



September 28, 2012

Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

Attn: Mr. Alex Fischer, P.G.
Environmental Supervisor – Western Colorado

Re: **WPM Estimate of Probable Pit Closure Costs**
Estimate Number – 1105-1202
Review of application materials prepared by SJ Interests.

Facility ID: **#421065 – McIntyre Flowback Pits 1 and 2**

Dear Mr. Fischer,

Western Project Management (WPM) is pleased to provide the following review narrative and estimate for the probable closure of the above referenced impoundment facility.

Per your request, we have reviewed the available project documentation. The WPM Estimate of Probable Pit Closure Costs is attached for your use.

The general basis for this estimate includes the following assumptions:

1. The WPM total cost estimate for the scope of work is \$375,402.59 for the full closure and reclamation of the site.
2. We have provided an optional cost to remove the existing poly pipe system for an estimated cost of \$10,890.00.
3. Takeoff quantities, labor rates, man-hours, and markups are all detailed in the attached estimate tabs.
4. The proposed operating life of the referenced facility is anticipated to be twenty years therefore, we cannot assume that any waste disposal facility or municipal water treatment plant will be available at their current locations when closure is initiated.
5. Due to the fact that it is impossible to accurately plan for escalation for this reclamation project over the next twenty years, WPM elected to forgo including any escalation or inflation factor with this estimate.
6. WPM suggests that this estimate be updated every five years to give the State a current cost picture.

The following is a summary, by estimate tab section, of the estimate basis:

1. Mobilization and Demobilization
 - a. For the purposes of this estimate, WPM assumed using the services of a Front Range or Western Slope Colorado contractor and have included rates and costs for mobilization and demobilization consistent with that market.
 - b. WPM anticipated that it will take approximately one week to accomplish the mobilization efforts which include transportation of all equipment to the site as well as set up of the field office and erosion control measures.
 - c. WPM has included costs for one week of demobilization as well.
2. Soils Sampling for Contamination
 - a. WPM has included additional cost for soils sampling on site for an estimated 15 locations (hand auger).
 - b. The sample depth will be taken from the surface to 2 feet below.
 - c. Laboratory costs are included in the basis of this estimate.
 - d. The shallow soils testing will occur prior to the reclamation efforts initiating.
3. Surface and Ground Water Well Testing for Contamination
 - a. WPM has assumed that five existing 2" diameter monitoring wells drilled to 50 feet below grade will be sampled.
 - b. Three on-site or close proximity (-1/4 mile) domestic well will be sampled.
 - c. Six seeps or springs in the area will be sampled.
4. Monitoring Well Abandonment
 - a. The 5 existing 2" inch monitoring wells that are drilled to 50 ft in depth will be abandoned in accordance with the State of Colorado State Engineers Monitoring Well Abandonment Requirements.
5. Demolition and Disassembly
 - a. All operator owned or operated monitoring equipment will be removed by the operator, prior to closure work.
 - b. Remaining pipe, culverts, fence, tanks, miscellaneous metals, etc., will be either recycled or hauled off site for disposal unless otherwise specified.
 - c. Disposal is estimated to take approximately 1 week with an allowance of 40 tons of non hazardous solid waste. Waste to include non-recycled fence (security and bird netting), concrete, tanks, miscellaneous piping and debris.
 - d. If the alternate is taken for the removal of the poly pipe, there is an additional 13 tons of waste associated with this work item.
6. Disposal of Pond Fluids
 - a. Waste water detention ponds are assumed to be filled to 100% of capacity when closure work begins.
 - b. For the purposes of this estimate, waste water will not be classified as hazardous materials.
 - c. Waste water 97% onsite disposal at the Federal 24-2 injection well (API# 05-051-06084) via the existing poly pipe system. This is the same as 3 & 4. Is this OK?

- d. 3% of the on-site waste water will be hauled to an offsite treatment facility within 60 minutes haul time from site.
- e. WPM assumes that the liquid waste vacuum truck capacity is 130 barrels or 5460 gallons capacity. This is an industry standard tank capacity.
- f. WPM assumes that the sludge will meet the requirements of Table 910-1. With that assumption, the majority of the sludge at bottom of pond will be integrated into native soil material on site.
- g. No sludge will be classified as hazardous waste.
- h. Some sludge will be hauled to a waste disposal facility.
- i. The waste water and sludge quantities are detailed on the Disposal of Pond Fluids estimate tab sheet.

