6 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day)
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer Subt - PPE Usage/H&S Planning	36.6 7.3 4.9 9.8	days days	\$9.00 \$25.00	\$66 \$123 \$735	\$66 \$12: \$73: <b>\$92</b> :	0 390.5 hours @ 5 390.5 hours @ 8 390.5 hours @ 5 390.5 hours @	8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	48.8 days @ 48.8 days @ 48.8 days @	75% "D" days = 15% "C" days =	36.6 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day)
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer Subt - PPE Usage/H&S Planning PCC-6.21 Supervision	36.6 7.3 4.9 9.8	days days hours	\$9.00 \$25.00 \$75.00	\$66 \$123 \$735 <b>\$923</b>	\$66 \$123 \$739 <b>\$92</b> 3	390.5 hours @ 5 390.5 hours @ 3 390.5 hours @ 3 390.5 hours @ 3 90.5 hours @	8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	48.8 days @ 48.8 days @ 48.8 days @ 9.8 hours	75% "D" days = 15% "C" days =	36.6 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote
PCC-6.20 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer Subt - PPE Usage/H&S Planning  PCC-6.21 Supervision Foreman	36.6 7.3 4.9 9.8	days days hours	\$9.00 \$25.00 \$75.00 \$65.00	\$66 \$123 \$735 <b>\$923</b>	\$6( \$12: \$73: \$92: \$6( \$6( \$6(	390.5 hours @ 390.5 hours @ 390.5 hours @ 390.5 hours @ 4 4 5 6 6 6 6 6 6 7 6 7 6 7 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1	8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	48.8 days @ 48.8 days @ 48.8 days @ 9.8 hours	75% "D" days = 15% "C" days =	36.6 days 7.3 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote

\$227,270

\$204,934

PCC-6: RMU-1				
Total Cost Summary				
·				
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	
		Period	Care	
Direct Costs		\$227,270	\$204,934	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$6,818		Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$9,091		5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$2,273	\$2,049.34	For post-closure, design costs minimal and included in Assb 6.21. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$2,273	\$2,049.34	For post-closure, design costs minimal and included in Assb 6.21. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$13,636	\$12,296	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$34,090	\$30,740	
Subtotal - Direct/Indirect Costs		\$261,360	\$235,674	
Plus Contingency	15.00%	\$39,204	\$35,351	DEC uses 15% applied to total cost
Total - PCC-6: RMU-1		\$300,564	\$271,026	

RMU-1 Years of Post Closure N/A Post Closure Years Remaining 30

Post Closure Costs Remaining Years \$9,016,922
Post Closure Costs 30-Years \$9,016,922

### PCC-7: Clos'd Lagoons/Salts Imp

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care		on and Quantities for In-		In-house Pricing References		
Lagoons/Salts Parameters - Area						18.5 acres	= 89667 SY =	807000 SF =	807.0 MSF	31680 LF (6 Mi.) = total est'd per	rimeter fencing for eight (8) SLFs
Lagoons/Salts Parameters - Fencing										3960 LF = portion of perimeter f	encing for Lagoons/Salts
PCC-7.1 Annual Visual Inspections						make visual inspec	tions and log results; tw	o persons required			
Post-Closure						·	<u> </u>				
echnician - Landfill	6.8	hours	\$38.00	\$258	\$0	2 hrs/insp x	1.7 insp/year x	2 per crew =	6.8 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	0	hours	\$38.00	\$0	\$0	0 hrs/insp x	0.0 insp/year x	0 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.5	hours	\$38.00	\$57	\$0	3 hrs/insp x	2.0 insp/year x	2 per crew/	8 facility units =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Storm Water Mgt Syst	7.2	hours	\$38.00	\$274	\$0	2 hrs/insp x	1.8 insp/year x	2 per crew =	7.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0	hours	\$38.00	\$0	\$0	included above					this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections				\$589	\$0	Lagoons/Salts pos	t-closure inspections				
Perpetual Care						Perpetual Care Fre	quencies according to P	age 11 of Site-Wide Pos	t-Closure Plan		
Technician - Landfill	4.0	hours	\$38.00	\$0	\$152	2 hrs/insp x	1.0 insp/year x	2 per crew =	4.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Landfill Leachate Syst	0.0	hours	\$38.00	\$0	\$0	0 hrs/insp x	0.0 insp/year x	0 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Perimeter Fencing	1.0	hours	\$38.00	\$0	\$38	4 hrs/insp x	1.0 insp/year x	2 per crew/	8 facility units =	1.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - Storm Water Mgt Syst	4.2	hours	\$38.00	\$0	\$160	2 hrs/insp x	1.04 insp/year x	2 per crew =	4.2 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Technician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0	\$0	included above					this activity s/b included with annual storm water inspect'ns
Subtotal - Annual Inspections Perp-Care				\$0	\$350	Lagoons/Salts per	petual care inspections				
(Subt: Assemb PCC-7.1 thru 7.1)				\$589	\$350	Lagoons/Salts visu	al inspections				
PCC-7.2 Perimeter Fence Maint.						one-eighth of tota	perimeter fencing alloc	ated per SLF unit; 2% ar	nnual replacement projected		
Replacement of Fencing	79.2	LF	\$20.00	\$1,584	\$1,584	31680 LF div by	8 units x	2% per year =	79.2 LF		Site Experience 2010 Rate
Subt - Perimeter Fence Maint.				\$1,584	\$1,584	Lagoons/Salts sha	re of perimeter fence ins	pection & replacement			
(Subt: Assemb PCC-7.2 thru 7.2)				\$1,584	\$1,584	Lagoons/Salts sha	re of perimeter fence ins	pection & replacement.	: post-closure & perpetual ca	re frequency are equal	
PCC-7.3 Groundwater Monitoring						not applicable - pa	rt of corrective measure.	s activities			
Monit'g Events & Samples/Event						0.0 quart'ly +	0.0 semi-ann +	0.0 b-ann'l x	1.05 each =	0.0 samp	includes 5% QA sampling
Post-Closure											
Technician	0	hours	\$38.00	\$0	\$0	0.0 samps @	1.0 hrs/samp x	2 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Sampling Supplies	0	samp	\$25.00	\$0	\$0	0.0 samps					bottles, shipping supplies
VOCs	0	samp	\$105.00	\$0	\$0	0.0 samps					Average of three quotes
Subt - GW Monitoring				\$0	\$0	post closure grou	ndwater monitoring				
Monit'q Events & Samples/Event						0.0 wells @	sample/5 years	1.05 each =	0.0 samp/yr		No DEC estimate for perpetual care
Perpetual Care	-						undwater monitoring or		o.o samp/yi		INO DEC estimate for perpetual care
•		hours	\$38.00	ćo	ćn		•		0.0 hours		loaded labor rate, loaded labor rate 2011 2rd party syste
Technician	0	hours	\$38.00	\$0 \$0		0.0 samps @	1.0 hrs/samp x	2 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
Sampling Supplies	0	samp				0.0 samples					bottles, shipping supplies
VOCs	- 0	samp	\$105.00	\$0 <b>\$0</b>		0.0 samples					Average of three quotes
Subt - GW Monitoring				\$0	Ş0	perpetual care gro	oundwater monitoring				

2011 CWM 2011 CWM

Extended

Extended

### PCC-7: Clos'd Lagoons/Salts Imp

Basic Closure Activities: Direct Costs	Quantity Measure					Basis of Produc	tion and Quantities for In-I	nouse Estimate			In-house Pricing References
PCC-7.4 Outfalls 002.003.004 SPDES Mon						production rate	= 2 hours per sample for a	one-person crew: each v	vear of monitoring during clo	osure	
Weekly Sampling Events						12 months =	52 weeks @	3 outfalls @	1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician	39	hours	\$38.00	\$1,482	\$1.482	156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	
Pickup Truck		hours	\$10.45	\$408		39.0 hours					
Sampling Equipment	39	hours	\$5.00	\$195		156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	samplers, meters, etc.
Sampling Supplies	19.5	samp	\$5.00	\$98	\$98	19.5 samples	· '		· · · · · · · · · · · · · · · · · · ·		bottles, shipping supplies
DH	19.5	samp	\$10.67	\$208	\$208	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
pecific Conductance	19.5	samp	\$13.33	\$260	\$260	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
otal Suspended Solids (TSS)	16.2	samp	\$13.33	\$216	\$216	2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @	52 weeks =	130 samp/8 units = 16.2 samp	weekly: Average of three quotes
otal Dissolved solids	16.2	samp	\$15.00	\$243	\$243	2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @	52 weeks =	130 samp/8 units = 16.2 samp	weekly: Average of three quotes
ettleable Solids	76.1	samp	\$13.33	\$1,015		3 outfalls @	3.9 samp/OF/week @	52 weeks =	608.4 samples/8 units	76.1 samples	daily during flow assume 3.9/week: Average of three quotes
OD-5	4.5		\$31.67	\$143		3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Dissolved Oxygen	4.5	samp	\$17.50	\$79	\$79	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
mmonia (NH3)	4.5	samp	\$22.67	\$102	\$102	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
OCs (624)	9	samp	\$105.00	\$945	\$945	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
il & Grease (1631)	9	samp	\$40.00	\$360	\$360	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
opper	4.5	samp	\$17.67	\$80	\$80	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
nc	4.5	samp	\$17.67	\$80	\$80	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
henols	4.5	samp	\$26.67	\$120	\$120	3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
esticides/PCBs (608) (MDL 65 PPT (ng/l))	19.5	samp	\$133.33	\$2,600	\$2,600	3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
-Chloroethyl vinyl ether	0	samp	\$86.67	\$0	\$0	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
ichlorodifluoromethane	9	samp	\$75.00	\$675	\$675	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
lethylene chloride	0	samp	\$75.00	\$0	\$0	3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
hipping	19.5	samp	\$5.00	\$98	\$98						
Subt - SPDES Outfall Sampling & Analysis				\$9,403	\$9,403	three outfalls r	equiring weekly sampling &	analysis for each year d	uring post-closure		
PCC-7.4a Discharge Monitoring Report						Monthly Dischar	rge Monitoring Reports				
Engineer (Report)	3	hours	\$130.00	\$390	\$390	12 months @	2 hrs/event =	24.0 hours @	div by 8 units =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical	6	hours	\$45.00	\$270	\$270	12 months @	4 hrs/event =	48.0 hours @	div by 8 units =	6.0 hours	
Subt - Discharge Monitoring Report				\$660	\$660	submittal of SPD	DES Permit required Dischar	ge Monitoring Report (D	MR)		
(Subt: Assemb PCC-7.3 thru 7.4a)				\$10,063	\$10,063	Lagoons/Salts g	roundwater & stormwater	monitoring activities			
			<u>.</u>			L					
CC-7.5 Landfill Cover Maint.											
Replacement of Cover	0.185	acre	\$20,973.33	\$3,880	\$3,880	18.5 acre @	1.0% per year =	0.185 acres/yr			unit price based upon vegetation, topsoil, from RMU-1
Subt - Landfill Cover Maint.				\$3,880	\$3,880	Lagoons/Salts c	ap maintenance and replac	ement			Assemblies 14.17 thru 14.18
PCC-7.6 Mowing/Grooming											
Mowing	807.0	MSF	\$3.21	\$2,593	\$2,593	807.0 MSF @	1.0 per year =	807.0 MSF			DEC 2004 rate * deflator (2004-2010)
ertilizing	161.4		\$3.82	\$616		807.0 MSF @	1.0 per	5.0 years =	161.4 MSF		DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming				\$3,209			nowing and fertilizing	,			, ,
(Subt: Assemb PCC-5.5 thru 5.6)				\$7,090			ap maintenance activities:	post-closure & perpetual	care frequency are equal		

### PCC-7: Clos'd Lagoons/Salts Imp

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	n and Quantities for In-	house Estimate			In-house Pricing References
PCC-7.7 Leachate System Mgmt					not applicable					
Subt - Leachate Coll Syst Mgmt				\$0						
, 3										
PCC-7.7a AWTS Operation										
Subt - AWTS Operation				\$0	\$0					
(Subt: Assemb PCC-7.7 thru 7.7a)				\$0						
				-	· •					
	<u> </u>			1						
PCC-7.8 N/A			<u> </u>		not applicable					
Subt - N/A				\$0	\$0					
200 7 0 11/4			<u> </u>							
PCC-7.9 N/A				4.0	not applicable					
Subt - N/A			-	\$0	\$0					
DCC 7.40 N/A			-		nat annliashla					
PCC-7.10 N/A Subt - N/A				\$0	not applicable					
(Subt: Assemb PCC-7.8 thru 7.10)			-	\$0 \$0						
(Subt. Assemb FCC-7.8 till a 7.10)				ŞU	\$0 <sub> </sub>					
PCC-7.11 Tank Assessments					not applicable					
Subt - Tank Assessments			1	\$0						
Subt - Talik Assessifierits				ŞU	30					
PCC-7.12 Tank Assessments					not applicable					
Subt - Tank Assessments				\$0						
(Subt: Assemb PCC-7.11 thru 7.12)				\$0						
(				γo	<del>-</del>					
	T		1	1						
PCC-7.13 Replace Mon Well Pump					not applicable					
Subt - Replace Mon Well Pumps (Subt: Assemb PCC-7.13 thru 7.13)				\$0						
(Subt: Assemb PCC-7.13 (mru 7.13)				\$0	\$0					
PCC-7.14 Drainage Ditch Repair					ditches estimated t	o be 10 feet in width				
Lagoons/Salts Drainage Ditches					6950 LF					drainage ditches specific to Lagoons/Salts areas
Facility-wide Drainage Ditches					22600 LF div by	8 units =	2825 LF			drainage ditches in non-specific areas of facility
Drainage Ditch Repair	0.022	acre	\$5,698.00	\$125		10 ft/LF =	2.244 acres @	1.0% per year =	0.022 acres	unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
Rip-Rap Downchute Channel Repair	0	SY	\$44.30	\$0	\$0 0 LF x	0 FT/LF @	9.0 SF/SY @	5.0% per year =	0.0 SY	unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
Subt - Drainage Ditch Repair				\$125	\$125 stormwater drain	age ditch repair				
PCC-7.15 Drainage Ditch Cleaning						o be 10 feet wide; sedir	ment estimated to be 4 inc	hes deep.		1 1 10 10 10 10 10 10 10
Lagoons/Salts Drainage Ditches			ļ		4000 LF	0 "	2025 / 5			drainage ditches specific to Lagoons/Salts areas
Facility-wide Drainage Ditches		CV	40.00	455	22600 LF div by	8 units =	2825 LF	420C CV @ 42/ /	0.40%	drainage ditches in non-specific areas of facility
Drainage Ditch Sediment Cleaning	8.4		\$2.38			10.0 ft/LF x	0.333 feet (4") =	1206 CY @ 1%/yr =	8.4 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
Transportation of Ditch Sediment		miles	\$3.25			20 tons/load =	0.6 loads @	5 miles per load =	5.0 miles	unit price based upon FAC Ponds 1/2 transportation (6.13)
Disposal of Ditch Sediment	11.3	ton	\$35.00	\$396	\$396 8.4 CY @	1.35 ton/CY =	11.3 tons			unit price based upon FAC Ponds 1/2 disposal (6.14)
Subt - Drainage Ditch Cleaning			1	\$432	\$432 stormwater drain	iae aitch cleanina				1

