

## Kurion Cost Estimate for Water Treatment

OPERATION AND MAINTENANCE COSTS			
DESCRIPTION	QUANTITY	UNITS	COMMENTS
Treatment facility electric	780	kW	The WAA facility maximum utility load under normal operating conditions in the winter with process running is 754 kW. The BA1 skid utilizes 25.6 kW of power.
Nitrate system - gas	2.4 Million	BTU/hr	1.2 million BTU/hr needed to raise temperature 20 degrees F at 125 gpm. Two nitrate trains require heating.
IX resin			IX resin cost based on estimated resin consumption
Barite			Barite cost based on estimated resin consumption and biomass generation rate for nitrate train 4.
6M HCl - UIX system pH adjustment	4,422	gal/month	Cost based on 125 gpm per UIX train for WAA and 90 gpm flowrate for BA #1.
Bioreactor - methanol nutrient source	\$58,500	Per Month	Injection rate of 11 gallons per hour was calculated for a single 125 gpm train at 155 ppm nitrate. Estimated average influent concentration is less than 80 ppm; need for each of the three treatment trains is approximately half of the 11 gallons per hour.
Spent resin disposal	93	55-gal drums	
Dewatered biomass	6	55-gal drums Per Week	Projection based on three 125 gpm train processing 150 ppm nitrates. Although the influent concentration is less than 80 ppm, used this rate to account for addition of inert material to meet disposal requirements.

## Kurion Cost Estimate for Water Treatment

BURIAL AREA #1 TREATMENT FACILITY CAPITAL CONSTRUCTION			
	TOTAL COST	UNIT COST	
		COMMENTS	
One (1) IX system in enclosure	\$1,150,000.00	\$1,150,000.00	Does not include IX resin vessels.
One (1) 12K gallon influent tank (TK-501)	\$44,875.00	\$44,875.00	Dual wall vertical tank. Includes full perimeter handrails and caged access ladders.
One (1) 12K gallon effluent tank (TK-801)	\$36,850.00	\$36,850.00	Single wall vertical tank. Includes full perimeter handrails and caged access ladders.
One (1) 1K gallon acid tank (TK-802)	\$5,330.00	\$5,330.00	Dual walled HDPE tank.
Four (4) 48-inch IX vessels	\$140,000.00	\$35,000.00	Estimated fabrication cost per AvanTech.
Chemical addition pump (P-502)	\$1,898.00	\$1,898.00	Grundfos Model DDC 15-4 quote from PumpTech Inc Moses Lake, WA
Two (2) centrifugal process pumps (P-501 & P-801)	\$13,314.00	\$6,657.00	Grundfos ModelCRN 20-7 quote from Pump Tech Inc, Moses Lake, WA
Wall mounted 2-ton air conditioner unit skid enclosure	\$6,425.00	\$6,425.00	Bard 2-Ton Model # W24A2-C06BPSX3E
Site work and foundations	\$196,539.67		Included in estimated cost for civil grading, foundations, etc., in Table 16-1.

## Kurion Cost Estimate for Water Treatment

WESTERN AREA TREATMENT FACILITY BUILDING - CAPITAL CONSTRUCTION COST		
	TOTAL COST	UNIT COST
COMMENTS		
Pre-engineered building	\$391,769.58	
Site Work and Foundations	\$2,974,001.91	
Electrical Equipment and Installation	\$176,560.00	\$176,560.00
Two (2) heaters for building	\$3,282.00	\$1,641.00
Two (2) exhaust fans	\$5,200.00	\$2,600.00
Five (5) vent louvers	\$7,175.00	\$1,435.00
One (1) heat pump with split air handling unit for office & conference room	\$5,900.00	\$5,900.00
One (1) wall mounted A/C unit	\$759.00	\$759.00
Five (5) eye wash stations	\$2,755.00	\$551.00

Includes mezzanine for resin handling equipment and allowance for mechanical installation

Includes foundation and slab for pre-engineered building.

Included in estimated cost for civil grading, foundations, etc., in Table 16-1.

Table 16-1 includes \$30,450 estimate by Burns & McDonald for septic systems

Switchboards, motor control centers, power panels, dry type transformer, Luminares, receptacles, conduits and installation.