7. Removal and Disposal of Pond Liners

- a. The quantity of liner layers and square footages have been taken from the pit design cross section dated 10/22/2010 and prepared by SJ Interests.
- b. WPM assumed that each layer of membrane will be cut, sections rolled and loaded separately prior to hauling off site for disposal.
- c. WPM assumes equal amount of dry sludge will be on the liner; this quantity is factored into the 65.5 tons of disposed waste.
- d. WPM assumes that the sludge on the liner will meet the requirements of Table 910-1.
- e. There are currently at least three operating waste disposal sites within an 85 mile radius of the site. The referenced local sites are:
 - i. Pitkin County Landfill
 - ii. Montrose County Landfill
 - iii. Delta County Landfill
- f. For the purposes of this estimate and in order to protect the future cost exposure for the State, the disposal site located the furthest distance from the project was used in calculating haul distance. (Montrose County Landfill)

8. Earthwork

- a. All soils will be used onsite in the existing condition.
- b. No import of off site soils will be required for the closure.
- c. No soil will be classified as hazardous. No cost provisions for removal or treatment of hazardous soils have been included
- d. WPM assumes that the onsite Class 6 road base and Type L rip rap will be tilled into the native soil.
- e. Final earthwork grade is assumed to be +/- 3 – 10ths of a foot therefore, Bluetop grading is not included in the scope of this work.
- f. Seeding consistent with a typical reclamation project is included.
- g. For the purposes of this estimate the following classes of heavy equipment performance data per the Caterpillar Performance Handbook Edition 41, was utilized (unless otherwise noted):
 - i. Caterpillar D8T bulldozer – 1 each
 - ii. Caterpillar 627G scrapers – 2 each
 - iii. Caterpillar 815F sheepsfoot compactor
 - iv. Caterpillar 16M blade

- v. Caterpillar 446b backhoe
- vi. Terex TH644C Reach Forklift (per Terex manufacturer's data sheet).

9. Site Management Costs

- a. Estimated costs for site personnel and contractor general conditions are included for the required scope.

10. Schedule

- a. A planning schedule is included for reference.

11. Labor Rates

- a. Labor classifications and burden is detailed in the estimate tabs. Most of the labor rates have been taken from the recent Mesa County, Colorado Davis Bacon Wage Determination dated January 06, 2012 and the Gunnison County, Colorado Davis Bacon Wage Determination dated January 13, 2012.

Additional estimate backup and assumptions are detailed on the corresponding estimate tabs. This concludes WPM's efforts for a third party review and estimate for the above referenced project.

Thank you for the opportunity to provide this service to the State of Colorado. Please contact me via email at jag@western-pm.com or by phone at 970-674-1618 for further clarification or with questions.