### PCC-7: Clos'd Lagoons/Salts Imp

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	on and Quantities for In-	house Estimate			In-house Pricing References
PCC-7.16 Basin Cleaning						sediment estimate	ed to be 4 inches deep.				
Basin No. 1						140625 SF div by	8 units =	17578 SF			
Basin No. 2						150000 SF div by	8 units =	18750 SF			
Basin Sediment Cleaning	89.6	CY	\$2.38	\$213	\$213	36,328 SF x	0.333 feet (4") =	448.0 CY @	20% per year =	89.6 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
Transportation of Basin Sediment	30.0	miles	\$3.25	\$98	\$98	121.0 tons @	20 tons/load =	6.0 loads @	5 miles/load =	30 miles	unit price based upon FAC Ponds 1/2 excavation (6.13)
Disposal of Basin Sediment	121.0	ton	\$35.00	\$4,235	\$4,235	89.6 CY @	1.35 ton/CY =	121.0 tons			unit price based upon FAC Ponds 1/2 excavation (6.14)
SubtBasin Cleaning				\$4,546	\$4,546	facility stormwate	r basin cleaning				
PCC-7.17 Culvert Maint/Replace						avg culvert = 25' (	SLF 11) & 40' (sitewide); v	various diameters			
Lagoons/Salts Culverts						3 culverts x	40 feet long =	120 LF			culverts specific to Lagoons/Salts areas
Facility-wide Culverts						20 culverts x	40 feet long =	800 LF div by	8 units =	100 LF	culverts in non-specific areas of facility
Culvert Cleaning - 8" diameter avg	220	LF	\$2.14	\$470	\$470	220.0 LF		,			DEC 2004 rate * deflator (2004-2010)
Repl Culvert - 8" diam avg (SLF 10)	10	LF	\$11.61	\$116	\$116	40.0 LF @	0.25 pipe/yr =	10.0 LF			DEC 2004 rate * deflator (2004-2010)
Repl Culv't - 18" diam avg (sitewide)	40	LF	\$22.35	\$894	\$894	40.0 LF					DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Ditch Excavation	37.5	CY	\$2.96	\$111	\$111	50.0 LF x	0.75 CY/LF =	37.5 CY			DEC 2004 rate * deflator (2004-2010)
Replace Culvert - Bkfill/Compaction	37.5	CY	\$3.86	\$145	\$145	37.5 CY					DEC 2004 rate * deflator (2004-2010)
Subt - Culvert Maint/Replacement				\$1,737	\$1,737	culvert maintena	nce and replacement				
(Subt: Assemb PCC-7.14 thru 7.17)				\$6,840	\$6,840	Lagoons/Salts stor	m drainage maintenance	2 & replacement: post-clos	sure & perpetual care frequency	are equal	
PCC-7.18 Road Maint/Replace						gravel roads = 15	eet wide; asphalt roads =	= 20 feet wide			
Lagoons/Salts Gravel Roads						900 LF x	15 feet wide =	1500 SY @	5% per year =	75 SY	
Facility-wide Asphalt Roads						21120 LF x	20 feet wide =	422400 SF @	1% per year =	4224.0 SF	asphalt roads in non-specific areas of facility
Lagoons/Salts Gravel Road Repair	75	SY	\$3.12	\$234	\$234	75.0 SY	20 jeet was -	722700 31 @	170 per yeur -	7227.0 31	DEC 2004 rate * deflator (2004-2010)
Facility-wide Asphalt Roads	528		\$1.35	\$712		4,224.0 SF div by	8 units =	528.0 SF			DEC 2004 rate * deflator (2004-2010)
Subt - Road Maint/Replacement	520		7 = 100	\$947		, ,	e and replacement				
(Subt: Assemb PCC-7.18 thru 7.18)				\$947			d maintenance & replace	ment			

Total Non-Super hours

54.5

PCC-7.19 PPE Use/H&S Planning				Level C @ 00%; Mo	d Level C @ 25%; Level D	) @ 75% for tot non-sup	ov hrs for all tasks; HASP @ 2.5% of	non-supv hrs	
PPE Usage - Level D	5.1 days	\$0.00	\$0	\$0 54.5 hours @	8 hr/day =	6.8 days @	75% "D" days =	5.1 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
PE Usage - Mod Level C	1.7 days	\$9.00	\$15	\$15 54.5 hours @	8 hr/day =	6.8 days @	25% "Mod C" days =	1.7 days	25% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PE Usage - Level C	0 days	\$25.00	\$0	\$0 54.5 hours @	8 hr/day =	6.8 days @	0% "C" days =	0.0 days	0% of non-supv hrs in Level C (used facility price: \$25/day)
Health & Safety Officer	1.4 hour	\$75.00	\$105	\$105 54.5 hours @	2.5% hr/hr =	1.4 hours			loaded labor rate: loaded labor rate 2011 3rd party quote
Subt - PPE Usage/H&S Planning			\$120	\$120					
PCC-7.20 Supervision									
oreman	0 hour	\$65.00	\$0	\$0 Included in AWTS A	Assemblies of PCC-1 throu	ugh PCC-6 and CM-1			loaded labor rate: loaded labor rate 2011 3rd party quote
iite Project Manager	0 hour	\$75.00	\$0	\$0 Included in Gen'l C	Contractor G&A/Home Of	fice indirect costs			loaded labor rate: loaded labor rate 2011 3rd party quote
Subtotal - Supervision			\$0	\$0					
Subt: Assemb PCC-7.19 thru 7.20)			\$120	\$120 supervision, health	& safety, and certification	n			

PCC-7: Lagoons/Salts Imp				
Total Cost Summary				
,				
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct Cost	Cost Post -	Annual	
		Closure	Perpetual	
		Period	Care	
Direct Costs		\$27,232	\$26,993	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$817	\$810	Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$1,089		5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$272	\$270	For post-closure, design costs minimal and included in Assb 7.20. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$272		For post-closure, design costs minimal and included in Assb 7.20. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$1,634		Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$4,085	\$4,049	
Subtotal - Direct/Indirect Costs		\$31,317	\$31,042	
Plus Contingency	15.00%	\$4,698	\$4,656	DEC uses 15% applied to total cost
Total - PCC-7: Lagoons/Salts Imp		\$36,015	\$35,698	

Post Closure Years Remaining

30

N/A

Years Since Closure

Lagoons & Salts Years of Post Closure

 Post Closure Costs Remaining Years
 \$1,080,444

 Post Closure Costs 30-Years
 \$1,080,444

asic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Producti	on and Quantities for In-h	ouse Estimate	In-house Pricing References		
rocess Tank Parameters - Total Area						6.0 acres	s = 29217 SY =	262950 SF =	263.0 MSF		31680 LF (6 Mi.) = total est'd perim fencing for eight (8) SLFs
rocess Tank Parameters - Concrete Cover Area						1.6 acres	s = 7813 SY =	70317 SF =	70.3 MSF		, , , , , , , , , , , , , , , , , , , ,
rocess Tank Parameters - Grass/Soil CoverArea						1.7 acres	s = 8345.9 SY =	75113 SF =	75.1 MSF		
rocess Tank Parameters - 80-mil HDPE Cover Area	a					0.2 acres	s = 855.56 SY =	7700 SF =	7.7 MSF		
rocess Tank Parameters - Asphalt Cover Area							s = 12202 SY =	109820 SF =	109.8 MSF		
rocess Tank Parameters - Fencing											3960 LF = portion of perimeter fencing for Process Tank Area
CC-8.1 Annual Visual Inspections	<u> </u>			<u> </u>	<u> </u>	make visual inspe	ections and log results; two	persons required			
ost-Closure											
echnician - Landfill	8.0	hours	\$38.00	\$304	\$0	2 hrs/insp x	2.0 insp/year x	2 per crew =	8.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Landfill Leachate Syst	0.0	hours	\$38.00	\$0		0 hrs/insp x	0.0 insp/year x	0 per crew =	0.0 hours	<u> </u>	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.5	hours	\$38.00	\$57		3 hrs/insp x	2.0 insp/year x	2 per crew/	8 facility units =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	8.0	hours	\$38.00	\$304		2 hrs/insp x	2.0 insp/year x	2 per crew =	8.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0		included above					this activity s/b included with annual storm water inspect'ns
ubtotal - Annual Inspections				\$665	\$0	Process Tank Area	a post-closure inspections				
erpetual Care											
echnician - Landfill	8.0		\$38.00	\$0		2 hrs/insp x	2.0 insp/year x	2 per crew =	8.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Landfill Leachate Syst	0.0	hours	\$38.00	\$0		0 hrs/insp x	0.0 insp/year x	0 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Perimeter Fencing	1.5	hours	\$38.00	\$0		3 hrs/insp x	2.0 insp/year x	2 per crew/	8 facility units =	1.5 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - Storm Water Mgt Syst	8.0		\$38.00	\$0		2 hrs/insp x	2.0 insp/year x	2 per crew =	8.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
echnician - 25-Yr Storm Event	0.0	hours	\$38.00	\$0 <b>\$0</b>		included above					this activity s/b included with annual storm water inspect'ns
ubtotal - Annual Inspections Perp-Care Subt: Assemb PCC-8.1 thru 8.1)			-	\$665			a perpetual care inspection a visual inspections	15			
Subt. Assemble Co.1 till to.1)				<del>7003</del>	<b>7003</b>	TTOCC33 TATIK ATC	a visual inspections				
CC-8.2 Perimeter Fence Maint.							tal perimeter fencing alloc	ated per SLF unit; 2% a	annual replacement projected		
eplacement of Fencing	79.2	LF	\$20.00	\$1,584		31680 LF div by	8 units x	2% per year =	79.2 LF		Site Experience 2010 Rate
ubt - Perimeter Fence Maint.				\$1,584			share of perimeter fence				
Subt: Assemb PCC-8.2 thru 8.2)				\$1,584	\$1,584	Process Tank Ared	a share of perimeter fence	inspection & replacen	nent: post-closure & perpetual ca	re frequency are equal	
CC-8.3 Groundwater Monitoring						not applicable - p	art of corrective measures	activities			
Nonit'g Events & Samples/Event						0.0 quart'ly +	0.0 semi-ann +	0.0 b-ann'l x	1.05 each =	0.0 samp	includes 5% QA sampling
ost-Closure						ļ					
echnician		hours	\$38.00			0.0 samps @	1.0 hrs/samp x	2 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies	_	samp	\$25.00			0.0 samps					bottles, shipping supplies
OCs ubt - GW Monitoring	0	samp	\$105.00	\$0 <b>\$0</b>		0.0 samps not applicable					Average of three quotes
Monit'g Events & Samples/Event						0.0 wells @	sample/5 years	1.05 each =	0.0 samp/yr		
erpetual Care		<del>                                     </del>	<u> </u>				art of corrective measures		0.0 samp, yi		
echnician	n	hours	\$38.00	\$0	Śn	0.0 samps @	1.0 hrs/samp x	2 per crew =	0.0 hours		loaded labor rate: loaded labor rate 2011 3rd party quote
ampling Supplies		samp	\$25.00			0.0 samples	1.0 m 3/ 30 m p x	2 per crew -	0.0 110413		bottles, shipping supplies
OCs		samp	\$105.00			0.0 samples					Average of three quotes
	†		+100.00								3
OCs ubt - GW Monitoring	0	samp	\$105.00	\$0 <b>\$0</b>		0.0 samples not applicable					

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care Basis of Product	tion and Quantities for In-ho	ouse Estimate			In-house Pricing References
PCC-8.4 Outfalls 002,003,004 SPDES Mon						= 2 hours per sample for a c				
Weekly Sampling Events		4	400.00	4	12 months =	52 weeks @	3 outfalls @	1 sample/OF =	156 samples	sampling & analysis according to SPDES Permit
Technician		9 hours	\$38.00	\$1,482	\$1,482 156 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	
Pickup Truck		9 hours	\$10.45 \$5.00	\$408	\$408 39.0 hours	2.0 h/	242.0	1	20 0 h	
Sampling Equipment		9 hours 5 samp	\$5.00	\$195	\$195 156 samples \$98 19.5 samples	2.0 hrs/samp =	312.0 hours @	1 units/crew/8 units =	39.0 hours	samplers, meters, etc.
Sampling Supplies				\$98		1 (05/	F2 I	45C	10.5	bottles, shipping supplies
pn Consider Constructions		5 samp	\$10.67 \$13.33	\$208	\$208 3 outfalls @ \$260 3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	19.5 samples	weekly: Average of three quotes
Specific Conductance		5 samp	\$13.33	\$260 \$216	\$260 3 outrails @ \$216 2 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units = 52 weeks =	19.5 samples	weekly: Average of three quotes
Total Suspended Solids (TSS)		2 samp				1 samp/OF/week +	1 OF @ 2/month @		130 samp/8 units = 16.2 samp	weekly: Average of three quotes
Total Dissolved solids		2 samp	\$15.00	\$243	\$243 2 outfalls @	1 samp/OF/week +	1 OF @ 2/month @		130 samp/8 units = 16.2 samp	weekly: Average of three quotes
Settleable Solids BOD-5		1 samp 5 samp	\$13.33	\$1,015	\$1,015 3 outfalls @	3.9 samp/OF/week @		608.4 samples/8 units	76.1 samples 4.5 samples	daily during flow assume 3.9/week: Average of three quotes
		samp samp	\$31.67 \$17.50	\$143 \$79	\$143 3 outfalls @ \$79 3 outfalls @	1 samp/OF/month @ 1 samp/OF/month @	12 months = 12 months =	36 samples/8 units = 36 samples/8 units =	4.5 samples 4.5 samples	monthly: Average of three quotes monthly: Average of three quotes
Dissolved Oxygen		samp samp	\$17.50		\$102 3 outfalls @					, ,
Ammonia (NH3) VOCs (624)		samp Samp	\$105.00	\$102 \$945	\$102 3 outrails @ \$945 3 outfalls @	1 samp/OF/month @ 2 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples 9.0 samples	monthly: Average of three quotes
, ,			\$105.00	\$945	\$945 3 outfalls @ \$360 3 outfalls @			72 samples/8 units =		2/month: Average of three quotes
Oil & Grease (1631)		samp samp	\$40.00	\$360	\$360 3 outfalls @	2 samp/OF/month @ 1 samp/OF/month @	12 months = 12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes
Copper		samp	\$17.67	\$80	\$80 3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units = 36 samples/8 units =	4.5 samples 4.5 samples	monthly: Average of three quotes
Zinc Phenols		samp	\$26.67	\$120	\$120 3 outfalls @	1 samp/OF/month @	12 months =	36 samples/8 units =	4.5 samples	monthly: Average of three quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))		5 samp	\$133.33	\$2,600	\$2,600 3 outfalls @	1 samp/OF/week @	52 weeks =	156 samples/8 units =	4.5 samples	monthly: Average of three quotes weekly: Average of three quotes
2-Chloroethyl vinyl ether		) samp	\$86.67	\$2,600	\$0 3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc VOC 624 analysis)
Dichlorodifluoromethane		9 samp	\$75.00	\$675	\$675 3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes (inc. voc. 624 analysis)  2/month: Average of three quotes
Methylene chloride		) samp	\$75.00	\$0	\$0 3 outfalls @	2 samp/OF/month @	12 months =	72 samples/8 units =	9.0 samples	2/month: Average of three quotes  2/month: Average of three quotes (inc VOC 624 analysis)
Shipping		5 samp	\$5.00	\$98	\$98	2 samp/Or/month @	12 111011(115 -	72 samples/o units –	3.0 samples	2/ month. Average of timee quotes (inc voc 024 analysis)
Subt - SPDES Outfall Sampling & Analysis	19.3	Samp	\$5.00	\$9,403	1	equiring weekly sampling &	analysis for each year o	during post-closure		
PCC-8.4a Discharge Monitoring Report		+			Monthly Dischar	ge Monitoring Reports				
Engineer (Report)	3	3 hours	\$130.00	\$390	\$390 12 months @	2 hrs/event =	24.0 hours @	div by 8 units =	3.0 hours	loaded labor rate: loaded labor rate 2011 3rd party quote
Clerical	6	5 hours	\$45.00	\$270	\$270 12 months @	4 hrs/event =	48.0 hours @	div by 8 units =	6.0 hours	· ' '
Subt - Discharge Monitoring Report		1		\$660	\$660 submittal of SPD	ES Permit required Discharg	e Monitoring Report ([	OMR)		
(Subt: Assemb PCC-8.3 thru 8.4a)				\$10,063	\$10,063 Process Tank Are	ea groundwater & stormwat	er monitoring activitie	s		
				1	1					
PCC-8.5 Landfill Cover Maint.	25.	C CF	40	40.075	62.076 70247.65.6	0.50/	254.6.657			2004 DEC Data * Invaligit Daffator
Grout Cracks/Joints - Conc Cover	351.6		\$8.75	\$3,076	\$3,076 70317 SF @	0.5% per year =	351.6 SF/yr			2004 DEC Rate * Implicit Deflator
Patch Concrete - Concrete Cover	1406.3		\$2.49	\$3,506	\$3,506 70317 SF @	2.0% per year =	1406.3 SF/yr	C1 0 CV /		2004 DEC Rate * Implicit Deflator
Seal Cracks - Asphalt Cover		O SY	\$6.40	\$391	\$391 109820 SF @	0.5% per year =	549.1 SF/yr =	61.0 SY/year		2004 DEC Rate * Implicit Deflator
Replace Asphalt Cover Replace 80-mil HDPE	2196.4 154.0		\$1.35 \$2.85	\$2,964 \$438	\$2,964 109820 SF @ \$438 7700 SF @	2.0% per year =	2196.4 SF/yr			2004 DEC Rate * Implicit Deflator 2004 DEC Rate * Implicit Deflator
Replace Soil/Grass Cover		7 acre	\$2.85	\$438 \$446	\$438 7700 SF @ \$446 1.7 acres @	2.0% per year =	154.0 SF/yr 0.017 acres/yr			
Subt - Cover Maintenance	0.017	acre	\$26,217.00	\$10,820		1.0% per year = rea upper cap maintenance o	.,,			unit price based upon vegetation, topsoil, from RMU-1
PCC-8.6 Mowing/Grooming		<del></del>								
Mowing	75 1	1 MSF	\$3.21	\$241	\$241 75.1 MSF @	1.0 per year =	75.1 MSF			DEC 2004 rate * deflator (2004-2010)
Fertilizing		) MSF	\$3.82	\$57	\$57 75.1 MSF @	1.0 per	5.0 years =	15.0 MSF		DEC 2004 rate * deflator (2004-2010)
Subt - Mowing/Grooming	13.0	T	72.02	\$299		rea mowing and fertilizing	2.2 /20.5			
				\$11,118	\$11,118 Process Tank Ar					+