Electric Heater Model Dayton 2YU73, 51,200 BTU/hr

Budgetary quote for Greencheck Model SE2-36-614-B30, 13,767 CFM

Budgetary quote for Greencheck Model EDS-435, 52" Wide X 66" Height & Filter Rack

Quote for Trane 6 Ton Split HP Unit Model TWA073D30RA

Frigidaire FFRH1822R2

Haws Model 7261-7271

## Kurion Cost Estimate for Water Treatment

WESTERN AREA WATER TREATMENT UNITS - CAPITAL CONSTRUCTION COST		
	TOTAL COST	UNIT COST
COMMENTS		
Three (3) IX systems	\$2,100,000.00	\$700,000.00
Does not include IX columns.		
Twelve (12) : 48-Inch IX Vessels	\$420,000.00	\$35,000.00
Estimated fabrication cost per AvanTech.		
Three (3) Biodenitrification Systems	\$4,300,000.00	
Estimated fabrication cost per AvanTech.		
Includes transfer pumps, bioreactors, bioreactor blowers, chemical injection systems, 2 dual media filters, backwash tank and pumps, sludge dewatering system, 125 gpm gas fired heater - \$1,900,000.		
Nitrate Train 2 will have single bioreactor without heating: estimate \$1,050,000		
Nitrate Train 3 will have single bioreactor wth heating: estimate \$1,350,000		

## Kurion Cost Estimate for Water Treatment

WESTERN AREA RESIN PROCESSING EQUIPMENT - CAPITAL CONSTRUCTION COST			
	TOTAL COST	UNIT COST	
		COMMENTS	
Scrolling Centrifuge	\$221,500.00	\$221,500.00	PENNWALT Super-D-Canter centrifuge (PM 30000)
Sack Unloader	\$43,425.00	\$43,425.00	Floor hopper, dust collection system, FLEXICON conveyor, bulk bag discharger
Air Compressor	\$2,953.00	\$2,953.00	Ingersoll Rand Model 2475D5-P with 80-gallon horizontal tank
Ribbon Blender	\$105,422.00	\$105,422.00	Ross 42N-80 ribbon blender (80 cu.ft maximum working capacity) with VFD and mounting option.
Screw Conveyor	\$15,000.00	\$15,000.00	Interface between centrifuge and ribbon blender - 6-inch unit
Miscellaneous Resin Handling Tanks	\$14,750.00	NA	Quote for 550-gallon sluice water tank (TK-703), 550-gallon excess water tank (TK-704), and 150-gallon vessel refill tank (TK-702)
Drum Dumper	\$31,200.00	\$31,200.00	Flexicon quote 2015/1701-DFS32 Open Chute High Lift Drum Dumper SD-DP-06, 10 feet lift

## Kurion Cost Estimate for Water Treatment

WESTERN AREA TANKS, PUMPS, ETC. - CAPITAL CONSTRUCTION COST		
	TOTAL COST	UNIT COST
COMMENTS		
Four (4) 12K gallons Influent Tanks	\$179,500.00	\$44,875.00
Dual wall vertical tank. Includes full perimeter handrails and caged access ladders.		
One (1) 30K gallons Effluent Tank	\$70,075.00	\$70,075.00
Single wall vertical tank. Includes full perimeter handrails and caged access ladders.		
One (1) 5K gallons Acid Tank	\$21,840.00	\$21,840.00
Dual wall HDPE tank		
4-Centrifugal Process Pumps (P-101, P-201, P-301& P-701)	\$26,628.00	\$6,657.00
Grundfos Model CRN 20-7 quote from Pump Tech Inc, Moses Lake, WA		
Diaphragm Pumps (P-702 & P-705)	\$5,215.00	\$2,950.00
Quote from Edson International. Electric diaphragm pump model 120EWA-40-200.		
Centrifugal Pumps (P-703 & P-704)	\$6,394.00	\$3,197.00
Grundfos CRN 10-4 quote from Pump Tech Inc, Moses Lake, WA		
3-Chemical addition Pumps (P-102, P-202, & P-302)	\$5,694.00	\$1,898.00
Grundfos Model DDC 15-4 quote from Pump Tech Inc, Moses Lake, WA		







