

Description	Number	Units	Unit Cost	Estimated Cost
Former Recycling Plant Area - 150' x 200' (30000 sf)				
<b>Concrete Containment:</b>				
30000 sf x 1' thick x 1.30 for walls & pedestals/27 = 1450 cy 1450 cy x 150 pcf x 27/2000 = approx. 2950 tons.	2950	T&D (nonhaz)/ton*	46.81	138,090
Breakup & Excavation 10 days	10	\$/day	5000	50,000
<b>Soil Removal:</b>				
Assume 2' from 15000 sf/27 = approx. 1150 cy. 1150 cy x 2700#/cy = 3,105,000 # or 1553 tons	3105000	T&D (Haz - incin)/ton**	0.29	900,450
Excavation, etc.	15	\$/day	5000	75,000
Backfill 1150 cy + 1450 cy= 2600cy	2600	\$/cy	8	20,800
Building Demolition				
Dismantle and remove (recycling or C&D Landfill)	3	\$/day	5000	15,000
<b>Surface Equipment (Tank V-68 &amp; V-69, Carbon Unit)</b>				
Discharge water to POTW				
Dissasemble misc. valves, pumps, and piping				
Decontaminate (Pressure wash) Carbon Unit and Tank interiors				
crew	5	\$/day	2750	13,750
Pressure washer	5	\$/day	376	1,880
manlift	5	\$/day	150	750
Analyze Rinsate samples				
analysis for hazardous constituents	1	\$/batch	500	500
Collect and dispose of Rinsate				
2000 gallons = 36 drums	36	T&D (Haz Incin)/drum ***	335	12,060
Dissassemble tanks, load and send to recycling.				
Dismantle and remove (recycle the steel)	4	\$/day	5000	20,000
<b>Abandonment of Trenches and Wells</b>				
Dissassemble pumps, piping and equipment				
crew	5	\$/day	2750	13,750
Disposal of removed equipment	20	\$/ton	60	1,200
Disposal at Lone Mountain Landfill				
Grout Trenches and wells	50	\$/well	600	30,000
	2	\$/well	1500	3,000
<b>Engineering Supervision and Inspection</b>				
50 hours over 10 week period	50	\$/hr	115	5,750
<b>Certification Report</b>				
Technical Writer	60	\$/hr	70	4,200
Clerk	8	\$/hr	60	480

Senior Engineer (Certifier)	8	\$/hr	170	1,360
Principal Engineer	4	\$/hr	275	1,100
<b>Estimated Total Closure Cost</b>				<b>\$ 1,309,120</b>

**NOTES:**

\*Non-haz T&D: Disposal @\$0.01/# or \$20/ton. Transportation to Lone Mountain - 195 miles @\$2.75/mi = \$536.25/ 20 ton load or \$26.81/ton. Total T&D = \$46.81/ton.

\*\*Haz. Incineration T&D: Disposal @ \$0.20/#. Transportation to Aragonite - 1255 miles @\$2.75/mi. = \$3451.25/40000# load or \$0.09/#. Total T&D = \$0.29/#.

\*\*\* Haz Incineration, lean water to El Dorado, T&D

Equipment and labor costs derived from Clean Harbors Technical Services Group pricing for one time only customers.

Crew fee per day (10 hour day)	
Supervisor: \$ 87/hr	870
Technician: \$49/hr x3 people	1470
Pickup truck\$167/day	167
PPE: 4 people x \$60/day	240
<b>Total</b>	<b>2747</b>
<b>Estimating Value</b>	<b>2750</b>

Standard Rate for Engineering services from a national engineering firm

Principal Engineer: \$/hr	275
Senior Engineer: \$/hr	170
Engineer Level III: \$/hr	115
Technical Writer: \$/hr	70
Clerk: \$/hr	60