				T T						
			2011 CWM	2011 CWM						
			Extended	Extended						
Basic Closure Activities: Direct Costs	Estimated	Unit of	Unit Price -	Price -	Basis of Production and Qua	antities for In-hou	use Estimate			
2.000	Quantity	Measure	Annual Cost	Annual Cost	and an a control and a					In-house Pricing References
			Post Closure	Perpetual						
			Period	Care						
CC-8.7 Leachate System Mgmt					ot applicable					
ubt - Leachate Coll Syst Mgmt			\$	\$0						
PCC-8.7a AWTS Operation				<u> </u>						
Subt - AWTS Operation			\$	\$0						
(Subt: Assemb PCC-8.7 thru 8.7a)			\$							
Jabi. Assembli CC 8.7 till a 8.7 dy			, ,	ار عار						
		1								
PCC-8.8 N/A			<del>                                     </del>		ot applicable					
iubt - N/A			\$	\$0						
000 0 0 1/4				<u> </u>	at applicable					
PCC-8.9 N/A					ot applicable					
Subt - N/A			\$	\$0						
OCC 9 10 N/A				ļ	ot applicable					
PCC-8.10 N/A Subt - N/A			\$		ot applicable					
Subt - N/A (Subt: Assemb PCC-8.8 thru 8.10)			\$							
Jubi. Assembli de 8.8 tillu 8.10)		<u> </u>	, ,	, 30						
PCC-8.11 Tank Assessments				I	ot applicable					
Subt - Tank Assessments			s		от аррисавле					
Just - Talik Assessments			7	, , ,						
PCC-8.12 Tank Assessments				n	ot applicable					
Subt - Tank Assessments			\$							
(Subt: Assemb PCC-8.11 thru 8.12)			\$							
						-				
·										
PCC-8.13 Replace Mon Well Pump			<u> </u>	n	ot applicable					
			\$		ot applicable					
PCC-8.13 Replace Mon Well Pump			\$	\$0	ot applicable					
CC-8.13 Replace Mon Well Pump ubt - Replace Mon Well Pumps				\$0	ot applicable					
PCC-8.13 Replace Mon Well Pump ubt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13) PCC-8.14 Drainage Ditch Repair				\$0 \$0	ditches estimated to be 10	feet in width				
CC-8.13 Replace Mon Well Pump  ubt - Replace Mon Well Pumps  Subt: Assemb PCC-8.13 thru 8.13)  CC-8.14 Drainage Ditch Repair  rocess Tank Area Drainage Ditches				\$0 \$0 \$0	ditches estimated to be 10 LF					drainage ditches specific to Process Tank Area
PCC-8.13 Replace Mon Well Pump ubt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13) PCC-8.14 Drainage Ditch Repair Process Tank Area Drainage Ditches Sacility-wide Drainage Ditches			S	\$0 \$0 \$0	ditches estimated to be 10 LF 22600 LF div by	8 units =	2825 LF			drainage ditches in non-specific areas of facility
PCC-8.13 Replace Mon Well Pump Subt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13) PCC-8.14 Drainage Ditch Repair rocess Tank Area Drainage Ditches Gracility-wide Drainage Ditches Drainage Ditch Repair	0.006		\$5,698.00 \$3	\$0 \$0 \$0 0 2 1 \$34 2	ditches estimated to be 10 LF 22600 LF div by 2,825 LF x	8 units = 10 ft/LF =	0.649 acres @	1.0% per year =	0.006 acres	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
PCC-8.13 Replace Mon Well Pump ubt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13) PCC-8.14 Drainage Ditch Repair rocess Tank Area Drainage Ditches actility-wide Drainage Ditches Drainage Ditch Repair tip-Rap Downchute Channel Repair		acre SY	\$5,698.00 \$3 \$44.30 \$	\$0 \$0 \$0 0 0 2 4 \$34 2 50 \$0	ditches estimated to be 10 LF 22600 LF div by 2,825 LF x D LF x	8 units = 10 ft/LF = 0 FT/LF @		1.0% per year = 5.0% per year =	0.006 acres 0.0 SY	drainage ditches in non-specific areas of facility
PCC-8.13 Replace Mon Well Pump oubt - Replace Mon Well Pumps			\$5,698.00 \$3	\$0 \$0 \$0 0 0 2 4 \$34 2 50 \$0	ditches estimated to be 10 LF 22600 LF div by 2,825 LF x	8 units = 10 ft/LF = 0 FT/LF @	0.649 acres @			drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
PCC-8.13 Replace Mon Well Pump ubt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13) PCC-8.14 Drainage Ditch Repair rocess Tank Area Drainage Ditches facility-wide Drainage Ditches Drainage Ditch Repair tip-Rap Downchute Channel Repair ubt - Drainage Ditch Repair			\$5,698.00 \$3 \$44.30 \$	\$0 \$0 \$0 0 0 2 4 \$34 2 50 \$0	ditches estimated to be 10 LF 22600 LF div by 2,825 LF x D LF x	8 units = 10 ft/LF = 0 FT/LF @	0.649 acres @			drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20)
PCC-8.13 Replace Mon Well Pump Subt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13)  PCC-8.14 Drainage Ditch Repair Process Tank Area Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Fubt - Drainage Ditch Repair			\$5,698.00 \$3 \$44.30 \$	\$0 \$0 \$0 0 2 4 \$34 2 \$0 \$34	ditches estimated to be 10 LF 12600 LF div by 1,825 LF x 0 LF x 0 stormwater drainage ditch	8 units = 10 ft/LF = 0 FT/LF @ repair	0.649 acres @ 9.0 SF/SY @	5.0% per year =		drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)
PCC-8.13 Replace Mon Well Pump Subt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13) PCC-8.14 Drainage Ditch Repair PCC-8.14 Drainage Ditches Facility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair Rip-Rap Downchute Channel Repair Rip-Rap Downchute Channel Repair Rip-Rap Downchute Channel Repair Rip-Rap Downchute Channel Repair Rip-Rap Downchute Channel Repair Rip-Rap Downchute Channel Repair Rip-Rap Downchute Channel Repair			\$5,698.00 \$3 \$44.30 \$	\$0 \$0 \$0 0 0 2 4 \$34 2 50 \$0 4 \$34	ditches estimated to be 10 LF 22600 LF div by 2,825 LF x LF x LF x (stormwater drainage ditch) ditches estimated to be 10	8 units = 10 ft/LF = 0 FT/LF @ repair feet wide; sedime	0.649 acres @ 9.0 SF/SY @ ent estimated to be 4 in	5.0% per year =		drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to Process Tank Area
CC-8.13 Replace Mon Well Pump ubt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13)  CC-8.14 Drainage Ditch Repair rocess Tank Area Drainage Ditches acility-wide Drainage Ditches rainage Ditch Repair ip-Rap Downchute Channel Repair ubt - Drainage Ditch Repair  CC-8.15 Drainage Ditch Cleaning rocess Tank Area Drainage Ditches acility-wide Drainage Ditches acility-wide Drainage Ditches	0	SY	\$5,698.00 \$3 \$44.30 \$ \$3	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$34 \$34 \$34 \$34 \$34	ditches estimated to be 10 LF R2600 LF div by R,825 LF x D LF x Stormwater drainage ditch ditches estimated to be 10 000 LF R2600 LF div by	8 units = 10 ft/LF = 0 FT/LF @ repair  feet wide; sedime 8 units =	0.649 acres @ 9.0 SF/SY @ ent estimated to be 4 in 2825 LF	5.0% per year =	0.0 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to Process Tank Area drainage ditches in non-specific areas of facility
CC-8.13 Replace Mon Well Pump ubt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13) CC-8.14 Drainage Ditch Repair rocess Tank Area Drainage Ditches brainage Ditch Repair cip-Rap Downchute Channel Repair ubt - Drainage Ditch Repair cocess Tank Area Drainage Ditches cocility-wide Drainage Ditch Repair	8.4	SY	\$5,698.00 \$3 \$44.30 \$ \$3 \$2.38 \$2	\$0 \$0 \$0 \$0 \$0 \$0 \$34 \$34 \$34 \$34 \$34 \$34 \$34 \$34 \$34 \$34	ditches estimated to be 10 ditches estimated to	8 units = 10 ft/LF = 0 FT/LF @ repair  feet wide; sedime 8 units = 10.0 ft/LF x	0.649 acres @ 9.0 SF/SY @ ent estimated to be 4 in 2825 LF 0.333 feet (4") =	5.0% per year = sches deep. 1206 CY @ 1%/yr =	0.0 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to Process Tank Area drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11)
PCC-8.13 Replace Mon Well Pump Subt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13)  PCC-8.14 Drainage Ditch Repair Process Tank Area Drainage Ditches Prainage Ditch Repair Pip-Rap Downchute Channel Repair Pip-Rap Downchu	8.4	SY  CY miles	\$5,698.00 \$3 \$44.30 \$ \$3 \$2.38 \$2 \$3.25 \$1	\$0 \$0 \$0 \$0 \$0 \$34 \$34 \$34 \$34 \$34 \$34 \$34 \$34 \$34 \$34	ditches estimated to be 10 LF 122600 LF div by 1,825 LF x 0 LF x 0 tornwater drainage ditch ditches estimated to be 10 000 LF 122600 LF div by 1,825.0 LF x 1.3 tons @ 20	8 units = 10 ft/LF = 0 FT/LF @ repair  feet wide; sedime 8 units = 10.0 ft/LF x	0.649 acres @ 9.0 SF/SY @ ent estimated to be 4 in 2825 LF 0.333 feet (4") = 0.6 loads @	5.0% per year =	0.0 SY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to Process Tank Area drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11) nit price based upon FAC Ponds 1/2 transportation (6.13)
PCC-8.13 Replace Mon Well Pump Subt - Replace Mon Well Pumps Subt: Assemb PCC-8.13 thru 8.13)  PCC-8.14 Drainage Ditch Repair rocess Tank Area Drainage Ditches Gracility-wide Drainage Ditches Drainage Ditch Repair Rip-Rap Downchute Channel Repair	8.4	SY  CY miles	\$5,698.00 \$3 \$44.30 \$ \$3 \$2.38 \$2	\$0 \$0 \$0 \$0 \$0 \$1 \$34 \$34 \$34 \$34 \$34 \$34 \$36 \$36 \$36 \$36 \$36 \$36 \$36 \$36 \$36 \$36	ditches estimated to be 10 LF 122600 LF div by 1,825 LF x 0 LF x 0 tornwater drainage ditch  ditches estimated to be 10 0000 LF 122600 LF div by 1,825.0 LF x 1 1.3 tons @ 20	8 units = 10 ft/LF = 0 FT/LF @ repair  feet wide; sedime  8 units = 10.0 ft/LF x 10.0 ft/LF x 10.0 ft/LF x	0.649 acres @ 9.0 SF/SY @ ent estimated to be 4 in 2825 LF 0.333 feet (4") =	5.0% per year = sches deep. 1206 CY @ 1%/yr =	0.0 SY 8.4 CY	drainage ditches in non-specific areas of facility unit price based upon \$5,698/acre (RMU-1 Assembly 14.20) unit price based upon \$44.30/SY (RMU-1 Assembly 14.19)  drainage ditches specific to Process Tank Area drainage ditches in non-specific areas of facility unit price based upon FAC Ponds 1/2 excavation (6.11)