PROJECT CLIENT: Cimarron Environmental Response Trust  
 PROJECT DESC: Cimarron Remediation  
 PROJECT #: 84237

**SUMMARY**

EST LEVEL: 60%  
 ESTIMATE DUE DATE: 12/22/2015  
 ESTIMATOR: SRH

**CIVIL**

DESCRIPTION	LABOR COST		MATERIAL COST	SUBCON COST	EQUIPMENT RENT COST	TOTAL COST
	MH	COST				

MARK-UP SETTINGS						
WORKING CONDIT. FACTOR	1.10000	NA	NA	NA	NA	1.10000
SUBTOTALS		NA	NA	NA	NA	1.10000
SALES TAX	1.08375	NA	1.08375	NA	NA	1.08375
SUBTOTALS		NA	1.08375	NA	NA	1.19213
FIELD OVERHEAD	1.10000	1.10000	1.10000	NA	NA	1.10000
SUBTOTALS		1.10000	1.19213	NA	NA	1.31134
HOME OFFICE COSTS	1.03000	1.03000	1.03000	NA	NA	1.03000
SUBTOTALS		1.13300	1.22789	NA	NA	1.35068
SUB-CONTR. PROFIT	1.10000	1.10000	1.10000	NA	NA	1.10000
SUBTOTALS		1.24630	1.35068	NA	NA	1.48575
BOND	1.01500	1.01500	1.01500	1.01500	1.01500	1.01500
SUBTOTALS		1.26499	1.37094	1.01500	1.01500	1.50803
ESCALATION	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SUBTOTALS		1.26499	1.37094	1.01500	1.01500	1.50803
CONTINGENCY	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
CTP SUBTOTAL MARKUP MULTIPLIERS		1.26499	1.37094	1.01500	1.01500	1.50803
G. C. O & P ON SIC WORK	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TOTAL MARKUP MULTIPLIERS	1.10000	1.26499	1.37094	1.01500	1.01500	1.50803

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**ESTIMATE DETAIL  
CIVIL**

EST LEVEL: 60%  
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SITE WORK	DESCRIPTION	QTY.	UNIT	LABOR		MATERIAL		SUBCONTRACT		EQUIPMENT RENT		UNIT COST	TOTAL COST
				U MH	MH	RATE \$/MH	TTL COST	UNIT COST	TTL COST	UNIT COST	TTL COST		
	Mob/Demob	1	ls					15225.00	15,225			15225.00	15,225
	Survey Layout Allowance	10	day	35.2	352	57.56	20,260			107.82	1,078	2133.84	21,338
	Clear & Grub at Buildings/Sheds (light clearing)	21	ac	13.2	277	57.56	15,955			2262.05	47,503	3021.80	63,458
	Erosion Control Wattles	23100	lf	0.011	254	57.56	14,625	4.11	95,006	0.15	3,484	4.90	113,115
	Rock Check Dams	5	ea	4.4	22	57.56	1,266	1370.94	6,855	120.64	603	1744.83	8,724
	Seed, Mulch, Fertilize	20	ac						60,900			3045.00	60,900
	Gravel Access Road	4223	sy	0.022	93	57.56	5,347	14.94	63,105	2.26	9,553	18.47	78,005
	- Earthwork (Cut to Fill)	1500	cy	0.088	132	57.56	7,598			3.02	4,524	8.08	12,122
	Access Road Improvements - 6" Agg Overlay	4400	sy	0.0187	82	57.56	4,736	9.60	42,225	1.96	8,626	12.63	55,587
	Rip Rap	341	cy	0.33	113	57.56	6,477	47.98	16,362	17.19	5,862	84.17	28,701
	- Earthwork (Cut to Fill)	341	cy	0.088	30	57.56	1,727			3.02	1,028	8.08	2,756
	Pipe Bollards	92	ea	1.65	152	57.56	8,737	822.56	75,676	22.62	2,081	940.15	86,494
	Western Area RTU Cabinet Platform & Foundations	1	ls					20300.00	20,300			20300.00	20,300
	2" HDPE Water Supply Tubing	1800	lf	0.088	158	72.44	11,474	2.29	4,121	1.27	2,280	9.93	17,876
	6" HDPE Fire Protection Pipe - SDR 17	1900	lf	0.22	418	72.44	30,280	7.61	14,457	3.17	6,017	26.71	50,753
	4" HDPE - Gas Pipe	1600	lf	0.165	264	72.44	19,124	4.61	7,370	2.38	3,800	18.93	30,295
	Valve Vault - Precast 4'x2'x2'	2	ea					3552.50	7,105			3552.50	7,105
	Fire Hydrant System	1	ea					6597.50	6,598			6597.50	6,598
	Propane Tank Foundations / Infrastructure	1	ls					20300.00	20,300			20300.00	20,300
	<b>TOTALS</b>				2,347		147,607		325,176		96,440		699,651

