

**Table 3
Selected Remedy Cost Estimate
Chemical Oxidation
Groundwater
KRY Site**

Item	Unit	Unit Costs	Quantity	Cost	Source
Geologist	hr	\$75.00	928	\$69,600.00	RACER
1-inch stainless steel well casing (vertical)	lf	\$24.00	8,579	\$205,884.00	Estimate from Casper distributor
1-inch stainless steel well screen (vertical)	lf	\$36.00	3,677	\$132,354.00	Estimate from Casper distributor
Swagelok Compression Fittings (3 per well)	ea	\$57.00	1,044	\$59,508.00	Vendor Quote
Rotary Drilling, 6-inch borehole (<= 100 ft)	lf	\$32.00	12,255	\$392,160.00	RACER
4-inch bentonite seal	ea	\$20.16	348	\$7,015.68	RACER
Ozone wellhead assembly	ea	\$1,744.00	348	\$606,912.00	Engineer's estimate from similar project
1-inch PVC piping (lateral connection)	lf	\$1.00	14,925	\$14,925.00	Harrington Plastics
Trenching	cy	\$8.55	4,975	\$42,536.25	RACER
Ozone System	ls	\$74,685.00	25	\$1,867,125.00	Vendor Quote (Calcon Systems)
SCADA System and radio telemetry	ls	\$14,285.72	25	\$357,143.00	Vendor Quote (Calcon Systems)

Subtotal \$3,755,162.93

Construction Contingencies 25% \$938,790.73 10% Scope, 15% bid

Subtotal \$4,693,953.66

Additional Tasks

Electricity power pole drop to each system	ea	\$2,500.00	25	\$62,500.00	Engineer's estimate from similar project
Startup and troubleshooting	ea	\$1,000.00	25	\$25,000.00	Engineer's estimate from similar project
				\$87,500.00	

Project Management 6% \$286,887.22 EPA Cost Guidance
 Remedial Design including Pilot Testing 5% plus \$100,000 \$673,774.44 EPA Cost Guidance
 Construction Management 8% \$382,516.29 EPA Cost Guidance

Subtotal \$1,430,677.95

TOTAL CAPITAL COSTS \$6,124,631.61

ANNUAL OPERATIONS AND MAINTENANCE COSTS

Item	Unit	Unit Cost	Quantity	Cost	Source
Site Operation and Maintenance	hr	\$65.00	2000	\$130,000.00	Engineer's estimate
Power	kwh	\$0.08	1456350	\$116,508.00	Bridger Valley Electric
Water	gal	\$2.25	1000	\$2,250.00	Laramie City

Subtotal \$248,758.00

O&M Contingencies 25% \$62,189.50 10% Scope, 15% Bid

TOTAL YEARLY O&M COSTS \$310,947.50

Present Value	3%
10 years	\$8,777,080.00

Present value includes capital costs and O&M costs for 10 years