PCC 8: Process Tank Area Direct Cost

Basic Closure Activities: Direct Costs	Estimated Quantity	Unit of Measure	Unit Price	2011 CWM Extended Price - Annual Cost Post Closure Period	2011 CWM Extended Price - Annual Cost Perpetual Care	Basis of Production	n and Quantities for In-h	ouse Estimate	In-house Pricing References		
	1	,									
PCC-8.16 Basin Cleaning							ed to be 4 inches deep.				
asin No. 1						140625 SF div by	8 units =	17578 SF			
Basin No. 2	20.5	CV	ć2.20	Ć242	6242	150000 SF div by	8 units =	18750 SF	200/	00.5.64	weit arise based was 500 Dands 4/2 sussessing (C.44)
Basin Sediment Cleaning	89.6	miles	\$2.38 \$3.25	\$213 \$98		36,328 SF x 121.0 tons @	0.333 feet (4") =	448.0 CY @	20% per year =	89.6 CY	unit price based upon FAC Ponds 1/2 excavation (6.11)
ransportation of Basin Sediment Disposal of Basin Sediment	121.0		\$3.25	\$98 \$4,235		89.6 CY @	20 tons/load = 1.35 ton/CY =	6.0 loads @	5 miles/load =	30 miles	unit price based upon FAC Ponds 1/2 excavation (6.13)
ubtBasin Cleaning	121.0	ton	\$35.00	\$4,235 <b>\$4,546</b>		89.6 ८१ @ facility stormwater		121.0 tons			unit price based upon FAC Ponds 1/2 excavation (6.14)
CC-8.17 Culvert Maint/Replace						avg culvert = 25' (9	SLF 11) & 40' (sitewide); \	various diameters			
rocess Tank Area Culverts						0 culverts x	40 feet long =	120 LF			culverts specific to Process Tank Area areas
acility-wide Culverts						20 culverts x	40 feet long =	800 LF div by	8 units =	100 LF	culverts in non-specific areas of facility
ulvert Cleaning - 18" diameter avg	100	LF	\$2.14	\$214	\$214	100.0 LF	io jeet iong -	200 2. 4 27	0 40	100 2.	DEC 2004 rate * deflator (2004-2010)
epl Culvert - 18" diam avg (Proc Tank)		LF	\$11.61	\$0		0.0 LF @	0.0 pipe/yr =	0.0 LF			DEC 2004 rate * deflator (2004-2010)
tepl Culv't - 18" diam avg (sitewide)	40		\$22.35	\$894		40.0 LF	5.5 p.p.5/ /·	****			DEC 2004 rate * deflator (2004-2010)
eplace Culvert - Ditch Excavation	30	CY	\$2.96	\$89		40.0 LF x	0.75 CY/LF =	30.0 CY			DEC 2004 rate * deflator (2004-2010)
eplace Culvert - Bkfill/Compaction	30		\$3.86	\$116		30.0 CY	,				DEC 2004 rate * deflator (2004-2010)
ubt - Culvert Maint/Replacement			·	\$1,313	\$1,313	culvert maintenan	ce and replacement				, ,
(Subt: Assemb PCC-8.14 thru 8.17)				\$6,325	\$6,325	Process Tank Area	storm drainage maintend	ance & replacement: pos	st-closure & perpetual care frequ	ency are equal	
											·
CC-8.18 Road Maint/Replace						gravel roads = 15 f	eet wide; asphalt roads =	= 20 feet wide			
ocess Tank Area Gravel Roads						0 LF x	15 feet wide =	1500 SY @	5% per year =	0.0 SY	
acility-wide Asphalt Roads						21120 LF x	20 feet wide =	422400 SF @	1% per year =	4224.0 SF	asphalt roads in non-specific areas of facility
roc Tank Area Gravel Road Repair		SY	\$3.12	\$0		0.0 SY					DEC 2004 rate * deflator (2004-2010)
acility-wide Asphalt Roads	528	SF	\$1.35	\$712	\$712	4,224.0 SF div by	8 units =	528.0 SF			DEC 2004 rate * deflator (2004-2010)
ubt - Road Maint/Replacement				\$712		road maintenance					
Subt: Assemb PCC-8.18 thru 8.18)				\$712		Drococc Tank Aroa					
				3/12	\$712	Process runk Areu	road maintenance & repi	acement			
otal Non-Super hours	56.5			3/12	\$712	Process Turk Areu	ойа татепансе & гері	acement			
				·	·	Level C @ 10%; M	·		pv hrs for all tasks; HASP @ 2.5%	of non-supv hrs	
CC-8.19 PPE Use/H&S Planning PE Usage - Level D	5.3	days	\$0.00	\$0	, \$0	Level C @ 10%; M 56.5 hours @	od Level C @ 15%; Level 8 hr/day =	D @ 75% for tot non-su 7.1 days @	75% "D" days =	of non-supv hrs 5.3 days	75% of non-supv hrs in Level D (used facility price: \$0/day)
PECC-8.19 PPE Use/H&S Planning PE Usage - Level D PE Usage - Mod Level C	5.3	days	\$9.00	\$0 \$10	\$0 \$10	Level C @ 10%; M 56.5 hours @ 56.5 hours @	od Level C @ 15%; Level 8 hr/day = 8 hr/day =	D @ 75% for tot non-su	75% "D" days = 15% "Mod C" days =	5.3 days 1.1 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
PECC-8.19 PPE Use/H&S Planning PE Usage - Level D PE Usage - Mod Level C PE Usage - Level C	5.3	_	\$9.00 \$25.00	\$0 \$10 \$18	\$0 \$10 \$18	Level C @ 10%; M 56.5 hours @ 56.5 hours @ 56.5 hours @	od Level C @ 15%; Level 8 hr/day =	D @ 75% for tot non-su 7.1 days @	75% "D" days =	5.3 days	1 1 1 1 1
PCC-8.19 PPE Use/H&S Planning PE Usage - Level D PE Usage - Mod Level C PE Usage - Level C PE Usage - Level C Health & Safety Officer	5.3 1.1 0.7	days	\$9.00	\$0 \$10 \$18 \$105	\$0 \$10 \$18 \$105	Level C @ 10%; M 56.5 hours @ 56.5 hours @	od Level C @ 15%; Level 8 hr/day = 8 hr/day =	D @ 75% for tot non-su 7.1 days @ 7.1 days @	75% "D" days = 15% "Mod C" days =	5.3 days 1.1 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day)
otal Non-Super hours  PCC-8.19 PPE Use/H&S Planning  PPE Usage - Level D  PPE Usage - Mod Level C  PPE Usage - Level C  Health & Safety Officer  Subt - PPE Usage/H&S Planning	5.3 1.1 0.7	days days	\$9.00 \$25.00	\$0 \$10 \$18	\$0 \$10 \$18	Level C @ 10%; M 56.5 hours @ 56.5 hours @ 56.5 hours @	od Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day =	D @ 75% for tot non-su 7.1 days @ 7.1 days @ 7.1 days @	75% "D" days = 15% "Mod C" days =	5.3 days 1.1 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day)
CC-8.19 PPE Use/H&S Planning PE Usage - Level D PE Usage - Mod Level C PE Usage - Level C lealth & Safety Officer ubt - PPE Usage/H&S Planning CC-8.20 Supervision	5.3 1.1 0.7 1.4	days days hours	\$9.00 \$25.00 \$75.00	\$0 \$10 \$18 \$105 \$132	\$0 \$10 \$18 \$105 \$132	Level C @ 10%; M 56.5 hours @ 56.5 hours @ 56.5 hours @ 56.5 hours @	od Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	D @ 75% for tot non-su 7.1 days @ 7.1 days @ 7.1 days @ 1.4 hours	75% "D" days = 15% "Mod C" days =	5.3 days 1.1 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote
CC-8.19 PPE Use/H&S Planning PE Usage - Level D PE Usage - Mod Level C PE Usage - Level C ealth & Safety Officer ubt - PPE Usage/H&S Planning  CC-8.20 Supervision oreman	5.3 1.1 0.7 1.4	days days hours	\$9.00 \$25.00 \$75.00 \$65.00	\$0 \$10 \$18 \$105 <b>\$132</b>	\$0 \$10 \$18 \$105 <b>\$132</b>	Level C @ 10%; M 56.5 hours @ 56.5 hours @ 56.5 hours @ 56.5 hours @	bd Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	D @ 75% for tot non-su 7.1 days @ 7.1 days @ 7.1 days @ 1.4 hours	75% "D" days = 15% "Mod C" days =	5.3 days 1.1 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote
PCC-8.19 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer Fubt - PPE Usage/H&S Planning PCC-8.20 Supervision Foreman Forem	5.3 1.1 0.7 1.4	days days hours	\$9.00 \$25.00 \$75.00	\$0 \$10 \$18 \$105 <b>\$132</b> \$0 \$0	\$0 \$10 \$18 \$105 <b>\$132</b>	Level C @ 10%; M 56.5 hours @ 56.5 hours @ 56.5 hours @ 56.5 hours @	od Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	D @ 75% for tot non-su 7.1 days @ 7.1 days @ 7.1 days @ 1.4 hours	75% "D" days = 15% "Mod C" days =	5.3 days 1.1 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote
PCC-8.19 PPE Use/H&S Planning PPE Usage - Level D PPE Usage - Mod Level C PPE Usage - Level C Health & Safety Officer Hubt - PPE Usage/H&S Planning PCC-8.20 Supervision Foreman	5.3 1.1 0.7 1.4	days days hours	\$9.00 \$25.00 \$75.00 \$65.00	\$0 \$10 \$18 \$105 <b>\$132</b>	\$0 \$10 \$18 \$105 \$132 \$0 \$0	Level C @ 10%; M 56.5 hours @ 56.5 hours @ 56.5 hours @ 56.5 hours @ Included in AWTS A	bd Level C @ 15%; Level 8 hr/day = 8 hr/day = 8 hr/day = 2.5% hr/hr =	D @ 75% for tot non-su 7.1 days @ 7.1 days @ 7.1 days @ 1.4 hours	75% "D" days = 15% "Mod C" days =	5.3 days 1.1 days	15% of non-supv hrs in Mod Level C (used facility price: \$9/day) 10% of non-supv hrs in Level C (used facility price: \$25/day) loaded labor rate: loaded labor rate 2011 3rd party quote

\$30,600

\$30,600

PCC-8: Process Tank Area				
Total Cost Summary				
Cost Category	Proposed	Proposed	Proposed	Cost Range
	Percent	Annual	Cost -	
	of Direct	Cost Post -	Annual	
	Cost	Closure	Perpetual	
		Period	Care	
Direct Costs		\$30,600	\$30,600	
Plus Indirect Costs/Profit:				
Site Activity Management Costs	3.00%	\$918	\$918.00	Included in Gen'l Contractor G&A/Home Office (note: DEC uses 3%)
Gen'l Contractor G&A/Home Office	4.00%	\$1,224	\$1,224	5% for post-closure. (note: DEC uses 4%)
Pre-Construction Design Costs	1.00%	\$306	\$306.00	For post-closure, design costs minimal and included in Assb 8.20. (note: DEC uses 1%)
Engineering During Construction	1.00%	\$306	\$306.00	For post-closure, design costs minimal and included in Assb 8.20. (note: DEC uses 1%)
General Contractor Profit	6.00%	\$1,836	\$1,836	Contractor Profit included in unit rates & Gen' Cont G&A/Home Office (Note DEC adds 6%)
Indirect Costs & Profit	15.00%	\$4,590	\$4,590	
Subtotal - Direct/Indirect Costs		\$35,190	\$35,190	
Subtotal - Direct/ indirect costs		333,130	\$33,190	
Plus Contingency	15.00%	\$5,279	\$5,279	DEC uses 15% applied to total cost
Total - PCC-8: Process Tank Area		\$40,469	\$40,469	

Process Tank Area Years of Post Closure

Years Since Closure

N/A

Post Closure Years Remaining

30

Post Closure Costs Remaining Years	\$1,214,055
Post Closure Costs 30-Years	\$1,214,055

# CLOSURE & POST-CLOSURE COST ESTIMATE UNIT RATES

## Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

	DEC	DEC - 2004			M 2011	
Labor	UOM	Price		UOM	Price	Reference
Laborer	hours	\$39.30		hours	\$39.00	ESG, Inc. quote
Maintenance Laborer				hours	\$45.00	ESG, Inc. quote
Driver	hours	\$40.30		hours	\$45.00	ESG, Inc. quote
Equipment Operator - Medium	hours	\$50.70		hours	\$45.00	ESG, Inc. quote
Equipment Operator - Heavy (crane)	hours	\$52.40		hours	\$50.00	ESG, Inc. quote
Technician/Sampler	hours	\$37.20		hours	\$38.00	ESG, Inc. quote
Sr. Technician/Sampler	hours	\$42.50		hours	\$50.00	ESG, Inc. quote
Chemist	hours	\$42.21		hours	\$75.00	ESG, Inc. quote
AWTS Technician				hours	\$65.00	ESG, Inc. quote
AWTS Supervisor				hours	\$85.00	ESG, Inc. quote
Foreman	hours	\$55.45		hours	\$65.00	ESG, Inc. quote
Site Project Manager	hours	\$59.72		hours	\$75.00	ESG, Inc. quote
AWTS Engineer				hours	\$90.00	ESG, Inc. quote
Safety Engineer	hours	\$57.82		hours	\$75.00	ESG, Inc. quote
Certification Engineer	hours	\$91.55		hours	\$130.00	ESG, Inc. quote
Certification Clerical	hours	\$33.65		hours	\$45.00	ESG, Inc. quote

	DEC	2004			1
		- 2004		M 2011	
Equipment Units	UOM	Price	UOM	Price	Reference
Forklift (12' lift, 2WD, gas)	hours	\$17.30	hour	\$22.21	RSM/HC p. 470 (line item 01 54 33 40 2020)
Road Tractor (330 HP)	hours	\$30.05	hour	\$32.45	RSM/HC p. 472 (line item 01 54 33 40 7410)
Flatbed Trailer (40 ton)	hours	\$17.85	hour	\$6.26	RSM/HC p. 472 (line item 01 54 33 40 6600)
Tank Trailer (5K gal - 6K gal)	hours	\$18.00	hour	\$6.31	RSM/HC p. 472 (line item 01 54 33 40 6900)
Rolloff (30 CY)	hours	\$16.63	hour	\$19.02	dumpster RSM/BC p. 42 (02225-730-0800)
Dump Trailer (20 CY)	hours	\$14.95	hour	\$5.20	RSM/HC p. 469 (line item 01 54 33 20 5400)
Small Loader (shovel/backhoe bucket 0.5 CY)	hours	\$19.10	hour	\$2.12	RSM/HC p. 468 (line item 01 54 33 20 3860)
Medium Loader (1 CY articulated, 70 HP)	hours	\$25.28	hour	\$14.39	RSM/HC p. 468 (line item 01 54 33 20 4610)
Large Loader (articulated, 185HP)	hours	\$39.12	hour	\$30.03	RSM/HC p. 469 (line item 01 54 33 20 4730)
Yard Crane (80-ton Truck mounted, hydraulic)	hours	\$81.80	hour	\$86.31	RSM/HC p. 474 (line item 01 54 33 60 2700)
Excavator (3/4 CY bucket)	hours	\$65.50	hour	\$29.98	RSM/HC p. 466 (line item 01 54 33 20 0140)
Medium Excavator (2.5 CY bucket)			hour	\$84.09	RSM/HC p. 467 (line item 01 54 33 20 0320)
Large Excavator (4.5 CY bucket)			hour	\$135.93	RSM/HC p. 477 (line item 01 54 33 20 0330)
Hydraulic Hammer (11000 ft-lb)	hours	\$18.15	hour	\$20.59	RSM/HC p. 467 (line item 01 54 33 20 0349)
Claw Attachment	hours	\$16.15	hour	\$2.47	RSM/HC p. 477 (line item 01 54 33 20 0345)
Shears Attachment	hours	\$30.00	hour	\$34.40	2004 DEC Rate * Implicit Deflator
Welding Equipment (electric, 300 amp)	hours	\$8.04	hour	\$5.41	RSM/HC p. 473 (line item 01 54 33 40 7800)
Roadway Sweeper	hours	\$55.63	hour	\$32.25	RSM/HC p. 473 (line item 01 54 33 50 3400)
Grader (40,000lb Grader)	hours	\$50.00	hour	\$45.93	RSM/HC p. 467(line item 01 54 33 20 1920)
Dozer (200 hp)	hours	\$110.00	hour	\$56.38	RSM/HC p. 468 (line item 01 54 33 20 4260)
Backhoe (1 CY)	hours	\$30.50	hour	\$19.18	RSM/HC p. 467 (line item 01 54 33 20 0460)
Skid-steer Loader, Wheeled (30 hp loader)	hours	\$19.10	hour	\$8.23	RSM/HC p. 469 (line item 01 54 33 20 4880)