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**ESTIMATE DETAIL  
CIVIL**

EST LEVEL: 60%  
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 ESTIMATOR: SRH

DESCRIPTION	QTY.	UNIT	LABOR		MATERIAL		SUBCONTRACT		EQUIPMENT RENT		UNIT COST	TOTAL COST	
			U MH	MH	RATE \$/MH	TTL COST	UNIT COST	TTL COST	UNIT COST	TTL COST			
<b>HDPE PIPING, PUMPS &amp; WELLS</b>													
<b>Injection System</b>													
2" HDPE - SDR 17	10296	lf	0.088	906	72.44	65,634				1.27	13,042	9.93	102,249
2" HDPE Deep Injection Well - 70 ft w/ Filter & Seal	2	ea	34.881	70	72.44	5,054	2,29	23,572		502.11	1,004	5504.80	11,010
2" HDPE Shallow Injection Well - 30 ft w/ Filter & Seal	11	ea	14.949	164	72.44	11,912	1061.11	11,672		215.19	2,367	2359.20	25,951
Vaults	11	ea						27,913				2537.50	27,913
<b>Injection Trench</b>													
- Excavation to 25' - benched/sloped sides	48592.6	cy	0.22	10,690	72.44	774,409				6.03	293,117	21.97	1,067,526
- Backfill w/ Aggregate for 15' Depth	20148.1	cy	0.132	2,660	72.44	192,658	47.98	966,765		3.77	75,960	61.31	1,235,383
- Backfill w/ Soil for 10' Depth	28444.4	cy	0.132	3,755	72.44	271,988				3.77	107,238	13.33	379,226
- Geotextile	1777.78	sy						5.08	9,022			5.08	9,022
HDPE Valves, Cleanouts, and Fittings Allowance	1	ls			72.44			20300.00	20,300			20300.00	20,300
Western Area Injection System	1	ls	222.07	222	72.44	16,087	76673.05	76,673		3044.50	3,045	95804.62	95,805
Burial Area 1 Injection System	1	ls	193.14	193	72.44	13,991	61085.01	61,085		2647.77	2,648	77723.52	77,724
- Enclosure	240	sf						65.98	15,834			65.98	15,834
Geomembrane- 60 Mil HDPE	1561	sy	0.1485	232	72.44	16,792	7.40	11,556				18.16	28,348
<b>Groundwater Collection System</b>													
6" HDPE - SDR 17	1518	lf	0.22	334	72.44	24,192	7.61	11,550		3.17	4,807	26.71	40,549
4" HDPE - SDR 17	8798	lf	0.165	1,452	72.44	105,159	4.61	40,527		2.38	20,897	18.93	166,582
3" HDPE - SDR 17	3084	lf	0.132	407	72.44	29,489	2.76	8,498		1.90	5,860	14.22	43,848
2" HDPE - SDR 17	4840	lf	0.088	426	72.44	30,854	2.29	11,081		1.27	6,131	9.93	48,066
Groundwater Extraction Trench - 4" HDPE Perforate Pipe	1000	lf	0.165	165	72.44	11,953	5.98	5,977		2.38	2,375	20.31	20,305
- Excavation to 25' - benched/sloped sides	15185.2	cy	0.242	3,675	72.44	266,203				6.03	91,599	23.56	357,802
- Backfill w/ Aggregate for 22' Depth	6296.3	cy	0.132	831	72.44	60,206	47.98	302,114		3.77	23,738	61.31	386,057
- Backfill w/ Soil for 3' Depth	8888.89	cy	0.132	1,173	72.44	84,996				3.77	33,512	13.33	118,508
- Geotextile	1111.11	sy						5.08	5,639			5.08	5,639
Groundwater Extraction Wells, Pump Assembly, & Control Vaults - Instrumentation w/ Electrical	40	ea						17052.00	682,080			17052.00	682,080
HDPE Valves, Cleanouts, and Fittings Allowance	40	ea						4821.25	192,850			4821.25	192,850
<b>TOTALS</b>	1	ls						20300.00	20,300			20300.00	20,300
				27,355		1,981,576	1,536,023	973,938	687,339				5,178,876

PROJECT CLIENT: Cimarron Environmental Response Trust  
 PROJECT DESC: Cimarron Remediation  
 PROJECT # 84237

**ESTIMATE DETAIL  
CIVIL**

EST LEVEL: 60%  
 ESTIMATE DATE: 12/22/2015  
 ESTIMATOR: SRH

DESCRIPTION	QTY.	UNIT	LABOR		MATERIAL		SUBCONTRACT		EQUIPMENT RENT		UNIT COST	TOTAL COST	
			U MH	MH	RATE \$/MH	TTL COST	UNIT COST	TTL COST	UNIT COST	TTL COST			
<b>HDPE PIPING, PUMPS &amp; WELLS</b>													
Compressed Air HDPE - 1"	350	lf	0.077	27	72.44	1,952	1.08	379		1.11	388	7.77	2,719
West Outfall Pipe - 8" HDPE - SDR 17	2800	lf	0.275	770	72.44	55,779	19.06	53,357		3.96	11,084	42.94	120,220
East Outfall Pipe - 4" HDPE - SDR 17	1700	lf	0.165	281	72.44	20,319	4.61	7,831		2.38	4,038	18.93	32,188
Tracer Wire	1200	lf	0.022	26	72.44	1,912	0.40	476				1.99	2,389
Tracere Wire Test Station	2	ea	8.8	18	72.44	1,275	137.03	274				774.50	1,549
Detection Tape	500	cif	0.0627	31	72.44	2,271	37.70	18,850				42.24	21,121
Clean Out Assembly w/ vault	45	ls	4.4	198	72.44	14,343	68.48	3,082	3552.50	60.32	2,714	4000.04	180,002
36" HDPE Stormwater Pipe	64	lf	0.176	11	72.44	816	52.10	3,334	30.45	3.62	232	98.91	6,331
Pressure Testing for Forcemain Pipe	10	ea	70.4	704	72.44	50,998	70.60	706				5170.37	51,704
Cimarron River NPDES Outfall Structure - Conc Headwall &	2	ea			72.44				15225.00			15225.00	30,450
Air Release Valves	1	ls							30450.00			30450.00	30,450
<b>Pipe &amp; Conduit Combined Trench</b>													
** 22,100 LF of Trench **													
Excavation	15555.6	cy	0.165	2,567	72.44	185,929				4.52	70,375	16.48	256,304
Bedding	8555.56	cy	0.132	1,129	72.44	81,809	41.13	351,874		3.77	32,255	54.46	465,938
Backfill w/ Compaction	8555.56	cy	0.132	1,129	72.44	81,809			2.54	3.77	32,255	15.87	135,774
- Respread Spoils	1555.56	cy	0.132	205	72.44	14,874				3.77	5,865	13.33	20,739
<b>TOTALS</b>				7,097		514,087	440,163		244,421		159,205		1,357,876



PROJECT CLIENT Cimarron Environmental Response Trust  
 PROJECT DESC: Cimarron Remediation  
 PROJECT #: 84237