Unit Rates
Closure & Post-Closure Cost Estimates
CWM Chemical Services, LLC, Model City, New York

Sheepsfoot Vibratory Roller (340 hp)	hours	\$126.50	hour	\$75.60	RSM/HC p. 468 (line item 01 54 33 20 3300)
Smooth Drum Roller (125 hp)	hours	\$41.65	hour	\$25.70	RSM/HC p. 468 (line item 01 54 33 20 3320)
Dump Truck (12-ton load)	hours	\$38.25	hour	\$24.78	RSM/HC p. 469 (line item 01 54 33 20 5250)
Pickup Truck (3/4 ton, 2WD)	hours	\$9.25	hour	\$10.45	RSM/HC p. 472 (line item 01 54 33 40 7100)
Tool Van	hours	\$14.25	hour	\$0.00	Not Used
Pumps 6" (Fac Pond discharge) (6" dia, 30HP)	hours	\$8.50	hour	\$12.34	RSM/HC p. 475 (line item 01 54 33 70 1300)
Discharge Piping (8" dia) (Fac Pond discharge)	LF	\$0.015	LF	\$0.01100	RSM/HC p. 475 (line item 01 54 33 70 0300)
Pumping Equipment (bulk load to tankers)	hours	\$62.50	hour	\$71.67	2004 DEC Rate * Implicit Deflator
Drum Shredder	hours	\$287.50	hour	\$329.70	2004 DEC Rate * Implicit Deflator
Mixing Equipment (Stabilization)	hours	\$118.85	hour	\$136.29	2004 DEC Rate * Implicit Deflator
Pressure Washer	hours	\$8.60	hour	\$4.04	RSM/HC p. 471 (line item 01 54 33 40 5450)
Vacuum (55-gal wet/dry)	hours	\$18.75	hour	\$3.41	RSM/HC p. 473 (line item 01 54 33 40 7800)
Pressure/Vacuum Sweeper			hour	\$22.94	2001 Rate * Implicit Deflator
Steam Cleaner (200 gpm) w/ FUEL			hour	\$18.92	RSM/HC p. 472 (line item 01 54 33 40 6310)
Air Compressor (sampling)			hour	\$2.40	RSM/HC p. 469 (line item 01 54 33 40 0196)
Sampling Supplies	hours	\$25.00		\$25.00	DEC 2004 estimate
Reconditioned drums (lab pack w/ packing)	each	\$100.00		\$114.68	2004 DEC Rate * Implicit Deflator
Replacement of Pump Dischg Hose	hose	\$185.00	hose	\$212.15	2004 DEC Rate * Implicit Deflator
Replace Piping - 6" Steel	LF	\$78.23	LF	\$89.71	2004 DEC Rate * Implicit Deflator
Pipe Cleaning - 8" diameter	LF	\$1.87	LF	\$2.14	2004 DEC Rate * Implicit Deflator
Replace Piping - 3"	LF	\$11.73	LF	\$13.45	2004 DEC Rate * Implicit Deflator
Goulds Submersible SLF-11, 12, RMU1 Secondary (0.5 hp)			each	\$850.00	CWM actual 2011 costs
Goulds Submersible SLF1-6, SLF7, 10, 11, 12, RMU-1 (1.5 hp)			each	\$1,382.40	CWM actual 2011 costs
Goulds Submersible SLF 1-6 (2.0 hp)			each	\$1,490.00	CWM actual 2011 costs
Godwin Submersible RMU-1 active cells (6.0 hp)			each	\$5,400.00	CWM actual 2011 costs
Godwin Submersible T-160 (30.0 hp)			each	\$14,425.00	CWM actual 2011 costs
QED SLF 1-6 (air operated)			each	\$2,950.00	CWM actual 2011 costs
Grunfos GWES & SLF 1-6 (2.0 hp)			each	\$1,490.00	CWM actual 2011 costs
IR Centrifugal SLF 12 OWS (15 hp)			each	\$12,000.00	CWM actual 2011 costs
IR Centrifugal SLF 12 (20 hp)			each	\$12,000.00	CWM actual 2011 costs
QED Air Lift (gw mon wells)			each	\$900.00	CWM actual 2011 costs

	D	EC	CW	/M 2011	
Kiln Dust/Additives/Encap Cont'rs	UOM	Price	UOM	Price	Reference
Cement Kiln Dust (not inc. delivery)	tons	\$6.85			Included in combined rate
Cement Kiln Dust - Delivery Cost	loads	\$300.00			for cost of material & delivery below
Portland cement	tons	\$82.00			
Cement Kiln Dust - Inc. Delivery			tons	\$48.00	CWM actual 2011 costs
Stabilization Costs			tons	\$25.00	CWM actual 2011 costs inc. labor & equipment
Absorbent Additive	CY	\$33.75		\$38.70	2004 DEC Rate * Implicit Deflator
Encapsulation Container - Macro Box	units	\$850.00	units	\$1,000.00	CWM actual 2011 costs
Dismantle/Cut/Load Ductwork	LF	\$1.87	LF	\$2.14	2004 DEC Rate * Implicit Deflator
Dismantle/Cut/Load Baghouses	Each	\$6,156.00	Each	\$7,340.17	2001 Rate * Implicit Deflator
Grout Cracks/Joints - Conc Cover	SF	\$7.65	SF	\$8.77	2004 DEC Rate * Implicit Deflator
Patch Concrete - Concrete Cover	SF	\$2.18	SF	\$2.50	2004 DEC Rate * Implicit Deflator
Seal Cracks - Asphalt Cover	SY	\$5.60	SY	\$6.42	2004 DEC Rate * Implicit Deflator
Replace Asphalt Cover	SF	\$1.18	SF	\$1.35	2004 DEC Rate * Implicit Deflator

### **Unit Rates**

## Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

Replace 80-mil HDPE	SF	\$2.49	SF	\$2.86	2004 DEC Rate * Implicit Deflator
Perimeter Fence	LF	\$38.00	LF	\$20.000	Site Experience 2010 Rate
Electrical Costs - Pumps	KWH	\$0.075		\$0.086	2004 DEC Rate * Implicit Deflator

		DEC	CW	M 2011	
Other Direct Costs	UOM	Price	UOM	Price	Reference
PPE Usage - Level D			days	\$0.00	Standard Work Clothes - Site Experience
PPE Usage - Modified Level C	days	\$9.00	days	\$9.00	Tyvek, gloves, overboots - Site Experience
PPE Usage - Level C	days	\$25.00	days	\$25.00	Respirator, Tyvek, gloves, overboots - Site Experience
Decon Equipment (52 SF/hr)	hours	\$105.95	hours	\$121.50	2004 DEC Rate * Implicit Deflator
Decon Water Disposal - Onsite	gals	\$0.1042			See AWT-2010 table
Aqueous Treatment - Onsite - Mild - DMB	gals	\$0.1042			See AWT-2010 table
Aq Treatment - Onsite-Highly contaminated	gals	\$1.3930			See AWT-2010 table
Diver Inspection SPDES			each	\$4,000.00	Based on 2010 site rate of \$3,500
Lab'r/EO/loader to handle bio-media	hours	\$115.25	hours	\$132.17	2004 DEC Rate * Implicit Deflator
Dismantle Tank/Return to Manuf. Fac Tank 3	each	\$5,500.00	each	\$6,307.28	2004 DEC Rate * Implicit Deflator
Labpacks (55-gal recond. steel)	each	\$100.00	each	\$114.68	2004 DEC Rate * Implicit Deflator

	DEC		CWM 2011		
Soil Borrow - Material & Delivery - Fac Ponds	UOM	Price	UOM	Price	Reference
Soil Borrow - Material & delivery	CY	\$8.85			See RMU-1 Closure Unit Rates
Offsite Borrow - Transportation Cost	miles	\$1.60			See RMU-1 Closure Unit Rates
Offsite Borrow - Material Cost	CY	\$6.85			See RMU-1 Closure Unit Rates

	D	EC	CWI	M 2011	
Fac Ponds	UOM	Price	UOM	Price	Reference
Seed/Fertilize	MSF	\$64.50	MSF	\$73.97	2004 DEC Rate * Implicit Deflator
Seed/Vegetation					Included above
Fertilize					Included above

#### **Cost References:**

"RSM/HC" refers to the RSMeans "Heavy Construction Cost Data", 2009 Edition (rates adjusted f

### Rate Adjustment for inflation:

Last Revised on January 23, 2012

<sup>&</sup>quot;RSM/UP" refers to the RSMeans "Environmental Remediation Cost Data - Unit Price", 2004 Edition (rates adjusted for inflation)

<sup>&</sup>quot;RSM/BC" refers to the RSMeans "Building Construction Cost Data", 2003 Edition (rates adjusted for inflation)

# Analytical Cost Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

Outfall 001	DE	C 2004	CW	/M 2001	CWN	/ 2011 (2)		
Laboratory - SPDES Prequalification	UOM	Price	UOM	Price	UOM	Price	Frequency	Reference
Surfactants (MBAS)	samp	\$36.50			samp	\$28.33	3/event	Avg. of three lab quotes
BOD-5	samp	\$30.00	samp	\$14.00	samp	\$30.00	3/event	Avg. of three lab quotes
Total Suspended Solids (TSS)	samp	\$10.35	samp	\$9.00	samp	\$13.33	3/event	Avg. of three lab quotes
Settleable Solids	samp	\$13.10	samp	\$5.00	samp	\$13.33	3/event	Avg. of three lab quotes
Ammonia (NH <sub>3</sub> )	samp	\$27.00	samp	\$9.00	samp	\$22.67	3/event	Avg. of three lab quotes
Phosphorous					samp	\$20.00	3/event	Avg. of three lab quotes
TON (TKN-NH3)					samp	\$41.67	3/event	Avg. of three lab quotes
Cyanide			samp	\$139.00	samp	\$35.00	3/event	Avg. of three lab quotes
Alkalinity as CaCO <sub>3</sub>					samp	\$15.33	3/event	Avg. of three lab quotes
TOC	samp	\$23.50			samp	\$31.67	3/event	Avg. of three lab quotes
Semi-volatile organics (625)	samp	\$472.50	samp	\$193.00	samp	\$208.33	3/event	Avg. of three lab quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))	samp	\$224.66	samp	\$65.00	samp	\$133.33	3/event	Avg. of three lab quotes
VOCs (624)	samp	\$203.56	samp	\$96.00	samp	\$105.00	3/event	Avg. of three lab quotes
Oil & Grease (1631)			samp	\$38.00	samp	\$21.67	3/event	Avg. of three lab quotes
Sulfates	samp	\$17.40			samp	\$21.00	3/event	Avg. of three lab quotes
Sulfides					samp	\$25.00	3/event	Avg. of three lab quotes
total Phenols			samp	\$139.00	samp	\$26.67	3/event	Avg. of three lab quotes
Priority Pollutant Metals (200.7) *	samp	\$307.99			samp	\$188.00	3/event	Avg. of three lab quotes
Mercury (245.1)					samp	\$25.00	3/event	Avg. of three lab quotes
Mercury (1631B)					samp	\$111.67	3/event	Avg. of three lab quotes
Ca/Mg Hardness (200.7)					samp	\$24.33	3/event	Avg. of three lab quotes
Specific Conductance	samp	\$11.23	samp	\$10.00	samp	\$13.33	3/event	Avg. of three lab quotes
рН	samp	\$6.15	samp	\$10.00	samp	\$10.67	3/event	Avg. of three lab quotes
Total Dissolved solids (TDS)			samp	\$9.00	samp	\$15.00	3/event	Avg. of three lab quotes
TDVS (total dissolved volatile solids)					samp	\$23.33	3/event	Avg. of three lab quotes
Fluoride					samp	\$19.33	3/event	Avg. of three lab quotes
Chlorine					samp	\$19.33	3/event	Avg. of three lab quotes
Residual Chlorine					samp	\$15.00	3/event	Avg. of two lab quotes
NO2					samp	\$21.00	3/event	Avg. of three lab quotes
NO3					samp	\$19.33	3/event	Avg. of three lab quotes
Temperature	samp	\$10.87			samp	field **	3/event	Avg. of three lab quotes
Dissolved Oxygen	samp	\$25.72	samp	\$10.00	samp	field **	3/event	Avg. of three lab quotes
Sampling Equipment	hours	\$25.00			samp	\$25.00		
Sampling Supplies	samp	\$25.00			samp	\$25.00		
Acute Toxicity/Bioassy	samp	\$2,000.00	samp	\$2,000.00		\$3,800.00	one/event	Actual 2010 costs

Note: Analyses based on current approved SPDES Permit

# Analytical Cost Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

- \* Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Ag, Sn, Ti, V, Zn, Se, Sr
- \*\* Field measurement
- (1) Third Part Contract laboratory rates for 2011. Average of 3 quotes.

OUTFALLS 002, 003, 004		DEC	CV	CWM 2001		1 2011 (2)		
Laboratory - SPDES	UOM	Price	UOM	Price	UOM	Price	Frequency	Reference
рН			samp	\$10.00	samp	\$10.67	weekly	Avg. of three lab quotes
Specific Conductance			samp	\$10.00	samp	\$13.33	weekly	Avg. of three lab quotes
Total Suspended Solids (TSS)			samp		samp	\$13.33	weekly	Avg. of three lab quotes
Total Dissolved solids			samp	\$9.00	samp	\$15.00	weekly	Avg. of three lab quotes
Settleable Solids			samp	\$5.00	samp	\$13.33	daily	Avg. of three lab quotes
BOD-5			samp	\$14.00	samp	\$31.67	monthly	Avg. of three lab quotes
Dissolved Oxygen			samp	\$10.00	samp	\$17.50	monthly	Avg. of two lab quotes
Ammonia (NH <sub>3</sub> )			samp	\$9.00	samp	\$22.67	monthly	Avg. of three lab quotes
VOCs (624)			samp	\$96.00	samp	\$105.00	2/month	Avg. of three lab quotes
Oil & Grease (1631)			samp	\$38.00	samp	\$40.00	2/month	Avg. of three lab quotes
Copper			samp	\$5.00	samp	\$17.67	monthly	Avg. of three lab quotes
Zinc			samp	\$5.00	samp	\$17.67	monthly	Avg. of three lab quotes
Phenols			samp	\$12.00	samp	\$26.67	monthly	Avg. of three lab quotes
Pesticides/PCBs (608) (MDL 65 PPT (ng/l))			samp	\$56.00	samp	\$133.33	weekly	Avg. of three lab quotes
2-Chloroethyl vinyl ether					samp	\$86.67	2/month	Avg. of three lab quotes
Dichlorodifluoromethane					samp	\$75.00	2/month	Avg. of two lab quotes ****
Methylene chloride					samp	\$75.00	2/month	Avg. of two lab quotes ****

Note: Analyses based on current approved SPDES Permit

		DEC	CWM 2001		CWM 2011 (2)		Reference
Laboratory- Other	UOM	Price	UOM	Price	UOM	Price	
Chemical Characterization (for leachate primaries)**			samp	\$1,200.00	samp	\$181.67	Avg. of three lab quotes
Priority Poll'nt Organics soil/Organic Priority Pollutants							
(OPP)*	samp	\$472.50	samp	\$345.00	samp	\$615.00	Avg. of three lab quotes
Pest/PCBs Soil	samp	\$224.66	samp	\$56.00	samp	\$131.67	Avg. of three lab quotes
PCB Analysis/Wipe Test (SW 8081/8082)	samp	\$167.13	samp	\$70.00	samp	\$83.33	Avg. of three lab quotes
Priority Pollutant Acid Extractable (Base Neutral)			samp	\$193.00	samp	\$195.00	Avg. of three lab quotes
Priority Pollutant VOCs	samp	\$203.56	samp	\$96.00	samp	\$105.00	Avg. of three lab quotes
VOC Analysis (EPA 624)	samp	\$203.56	samp	\$96.00	samp	\$105.00	Avg. of three lab quotes
VOC Site Specific (VOCs)			samp	\$96.00	samp	\$105.00	Avg. of three lab quotes
TCLP/Priority Pollutant Metals ***			samp	\$108.00	samp	\$160.00	Avg. of three lab quotes
TCLP (Metals/VOCs/Semi-VOCs)	samp	\$661.00	samp	\$239.00	samp	\$446.67	Avg. of three lab quotes

# Analytical Cost Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

TCLP (RCRA EPA 1311)	samp	\$585.00	samp	\$239.00	samp	\$348.33	Avg. of three lab quotes
TCLP VOCs			samp	\$131.00	samp	\$145.00	Avg. of three lab quotes
Total Priority Pollutants (TPP)			samp	\$472.00	samp	\$633.33	Avg. of three lab quotes
Priority Pollutant Metals soil	samp	\$307.99	samp	\$108.00	samp	\$158.33	Avg. of three lab quotes
Toxic Metals, Cyanide, Phenols (Metals)			samp	\$139.00	samp	\$155.00	Avg. of three lab quotes
6NYCRR Part 371, Appendix 33 Constituents/USEPA 40CFR							
Part 264 Append IX (soil)	samp	\$1,200.00	samp	\$1,200.00	samp	\$1,226.67	Avg. of three lab quotes

<sup>\*</sup> OPP analysis includes Priority Pollutant Volatile Organic, PCB, Pesticides, SVOCs, and Priority Pollutant metals, cyanide.

<sup>\*\*</sup> Chemical Characterization includes, but is not limited to, analysis for PCBs and VOCs.

<sup>\*\*\*</sup> Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn

<sup>\*\*\*\* -</sup> Tested in one 624 run.

# Transportation & Disposal Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

					D	EC Estimate			CWM Estimate				
Waste Type	Disposal Method	CWM Assumed Disposal Site	иом	2004 Per Unit Cost	NYS Deflator: 2010	2010 Per Unit Cost	Reference	2001 Per unit	2011 Per unit	Reference			
Lab Packs (<55 gal)	Incineration	wтı, он	pound	\$2.43	1.147	\$2.79	avg of 3 unit prices	\$1.50	\$1.91	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing			
Misc. Labpacks - Landfill off-site	Landfill		Lab Pack	\$292.00	1.147	\$334.92	avg of 3 unit prices		\$341.00	DEC 2004 Estimate accounting for inflation & CWM 2011 cost comparison industry pricing based on currrent market conditions			
Bulk Non-PCB Org Liquids	Incineration	Veolia ES Technical Solutions (Veolia)	pound		1.147	\$0.00			\$0.35	HWC/ETC 2004 & Current third party rate			
Buik Non-1 CB Org Elquius	memeration	Port Arthur, TX Treatment Complex	gal	\$3.55	1.147	\$4.07	avg of 3 unit prices	\$2.80	\$3.15	HWC/ETC 2004 & Current third party rate			
PCB organic phase liquids	Incineration	Veolia ES Technical Solutions (Veolia)	pound		1.147	\$0.00		\$0.28	\$0.52	HWC/ETC 2004 & Current third party rate			
		Port Arthur, TX Treatment Complex	gal	\$4.88	1.147	\$5.60	avg of 5 unit prices	\$2.80	\$4.68	HWC/ETC 2004 & Current third party rate			
PCB water phase liquids	Incineration	Veolia Port Arthur, TX	pound	n/c	1.147			\$0.28	\$0.52	HWC/ETC 2004 & Current third party rate			
T CB water phase riquius	memeration	veolia i ore Artiful, 1X	gal	n/c	1.147			\$3.30	\$4.33	HWC/ETC 2004 & Current third party rate			
SLF-7 Leachate	Deep Well Injection	WM Vickery	pound	n/c	1.147				\$0.25				
JEI / Ledenate	Beep Well injection	vivi vickery	gal	n/c	1.147				\$0.03				
Bulk PCB solids/sludges	Incineration	Veolia Port Arthur, TX	pound	\$0.73	1.147	\$0.84	avg of 3 unit prices	\$0.60	\$0.64	Current CWM 2011 third party rate			
Bulk PCB Solids	Landfill		ton	\$86.25	1.147	\$98.93	avg of 2 unit prices		\$90.00	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions			
Bulk RCRA Solids	Landfill-w/treatment	Michigan	ton	\$130.00	1.147	\$149.11	HWRC '03 for landfill bulk haz waste w/o treatment		\$133.00	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions	Stab Waste/Fac Pond Sediment/Hazardous Waste Resource Center/Environmental Technology Council (ETC)		
	Landfill-w/o treatment	Michigan	ton	\$86.25	1.147	\$98.93	avg of 2 unit prices		\$90.00	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions			
Tanks/Tank System Debris/Macro-	1 46°11	Michigan	CF	\$10.90	1.147	\$12.50	RS Means		\$12.50	DEC 2004 Estimate accounting for inflation	material placed in macro-box onsite		
Box/RCRA Debris	Landfill	Michigan	СУ		1.147	\$0.00			\$337.50	DEC 2004 Estimate accounting for inflation			
Large PCB Transformer	Landfill	Michigan	СУ	\$294.00	1.147	\$337.22	RS Means		\$12.50	DEC 2004 Estimate accounting for inflation			
Large PCB Transformer	Lanumi	iviiciiigaii	CF		1.147	\$0.00			\$337.50	DEC 2004 Estimate accounting for inflation			
Offsite Disposal - Concrete Debris/Non- Haz	Landfill	New York State 'D' Landfill	tons	\$27.00	1.147	\$30.97	EPA Data		\$35.00	Non-Haz Disposal/Site Experience			
Drum PCB Solids	Landfill	Michigan	drum	\$98.75	1.147	\$113.27	avg of 2 unit prices		\$100.00	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions			
Drum RCRA Solids	Landfill	Michigan	drum	\$98.75	1.147	\$113.27	avg of 2 unit prices		\$100.00	HWC/ETC 2004 & CWM 2011 cost comparison industry pricing based on current market conditions			
Carbon Regeneration	n/a	Siemans	pound	\$0.265	1.147	\$0.30	avg of 2 unit prices	\$0.2813	\$0.37	Current third party rate (Seimans) - Actual Cost Site Experience	CWM rate includes transport		

2010 Rate = 110.654 (2010 GDP) ÷ 96.77 (2004 GDP)

HWC/ETC 2004 = Hazardous Waste Resource Center/Environmental Technology Council (ETC)

# Transportation & Disposal Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

2004-2009

2004-2010

2001-2010

2009-2010

1.134

1.147

1.223

1.012

### TRANSPORTATION COSTS (add to facility list as per above)

		Distance to Facility from Model City
Facility	UOM	Facility
CWM Port Arthur, TX	miles	1529
Resource Recovery	miles	440
WTI, OH	miles	255
WM Vickery	miles	295
Wayne Disposal, MI	miles	385
Siemans	miles	232
Modern	miles	5

			2011 Cost per
Equipment Type	иом	2001 Cost per loaded mile	loaded mile
Van Trailer	mile	\$2.70	\$3.25
Dump Trailer	mile	\$3.25	\$2.70
Flatbed	mile	\$3.50	\$3.50
Tanker truck	mile	\$3.50	\$3.50
Roll-off Transporter	mile	\$3.25	\$3.25

### Leachate and Site Waters Treatment

### Costs

Summary costs (without labor and	
maintenance):	Treatment \$/Gal.
SLF 1-6	\$1.8244
SLF 7	\$0.2195
SLF 10	\$0.2195
SLF 11	\$0.3532
SLF 12	\$0.1526
RMU-1	\$0.0178
Site Waters	\$0.0313
Groundwater	\$0.1526
OTHER	\$0.1526
Total	\$0.0453

Note: Leachate treatment costs from unit costs table

AWTS Labor in Assembly 13.0 - third Party leachate treatment costs to operate facility

# Leachate Treatment Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

### AQUEOUS WASTEWATER TREATMENT (AWT): Variable Cost

Assume fixed cost = 0; labor/maintenance excluded and separately estimated.

Variable cost = oil and filter cake disposal, reagents.

### Based upon actual 2010 volumes, actual treatment and disposal costs as invoiced.

2010 cost for transportation and disposal of leachate oil and filter cake (Leachate oil to Port Arthur; 100% of filter cake to Port Arthur, 0% of filter cake to Stablex):

	Leachate	Filter Cake (lb.)	Filter Cake (lb.)	Filt	ter Cake (lb.)
	Oil (lb.)	to Port Arthur	to Stablex		Overall
Disposal	\$ 0.52	\$ 0.34		\$	0.34
Transportation	\$ 0.24	\$ 0.13		\$	0.13
Total	\$ 0.76	\$ 0.47		\$	0.47

### Total 2010 gallons generated:

	Total	% Oil	Gallons	% Aqueous	Gallons
	Gallons	*	Oil		Aqueous
SLF 1-6	114,110	25	28,528	75	85,583
SLF 7	51,800	1	518	99	51,282
SLF 10	61,325	1	613	99	60,712
SLF 11	143,283	3	4,298	97	138,985
SLF 12	37,765	0	=	100	37,765
RMU-1	14,666,777	0	-	100	14,666,777
Site Waters	1,445,496	0	-	100	1,445,496
Groundwater	616,760	0	=	100	616,760
OTHER	814,435	0	-	100	814,435
Total	17,951,751	-	33,957	-	17,917,794

<sup>\* =</sup> Based on outbound shipments of profile X0024 to Port Arthur, TX

**2010 reagent cost: Carbon =** \$318,400 Carbon + treatment chemicals = \$398,000

Reagent cost includes carbon, sulfuric acid, hydrochloric acid, ferrous sulfate and lime.

RMU-1 = \$0.0178 /gal. Site Waters (90% carbon only) = \$0.0219 /gal.

SLF 1-6, 7, 10, 11, 12, groundwater + other = \$0.0586 /gal.

### Assume 1 lb. of filter cake generated for every 5 gallons of leachate treated.

### Disposal of leachate oils:

Leachate oil is 9 lb./gallon.

	Gallons	Disposal	Density	Total
	Oil	Cost/lb.	lb./gal.	Cost
SLF 1-6	28,528	0.76	9	\$ 195,128
SLF 7	518	0.76	9	\$ 3,543
SLF 10	613	0.76	9	\$ 4,195
SLF 11	4,298	0.76	9	\$ 29,402
Total	33,957	-	-	\$ 232,268

# Leachate Treatment Unit Rates Closure & Post-Closure Cost Estimates CWM Chemical Services, LLC, Model City, New York

### Disposal of filter cake:

	Gallons	Filter Cake	Disposal	Total
	Aqueous	(1 lb/5 gal)	Cost/lb.	Cost
SLF 1-6	85,583	17,117	\$ 0.47	\$ 8,045
SLF 7	51,282	10,256	\$ 0.47	\$ 4,821
SLF 10	60,712	12,142	\$ 0.47	\$ 5,707
SLF 11	138,985	27,797	\$ 0.47	\$ 13,065
SLF 12	37,765	7,553	\$ 0.47	\$ 3,550
RMU-1	14,666,777	•	\$ 0.47	\$ -
10% Site Waters	144,550	28,910	\$ 0.47	\$ 13,588
Groundwater	616,760	123,352	\$ 0.47	\$ 57,975
OTHER	814,435	162,887	\$ 0.47	\$ 76,557
Total	16,616,847	390,014	\$ 0.47	\$ 183,307

### **Reagent Cost:**

	Gallons	Reagent		Total
	Aqueous	Cost/gal		Cost
SLF 1-6	85,583	\$	0.0586	\$ 5,014
SLF 7	51,282	\$	0.0586	\$ 3,005
SLF 10	60,712	\$	0.0586	\$ 3,557
SLF 11	138,985	\$	0.0586	\$ 8,143
SLF 12	37,765	\$	0.0586	\$ 2,213
RMU-1	14,666,777	\$	0.0178	\$ 260,629
Site Waters	1,445,496	\$	0.0219	\$ 31,587
Groundwater	616,760	\$	0.0586	\$ 36,135
OTHER	814,435	\$	0.0586	\$ 47,717
Total	17,917,794			\$ 398,000

### Summary costs (without labor and maintenance):

	Oil	Filter	Reagents	Total	Gallons	Treatment
	(\$)	Cake (\$)	(\$)	Cost (\$)		\$/Gal.
SLF 1-6	\$ 195,128	\$ 8,045	\$ 5,014	\$ 208,187	114,110	\$1.8244
SLF 7	\$ 3,543	\$ 4,821	\$ 3,005	\$ 11,368	51,800	\$0.2195
SLF 10	\$ 4,195	\$ 5,707	\$ 3,557	\$ 13,459	61,325	\$0.2195
SLF 11	\$ 29,402	\$ 13,065	\$ 8,143	\$ 50,609	143,283	\$0.3532
SLF 12	\$ -	\$ 3,550	\$ 2,213	\$ 5,763	37,765	\$0.1526
RMU-1	\$ -	\$ -	\$ 260,629	\$ 260,629	14,666,777	\$0.0178
Site Waters	\$ -	\$ 13,588	\$ 31,587	\$ 45,175	1,445,496	\$0.0313
Groundwater	\$ -	\$ 57,975	\$ 36,135	\$ 94,111	616,760	\$0.1526
OTHER	\$ -	\$ 76,557	\$ 47,717	\$ 124,274	814,435	\$0.1526
Total	\$ 232,268	\$ 183,307	\$ 398,000	\$ 813,574	17,951,751	\$0.0453