**SUMMARY**  
**CONTROL SHED**

EST LEVEL: 60%  
 ESTIMATE DUE DATE: 12/22/2015  
 ESTIMATOR: SRH

DESCRIPTION	LABOR COST		MATERIAL COST	SUBCON COST	EQUIPMENT RENT COST	TOTAL COST
	MH	COST				

<b>MARK-UP SETTINGS</b>						
WORKING CONDIT. FACTOR	1.10000	NA	NA	NA	1.10000	
SUBTOTALS		NA	NA	NA	1.10000	
SALES TAX	1.08375	NA	1.08375	NA	1.08375	
SUBTOTALS		NA	1.08375	NA	1.19213	
FIELD OVERHEAD	1.10000	1.10000	1.10000	NA	1.10000	
SUBTOTALS		1.10000	1.19213	NA	1.31134	
HOME OFFICE COSTS	1.03000	1.03000	1.03000	NA	1.03000	
SUBTOTALS		1.13300	1.22789	NA	1.35068	
SUB-CONTR. PROFIT	1.10000	1.10000	1.10000	NA	1.10000	
SUBTOTALS		1.24630	1.35068	NA	1.48575	
BOND	1.01500	1.01500	1.01500	1.01500	1.01500	
SUBTOTALS		1.26499	1.37094	1.01500	1.50803	
ESCALATION	1.00000	1.00000	1.00000	1.00000	1.00000	
SUBTOTALS		1.26499	1.37094	1.01500	1.50803	
CONTINGENCY	1.00000	1.00000	1.00000	1.00000	1.00000	
CTP SUBTOTAL MARKUP MULTIPLIERS		1.26499	1.37094	1.01500	1.50803	
G. C. O & P ON S/C WORK	1.00000	1.00000	1.00000	1.00000	1.00000	
TOTAL MARKUP MULTIPLIERS	1.10000	1.26499	1.37094	1.01500	1.50803	

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**ESTIMATE DETAIL  
CONTROL SHED**

EST LEVEL: 60%  
 ESTIMATE DATE: 12/22/2015  
 ESTIMATOR: SRH

DESCRIPTION	QTY.	UNIT	LABOR		MATERIAL		SUBCONTRACT		EQUIPMENT RENT		UNIT COST	TOTAL COST
			U. MH	MH	RATE \$/MH	TTL COST	UNIT COST	TTL COST	UNIT COST	TTL COST		
<b>Control Shed (10'x10')</b>												
Pre-Engineered Metal Building	100	sf	0.2013	20	63.81	1,284	1,645			5.43	543	3,472
-Includes Primary & Secondary Framing												
-10' Eave Height												
Metal Wall Panels	400	sf	0.0495	20	63.81	1,263	6.85	2,742		0.68	271	4,277
R-13 Vinyl Faced Batt Insulation	400	sf	0.011	4	63.81	281	0.58	230		0.15	60	571
Metal Liner Panels	400	sf	0.033	13	63.81	842	4.11	1,645		0.45	181	2,668
Standing Seam Metal Roof	100	sf	0.0495	5	63.81	316	8.91	891		0.68	68	1,275
R-19 Vinyl Faced Batt Insulation	100	sf	0.022	2	63.81	140	0.75	75		0.30	30	246
Gutters	40	lf	0.055	2	63.81	140	9.19	367		0.75	30	538
Downspouts	40	lf	0.0682	3	63.81	174	4.74	190		0.93	37	401
Splash Blocks	4	ea	0.1375	1	63.81	35	47.98	192		1.89	8	235
3070 HM Frames	1	ea	1.65	2	63.81	105	292.01	292				397
3070 HM Doors- Insulated, Narrow Light	1	ea	1.65	2	63.81	105	811.60	812				917
Standard Hardware, Lock / Latch Sets	1	ea	3.3	3	63.81	211	527.81	528				738
Closers	1	ea	2.2	2	63.81	140	387.88	388				528
Sealed Concret Floors	100	sf	0.066	7	63.81	421	2.06	206		0.90	90	717
HVAC	100	sf										2,538
Concrete Foundation/Slab	100	sf								25.38	2,538	3,045
Building Electrical	100	sf								30.45	3,045	2,132
Gravel Driveway	34	sy	0.022	1	57.56	43	14.94	508		2.26	77	628
<b>TOTALS</b>				86		5,502	10,711	7,714	1,396			25,323





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**SUMMARY**  
**TREATMENT FACILITIES**