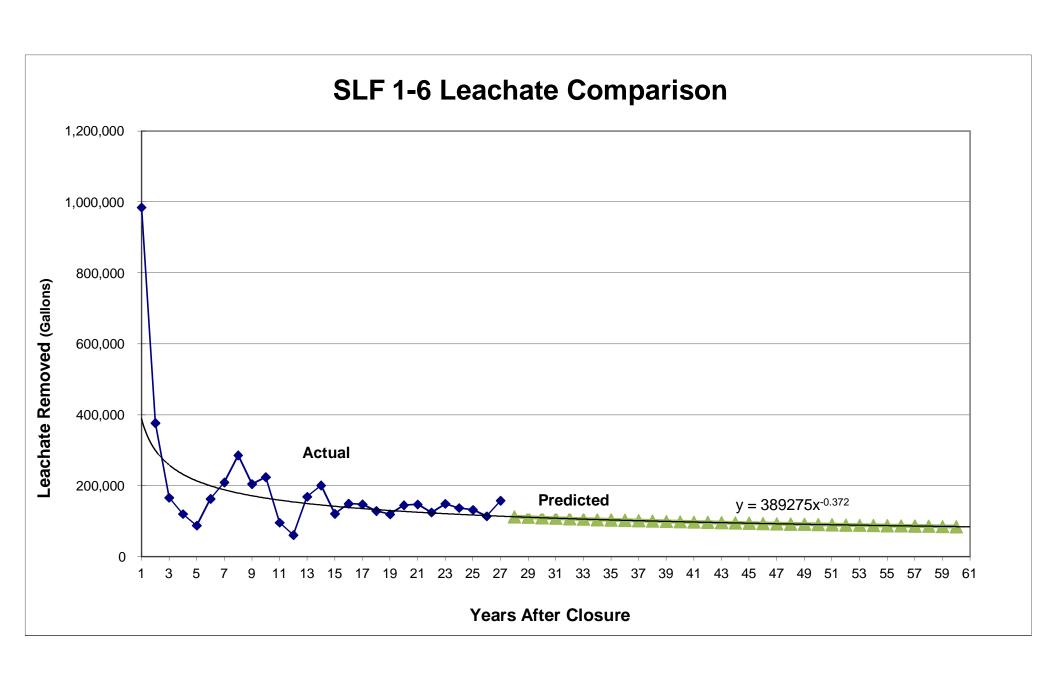
## POST CLOSURE LEACHATE GENERATION RATE ESTIMATES

### **LEACHATE GENERATION RATES MODIFIED LINEAR REGRESSION OF SLF 1-6**

Correlation of Yearly Flows VS. Time (Gal/Yr)

Years	Year	Leachate Removed	Leachate Removed
After Closure		(Actual)	(Predicted)
1	1985	984,600	
2	1986	376,724	
3	1987	166,413	
4	1988	120,377	
5	1989	87,839	
6	1990	163,109	
7	1991	209,380	
8	1992	285,905	
9	1993	205,017	
10	1994	224,322	
11	1995	96,113	
12	1996	60,998	
13	1997	169,171	
14	1998	201,010	
15	1999	121,108	
16	2000	149,532	
17	2001	147,799	
18	2002	128,995	
19	2003	119,500	
20	2004	145,171	
21	2005	147,496	
22	2006	124,872	
23	2007	149,140	
24	2008	137,476	
25	2009	132,155	
26	2010	114,110	
27	2011	158,011	
28	2012		112,697
29	2013		111,236
30	2014		109,842
31	2015		108,510
32	2016		107,236
33	2017		106,015
34	2018		104,845
35	2019		103,720
36	2020		102,639
37	2021		101,598
38	2022		100,595
39	2023		99,628
40	2024		98,694
41	2025		97,791
42	2026		96,919
43	2027		96,074
44	2028		95,256
45	2029		94,463
46	2030		93,694
47	2031		92,947
48	2032		92,222
49	2033		91,517
50	2034		90,832
51	2035		90,166
52	2036		89,517
53	2037		88,884
54	2038		88,269
55	2039		87,668
56	2040		87,082
57	2041		86,511
58	2042		85,953
59	2043		85,408
60	2044		84,876
61	2045		84,356

138,178 Average of previous 5-years 111,258 Predicted average of years 28 through 30 94,984 Predicted average of years 31 through 60



## LEACHATE GENERATION RATES MODIFIED LINEAR REGRESSION OF SLF 7

Correlation of Yearly Flows VS. Time (Gal/Yr)

V	V	Larabata Banana I	Landaria Banana I
Years	Year		Leachate Removed
After Closure		(Actual)	(Predicted)
1	1985	533,700	
2	1986	254,603	
3	1987	76,870	
4	1988	25,587	
5	1989	36,480	
6	1990	32,588	
7	1991	37,770	
8	1992	42,317	
9	1993	35,407	
10	1994	33,039	
11	1995	37,352	
12	1996	47,543	
13	1997	57,610	
14	1998	47,891	
15	1999	44,672	
16	2000	31,491	
17	2001	30,773	
18	2002	37,864	
19	2003	29,061	
20	2004	36,777	
21	2005	56,037	
22	2006	35,733	
23	2007	25,324	
24	2008	33,134	
25	2009	69,850	
26	2010	51,800	
27	2011	74,050	
28	2012		30,319
29	2013		29,808
30	2014		29,323
31	2015		28,861
32	2016		28,421
33	2017		28,001
34	2018		27,599
35	2019		27,215
36	2020		26,846
37	2021		26,493
38	2022		26,153
39	2023		25,826
40	2024		25,512
41	2025		25,209
42	2026		24,916
43	2027		24,634
44	2028		24,361
45	2029		24,098
46	2030		23,843
47	2031		23,596
48	2032		23,357
49	2033		23,125
50	2034		22,900
51	2035		22,681
52	2036		22,469
		•	·

50,832 Average of previous 5-years29,817 Predicted average of years 28 through 3024,297 Predicted average of years 31 through 60

## LEACHATE GENERATION RATES MODIFIED LINEAR REGRESSION OF SLF 7

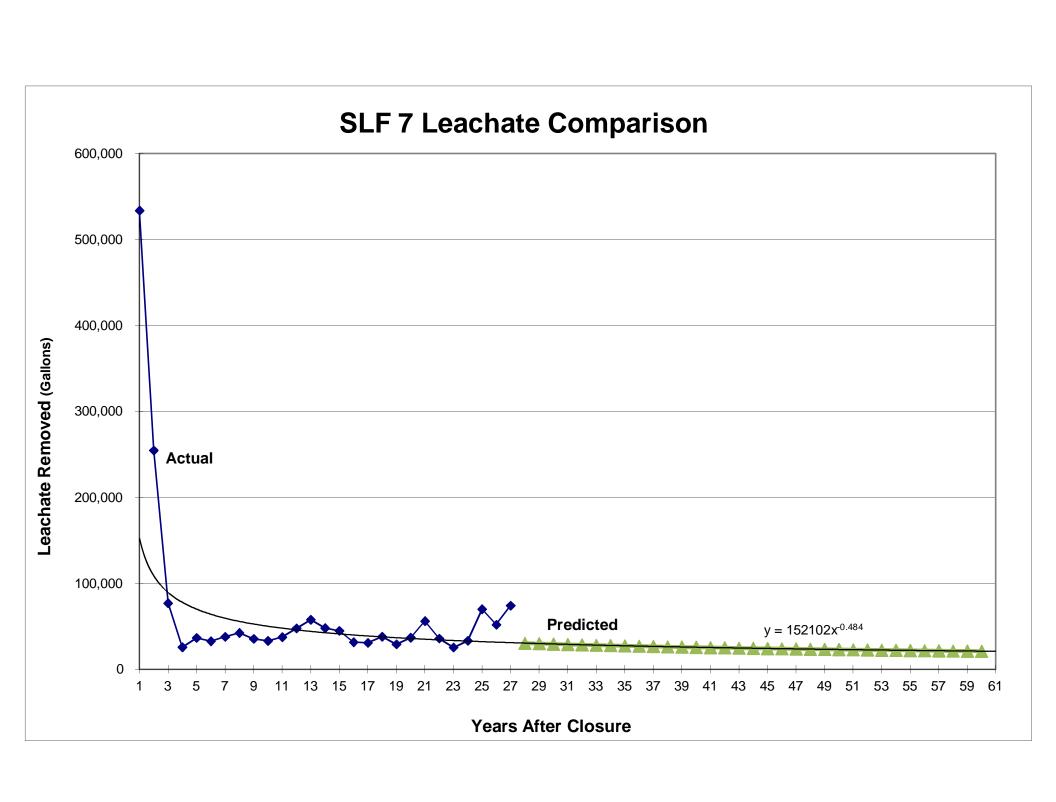
Correlation of Yearly Flows VS. Time (Gal/Yr)

Years	Year	Leachate Removed	Leachate Removed
After Closure		(Actual)	(Predicted)
53	2037		22,263
54	2038		22,063
55	2039		21,868
56	2040		21,678
57	2041		21,493
58	2042		21,313
59	2043		21,137
60	2044		20,966
61	2045		20,799

#### Notoo

Golder calculated the predicted leachate removed using a power trendline based on actual data from previous years

Prior to August 2008, both SLF 7 and SLF 11 leachates were collected in tank T-108, and it was assumed that the total leachate volume in this tank was comprised of 15% SLF 7 and 85% SLF 11, based upon historical information. Since August 2008, SLF 7 and SLF 11 leachate have been collected and measured separately in tanks T-107 and T-108, respectively.



## LEACHATE GENERATION RATES MODIFIED LINEAR REGRESSION OF SLF 10

Correlation of Yearly Flows VS. Time (Gal/Yr)

Years	Year	Leachate Removed	Leachate Removed
After Closure		(Actual)	(Predicted)
1	1987	133,922	(
2	1988	38,562	
3	1989	50,951	
4	1990	69,142	
5	1991	56,254	
6	1992	54,185	
7	1993	36,156	
8	1994	40,954	
9	1995	28,508	
10	1996	40,881	
11	1997	35,356	
12	1998	44,324	
13	1999	32,525	
14	2000	40,717	
15	2001	41,516	
16	2002	45,940	
17	2003	36,090	
18	2004	71,937	
19	2005	64,899	
20	2006	60,493	
21	2007	58,348	
22	2008	54,879	
23	2009	48,204	
24	2010	61,325	
25	2011	76,115	
26	2012		46,127
27	2013		45,985
28	2014		45,848
29	2015		45,716
30	2016		45,589
31	2017		45,467
32	2018		45,349
33	2019		45,234
34	2020		45,124
35	2021		45,017
36	2022		44,913
37	2023		44,812
38	2024		44,714
39	2025		44,619
40	2026		44,526
41	2027		44,436
42	2028		44,349
43	2029		44,263
44	2030		44,180
45	2031		44,098
46	2032		44,019
47	2033		43,941
48	2034		43,866
49	2035		43,791
50	2036		43,719
51	2037		43,648
52	2038		43,579
53	2039		43,511
54	2040		43,444

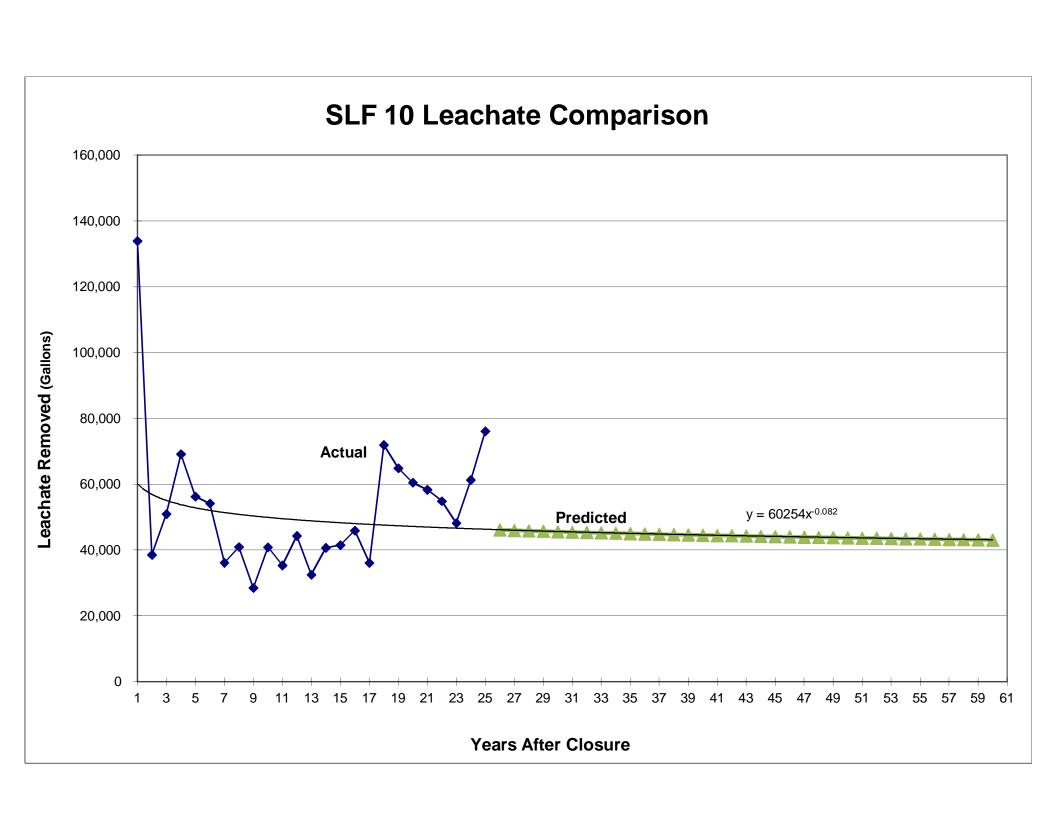
59,774 Average of previous 5-years45,853 Predicted average of years 26 through 3044,132 Predicted average of years 31 through 60

Correlation of Yearly Flows VS. Time (Gal/Yr)

Years	Year	Leachate Removed	Leachate Removed
After Closure		(Actual)	(Predicted)
55	2041		43,379
56	2042		43,315
57	2043		43,252
58	2044		43,190
59	2045		43,130
60	2046		43.070

### Notes

Golder calculated the predicted leachate removed using a power trendline based on actual data from previous years.