EST LEVEL: 60%  
 ESTIMATE DUE DATE: 12/22/2015  
 ESTIMATOR: SRH

DESCRIPTION	LABOR COST		MATERIAL COST	SUBCON COST	EQUIPMENT RENT COST	TOTAL COST
	MH	COST				

MARK-UP SETTINGS						
WORKING CONDIT. FACTOR	1.00000	NA	NA	NA	NA	1.00000
SUBTOTALS		NA	NA	NA	NA	1.00000
SALES TAX	1.08375	NA	1.08375	NA	NA	1.08375
SUBTOTALS		NA	1.08375	NA	NA	1.08375
FIELD OVERHEAD	1.10000	1.10000	1.10000	NA	NA	1.10000
SUBTOTALS		1.10000	1.19213	NA	NA	1.19213
HOME OFFICE COSTS	1.03000	1.03000	1.03000	NA	NA	1.03000
SUBTOTALS		1.13300	1.22789	NA	NA	1.22789
SUB-CONTR. PROFIT	1.10000	1.10000	1.10000	NA	NA	1.10000
SUBTOTALS		1.24630	1.35068	NA	NA	1.35068
BOND	1.01500	1.01500	1.01500	1.01500	1.01500	1.01500
SUBTOTALS		1.26499	1.37094	1.01500	1.01500	1.37094
ESCALATION	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SUBTOTALS		1.26499	1.37094	1.01500	1.01500	1.37094
CONTINGENCY	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
CTP SUBTOTAL MARKUP MULTIPLIERS		1.26499	1.37094	1.01500	1.01500	1.37094
G. C. O & P ON SIC WORK	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TOTAL MARKUP MULTIPLIERS	1.00000	1.26499	1.37094	1.01500	1.01500	1.37094





PROJECT CLIENT Cimarron Environmental Response Trust  
 PROJECT DESC: Cimarron Remediation  
 PROJECT #: 84237

**SUMMARY**  
**ELECTRICAL**

EST LEVEL: 60%  
 ESTIMATE DUE DATE: 12/22/2015  
 ESTIMATOR: GS

DESCRIPTION	LABOR COST		MATERIAL COST	SUBCON COST	EQUIPMENT RENT COST	TOTAL COST
	MH	COST				

<b>MARK-UP SETTINGS</b>						
WORKING CONDIT. FACTOR	1.00000	NA	NA	NA	1.00000	
SUBTOTALS		NA	NA	NA	1.00000	
SALES TAX	1.08375	NA	1.08375	NA	1.08375	
SUBTOTALS		NA	1.08375	NA	1.08375	
FIELD OVERHEAD	1.10000	1.10000	1.10000	NA	1.10000	
SUBTOTALS		1.10000	1.19213	NA	1.19213	
HOME OFFICE COSTS	1.03000	1.03000	1.03000	NA	1.03000	
SUBTOTALS		1.13300	1.22789	NA	1.22789	
SUB-CONTR. PROFIT	1.10000	1.10000	1.10000	NA	1.10000	
SUBTOTALS		1.24630	1.35088	NA	1.35088	
BOND	1.01500	1.01500	1.01500	1.01500	1.01500	
SUBTOTALS		1.26499	1.37094	1.01500	1.37094	
ESCALATION	1.00000	1.00000	1.00000	1.00000	1.00000	
SUBTOTALS		1.26499	1.37094	1.01500	1.37094	
CONTINGENCY	1.00000	1.00000	1.00000	1.00000	1.00000	
CTP SUBTOTAL MARKUP MULTIPLIERS		1.26499	1.37094	1.01500	1.37094	
G. C. O & P ON S/C WORK	1.00000	1.00000	1.00000	1.00000	1.00000	
TOTAL MARKUP MULTIPLIERS	1.00000	1.26499	1.37094	1.01500	1.37094	

PROJECT CLIENT: Cimarron Environmental Response Trust  
 PROJECT DESC: Cimarron Remediation  
 PROJECT # 84237