Years	Year	Leachate Removed	Leachate Removed
After Closure		(Actual)	(Predicted)
1	1992	686,761	(,
2	1993	550,320	
3	1994	572,622	
4	1995	503,300	
5	1996	377,071	
6	1997	251,147	
7	1998	229,441	
8	1999	253,144	
9	2000	178,441	
10	2001	174,368	
11	2002	214,570	
12	2003	164,681	
13	2004	208,406	
14	2005	317,546	
15	2006	202,487	
16	2007	143,502	
17	2008	150,829	
18	2009	137,678	
19	2010	143,283	
20	2011	163,002	
21	2012		144,071
22	2013		140,275
23	2014		136,741
24	2015		133,441
25	2016		130,350
26	2017		127,449
27	2018		124,717
28	2019		122,141
29	2020		119,705
30	2021		117,398
31	2022		115,209
32	2023		113,129
33	2024		111,148
34	2025		109,260
35	2026		107,457
36	2027		105,733
37	2028		104,083
38	2029		102,502
39	2030		100,985
40	2031		99,528
41	2032		98,128
42	2033		96,780
43	2034		95,481
44	2035		94,230
45	2036		93,022
46	2037		91,856
47	2038		90,729
48	2039		89,639
49	2040		88,584
50	2041		87,563
51	2042		86,573
52	2043		85,614
53	2044		84,683
54	2045		83,779
55	2046		82,901
56	2047		82,048

147,659 Average of previous 5-years

129,629 Predicted average of years 21 through 30

94,026 Predicted average of years 31 through 60

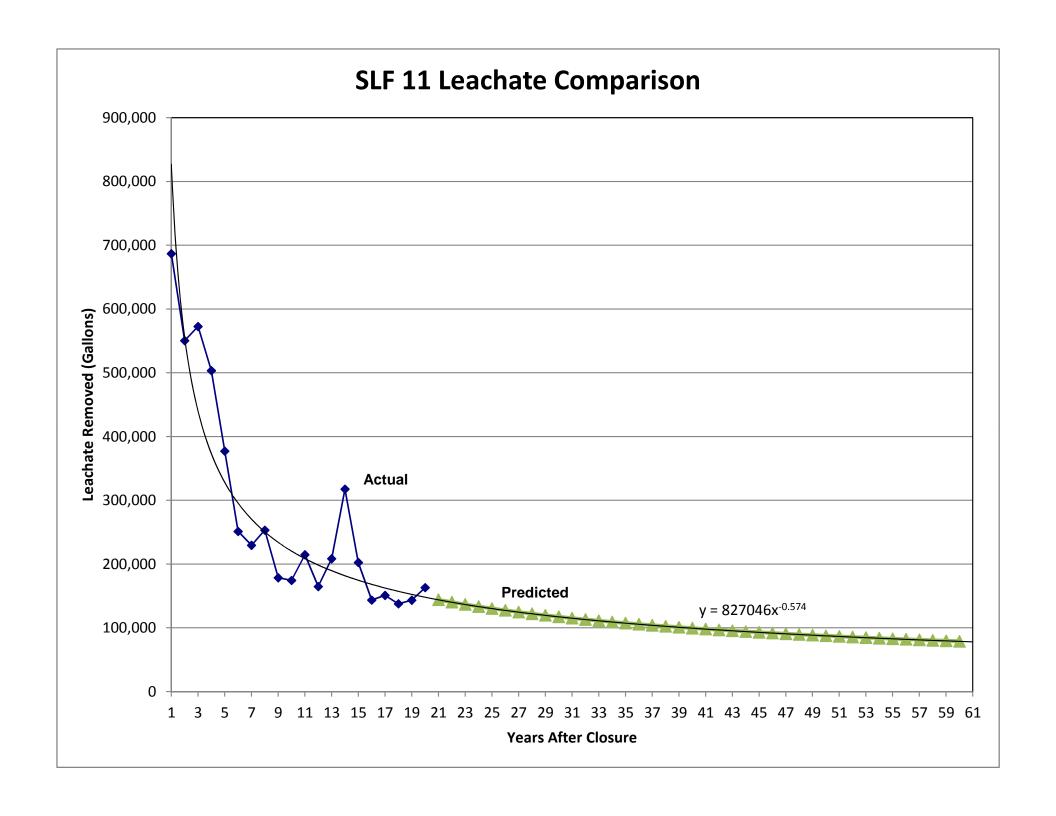
Years	Year	Leachate Removed	Leachate Removed
After Closure		(Actual)	(Predicted)
57	2048		81,219
58	2049		80,412
59	2050		79,627
60	2051		78,863

### Notes:

Golder calculated the predicted leachate removed using a power trendline based on actual data from previous years.

Prior to August 2008, both SLF 7 and SLF 11 leachates were collected in tank T-108, and it was assumed that the total leachate volume in this tank was comprised of 15% SLF 7 and 85% SLF 11, based upon historical information. Since August 2008, SLF 7 and SLF 11 leachate have been collected and measured separately in tanks T-107 and T-108, respectively.

The reported 2005 volume is likely due to the lowering of the leachate compliance level for SLF 11 from one foot over the top of operations layer to one foot over the top of the primary liner.



Years After Closure	Year	Leachate Removed (Actual)	Leachate Removed (Predicted)
1	1996	578,847	(i rouioteu)
2	1997	363,240	
3	1998	194,073	
4	1999	114,015	
5	2000	142,807	
6	2001	77,273	
7	2001	61,321	
8	2002	67,446	
9	2003	66,410	
10	2005	86,658	
11	2006	69,430	
12	2007	62,631	
13	2008	43,816	
14	2009	45,318	
15	2010	37,765	
16	2011	46,868	
17	2012	+0,000	37,826
18	2012		37,826
19	2013		34,045
20	2015		
21	2016		32,430
22	2017		30,966
23	2017		29,632
			28,410
24	2019		27,288
25	2020		26,253
26	2021		25,296
27	2022		24,408
28 29	2023 2024		23,581 22,811
30	2025		22,090
31	2026		21,415
32	2027		20,780
33			
	2028		20,183
34 35	2029		19,621
	2030		19,090
36	2031		18,587
37	2032		18,111
38	2033		17,659
39 40	2034 2035		17,230
41	2035		16,822 16,433
42	2036		16,433
43	2037		15,708
43	2039		15,370
45	2039		15,370
46	2040		14,737
47	2042		14,737
48	2042		14,440
49	2043		13,881
50	2044		
50			13,618
52	2046 2047		13,365
			13,121
53	2048		12,887
54 55	2049 2050		12,661 12,442

47,280 Average of previous 5-years

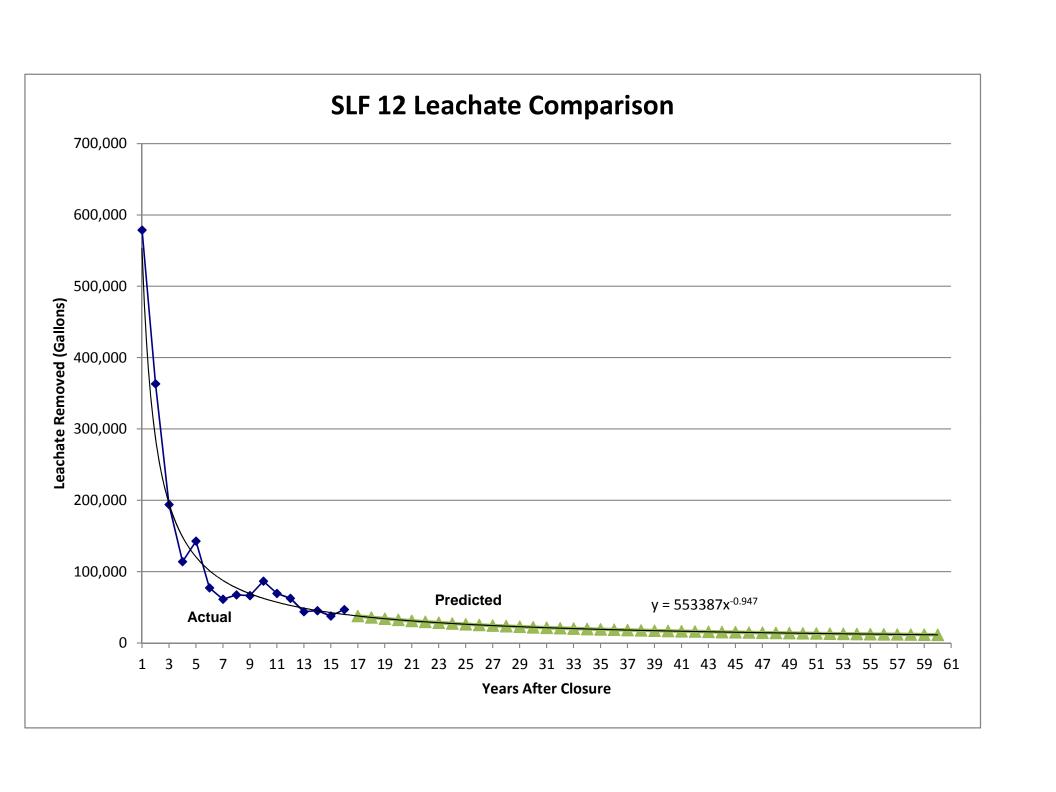
28,634 Predicted average of years 17 through 30

15,421 Predicted average of years 31 through 60

Years	Year	Leachate Removed	Leachate Removed
After Closure		(Actual)	(Predicted)
56	2051		12,232
57	2052		12,029
58	2053		11,832
59	2054		11,642
60	2055		11,458

### Note

Golder calculated the predicted leachate removed using a power trendline based on actual data from previous years.



Years After Closure	Year	Leachate Removed (Actual)	Leachate Removed (Predicted)	SLF-12 leachate removed per acre
1	2015	n/a	1,041,925	26311.2
2	2016	n/a	653,832	16510.9
3	2017	n/a	349,331	8821.5
4	2018	n/a	205,227	5182.5
5	2019	n/a	257,053	6491.2
6	2020	n/a	139,091	3512.4
7	2021	n/a	110,378	2787.3
8	2022	n/a	121,403	3065.7
9	2023	n/a	119,538	3018.6
10	2024	n/a	155,984	3939.0
11	2025	n/a	124,974	3155.9
12	2026	n/a	112,736	2846.9
13	2027	n/a	78,869	1991.6
14	2028	n/a	81,572	2059.9
15	2029	n/a	67,977	1716.6
16	2030	n/a	84,362	2130.4
17	2031	n/a	68,087	
18	2032	n/a	64,500	
19	2033	n/a	61,280	
20	2034	n/a	58,375	
21	2035	n/a	55,739	
22	2036	n/a	53,337	
23	2037	n/a	51,138	
24	2038	n/a	49,118	
25	2039	n/a	47,256	147527.2
26	2040	n/a	45,533	
27	2041	n/a	43,934	
28	2042	n/a	42,447	
29	2043	n/a	41,059	
30	2044	n/a	39,762	
31	2045	n/a	38,546	
32	2046	n/a	37,405	
33	2047	n/a	36,330	
34	2048	n/a	35,318	
35	2049	n/a	34,361	
36	2050	n/a	33,457	
37	2051	n/a	32,600	
38	2052	n/a	31,787	
39	2053	n/a	31,014	
40	2054	n/a	30,280	
41	2055	n/a	29,580	
42	2056	n/a	28,912	
43	2057	n/a	28,275	
44	2058	n/a	27,666	
45	2059	n/a	27,084	
46	2060	n/a	26,526	
47	2061	n/a	25,991	
48	2062	n/a	25,478	
49	2063	n/a	24,985	
50	2064	n/a	24,512	
51	2065	n/a	24,057	
52	2066	n/a	23,618	
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53

2067

n/a

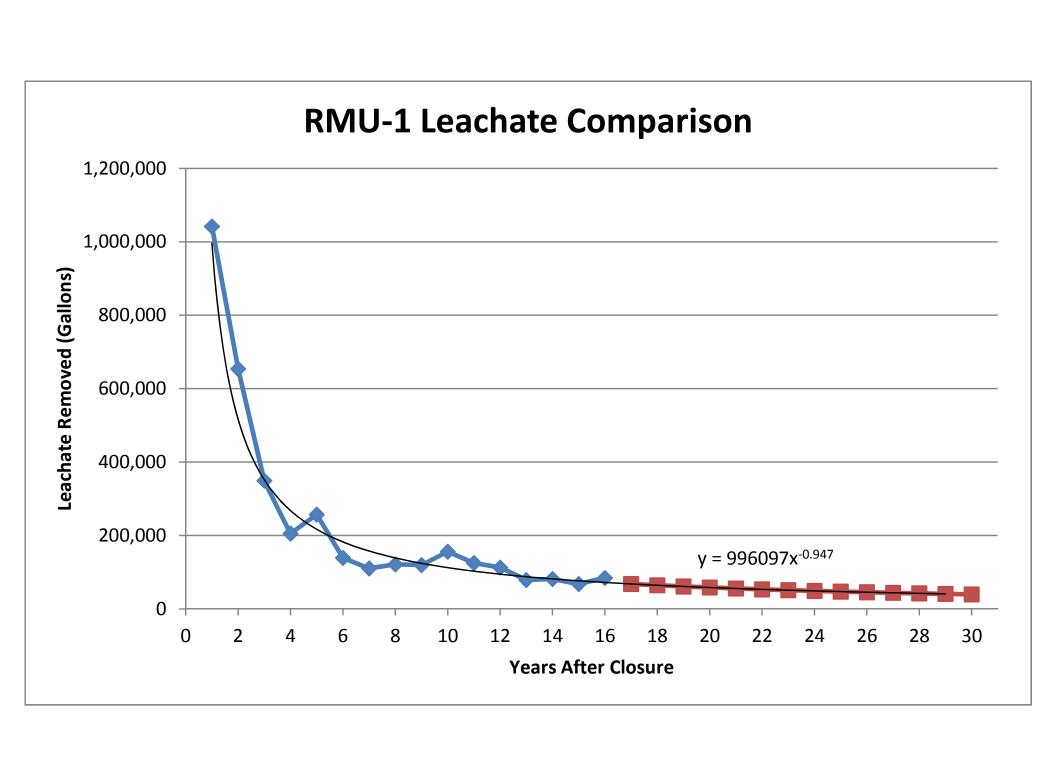
23,196

147527.2 Average of years 0 through 30

Years After Closure	Year	Leachate Removed (Actual)	Leachate Removed (Predicted)	SLF-12 leachate removed per acre
54	2068	n/a	22,789	
55	2069	n/a	22,396	
56	2070	n/a	22,017	
57	2071	n/a	21,652	
58	2072	n/a	21,298	
59	2073	n/a	20,956	
60	2074	n/a	20,625	

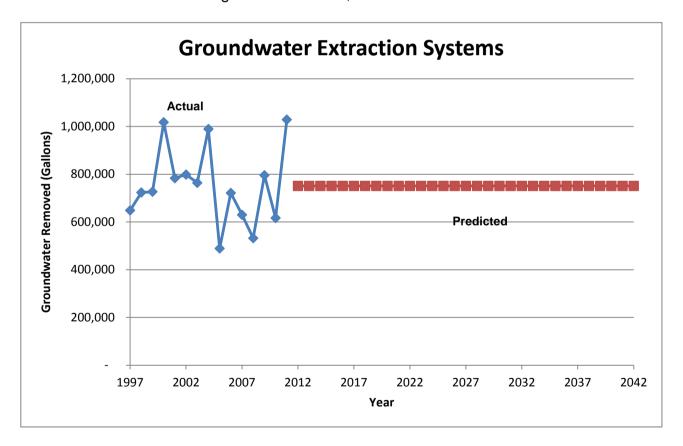
### Note:

Model based on the per acre generation rate of SLF-12 for each year since closure. The generation rate per acre for SLF-12 was applied to RMU-1 since both landfills are of similar construction. For years after the 16 years since closure of SLF-12, Golder calculated the predicted leachate removed using a power trendline based on actual data from years 0-16.



# GROUNDWATER GENERATION RATES CORRECTIVE ACTION GROUNDWATER EXTRACTION

	Groundwater
Year	Removed
1997	648,587
1998	723,512
1999	726,726
2000	1,017,667
2001	783,387
2002	798,540
2003	763,900
2004	989,309
2005	489,129
2006	721,440
2007	629,893
2008	532,148
2009	795,555
2010	616,760
2011	1,028,720
Average	751,018



### SITE WATERS GENERATION RATES HISTORICAL RATES

Year	Site Water Treated
	(Actual)
1996	578,847
1997	363,240
1998	194,073
1999	114,015
2000	142,807
2001	1,009,787
2002	1,048,265
2003	940,415
2004	1,398,225
2005	1,135,950
2006	1,110,722
2007	1,499,845
2008	1,432,420
2009	1,270,595
2010	1,445,496
2011	1,393,391

1,408,349 Average of previous 5-years