**ESTIMATE DETAIL  
ELECTRICAL**

EST LEVEL: 60%  
 ESTIMATE DATE: 12/22/2015  
 ESTIMATOR: GS

DESCRIPTION	QTY.	UNIT	LABOR		MATERIAL		SUBCONTRACT		EQUIPMENT RENT		UNIT COST	TOTAL COST
			U	MH	RATE \$/MH	TTL COST	UNIT COST	TTL COST	UNIT COST	TTL COST		
<b>ELECTRICAL</b>												
ELECTRICAL SERVICE CONNECTION	1	LS	250.65	251	63.64	15,952	56,550.95				72,502.55	72,503
WESTERN AREA EXTRACTION WELL POWER	1	LS	2898.3	2,898	63.64	184,450	65,472.47				249,922.66	249,923
WESTERN AREA EXTRACTION INSTRUMENTATION	1	LS	1742.6	1,743	63.64	110,899	113,188.90				224,088.17	224,088
BURIAL AREA EXTRACTION WELL POWER	1	LS	887.43	887	63.64	56,478	17,360.84				73,838.55	73,839
BURIAL AREA EXTRACTION INSTRUMENTATION	1	LS	619.39	619	63.64	39,419	49,644.58				89,063.84	89,064
WELL FIELD AREA EXTRACTION WELL POWER	1	LS	1579.7	1,580	63.64	100,533	40,718.92				141,251.76	141,252
WELL FIELD AREA EXTRACTION INSTRUMENTATION	1	LS	922.98	923	63.64	58,740	52,184.85				110,924.78	110,925
INJECTION WELL INSTRUMENTATION	1	LS	1221.1	1,221	63.64	77,710	66,125.68				143,835.98	143,836
WESTERN AREA INJECTION BUILDING ELECTRICAL	1	LS	430	430	63.64	27,366	119,957.06				147,323.06	147,323
BURIAL AREA 1 BUILDING ELECTRICAL	1	LS	410	410	63.64	26,093	99,392.99				125,486.16	125,486
WELL FIELD CONTROL BUILDING ELECTRICAL	1	LS	210	210	63.64	13,365	78,828.92				92,193.72	92,194
SITE FIBER	1	LS	354.5	354	63.64	22,561	15,677.55				38,238.34	38,238
<b>TOTALS</b>				11,526		733,566	775,104					1,508,670

PROJECT CLIENT: Cimarron Environmental Response Trust  
 PROJECT DESC: Cimarron Remediation  
 PROJECT # 84237

**ESTIMATE DETAIL  
ELECTRICAL**

EST LEVEL: 60%  
 ESTIMATE DATE: 12/22/2015  
 ESTIMATOR: GS

DESCRIPTION	QTY.	UNIT	LABOR		MATERIAL		SUBCONTRACT		EQUIPMENT RENT		UNIT COST	TOTAL COST
			U	MH	RATE \$/MH	TTL COST	U	MH	TTL COST	U		
<b>ELECTRICAL</b>												
<b>ADDED SCOPE 12/22/15</b>												
WESTERN AREA SERVICE	1	LS	32		63.64	2,037	21,729.36				23,765.90	23,766
WELL FIELD AREA SERVICE	1	LS	63.7	64	63.64	4,054	10,282.03				14,336.02	14,336
BURIAL AREA 1 SERVICE	1	LS	63.7	64	63.64	4,054	9,048.19				13,102.18	13,102
FLOW METERS AT EACH WELL SITE	1	LS	147	147	63.64	9,355	100,763.93	100,764			110,119.28	110,119
LEVEL TRANSMITTERS AT EACH WELL SITE	1	LS	117.6	118	63.64	7,484	100,763.93	100,764			108,248.21	108,248
GROUNDING AT EACH WELL SITE	1	LS	483.1	483	63.64	30,745	50,288.67	50,289			81,034.06	81,034
FIBER TO ETHERNET MEDIA CONVERTERS/SWITCHES AT EA	1	LS	106	106	63.64	6,746	108,989.55	108,990			115,735.59	115,736
GROUNDING AT THE BURIAL AREA 1. WELL FIELD CONTROL	1	LS	140.3	140	63.64	8,929	14,335.38	14,335			23,264.33	23,264
INCLUDE WAA-REMOTE PLC CABINET AND PLATFORM	1	LS	240	240	63.64	15,274	95,965.65	95,966			111,239.69	111,240
PLC COMMISSIONING / PROGRAMMING	1	LS	800	800	126.50	101,200	13,709.38	13,709			114,908.94	114,909
<b>TOTALS</b>				2,193		189,878	525,876					715,754