Best regards,

John Goad, Jr.
Senior Project Manager
Western Project Management

Attachments - (1) WPM Estimate of Probable Pit Closure Costs - McIntyre 1 & 2

By: WPM - Western Project Management



Cost Estimate Summary

Item	Description	Quantity	Unit	Direct Unit Cost	Direct Total Cost	Contingency (10%)	Subtotal	Payment & Performance Bonds (1.5%)	Subtotal	Contractor Overhead & Profit (15%)	Total	
A.	Construction Contractor Costs											
1	Mobilization / Demobilization	2	Lump Sum	\$ 6,538.90	\$ 13,077.79	\$ 1,307.78	\$ 14,385.57	\$ 215.78	\$ 14,601.35	\$ 2,190.20	\$ 16,791.56	
2	Soil Sampling for Contamination	15	Locations	\$ 288.63	\$ 4,329.50	\$ 432.95	\$ 4,762.45	\$ 71.44	\$ 4,833.89	\$ 725.08	\$ 5,558.97	
3	Surface Water Sampling for Contamination - 8 samples	14	Samples	\$ 280.26	\$ 3,923.60	\$ 392.36	\$ 4,315.96	\$ 64.74	\$ 4,380.70	\$ 657.10	\$ 5,037.80	
4	Monitoring well Abandonment	5	Wells	\$ 392.50	\$ 1,962.50	\$ 196.25	\$ 2,158.75	\$ 32.38	\$ 2,191.13	\$ 328.67	\$ 2,519.80	
5	Disposal of Pond Fluids (Assumed to be non-hazardous)	3,299,479	Gallons	\$0.002	\$ 7,944.79	\$ 794.48	\$ 8,739.27	\$ 131.09	\$ 8,870.36	\$ 1,330.55	\$ 10,200.91	
6	Remove & Dispose of Operating Equipment	40	Hours	\$ 543.12	\$ 21,724.80	\$ 2,172.48	\$ 23,897.28	\$ 358.46	\$ 24,255.74	\$ 3,638.36	\$ 27,894.10	
7	Remove & Dispose of Pond Liners	189,000.00	Square feet	\$0.096	\$ 18,089.59	\$ 1,808.96	\$ 19,898.55	\$ 298.48	\$ 20,197.03	\$ 3,029.55	\$ 23,226.59	
8	Backfill, Compact, & Restore Site	33,289.31	Cubic yards	\$ 2.99	\$ 99,692.83	\$ 9,969.28	\$ 109,662.11	\$ 1,644.93	\$ 111,307.04	\$ 16,696.06	\$ 128,003.10	
9	Site Management Costs	5	Weeks	\$ 14,580.14	\$ 72,900.69	\$ 7,290.07	\$ 80,190.76	\$ 1,202.86	\$ 81,393.62	\$ 12,209.04	\$ 93,602.66	
	Subtotal Construction					\$ 243,646.09	\$ 24,364.61	\$ 268,010.70	\$ 4,020.16	\$ 272,030.86	\$ 40,804.63	\$ 312,835.49
B.	Administrative and Engineering Costs											
1	Construction Management Fee (5% of Construction)										\$ 15,641.77	
2	Work plans, Engineering Design, and Bid Documents (15% of Construction)										\$ 46,925.32	
Grand Total											\$ 375,402.59	

Mobilization / Demobilization

Summary	Description	Quantity	Unit	Unit Price	Total
	Transportation to the jobsite - Crew	8	hrs	\$ 173.94	\$ 1,391.50
	Transportation to the jobsite - Equip.	8	hrs	\$ 427.86	\$ 3,422.89
	Jobsite Trailer set-up/removal	0	ea	\$ 750.00	\$ -
	Sanitation Facilities	3	ea	\$ 75.00	\$ 225.00
	Crew Jobsite Set-up	8	hrs	\$ 173.94	\$ 1,391.50
	Work Truck - Crew Cab	8	hrs	\$ 13.50	\$ 108.00
	Mobilization/Demobilization Unit Rate				\$ 6,538.90

Crew Rate

	Quantity	Unit	Unit Price	Total
Laborer - Common	2	ea	\$ 27.79	\$ 55.57
Truck Driver	1	ea	\$ 34.43	\$ 34.43
Equipment Operator - Level 2	1	ea	\$ 33.56	\$ 33.56
Equipment Operator - Level 3	1	ea	\$ 50.37	\$ 50.37
				\$ 173.94

Equipment Rate

Work Truck - Crew Cab	2	ea	\$ 13.50	\$ 27.00
Flatbed Truck, Trailer, & Driver	2	ea	\$ 90.43	\$ 180.86
Flatbed Truck, Trailer, & Driver	2	ea	\$ 110.00	\$ 220.00
				\$ 427.86

	Distance	Unit	Speed (mph)	Time
Load up time				2.5
Denver to Exit 116 (I-70)	158	mi	55	2.9
Exit 116 through Carbondale (Hwy 82 & 113)	58	mi	30	1.9
Local roads to Jobsite	4	mi	15	0.3
	<u>220</u>	<u>mi</u>		<u>7.6</u>
Round to the nearest full day				8 hrs

Soil Sampling for Contamination -		15 Locations			
Labor		Quantity	Unit	Unit Price	Total
	Soils Technician	40	hrs	\$ 55.00	\$ 2,200.00
					\$ 2,200.00
Equipment					
	Hand Auger - for testing at perimeter of pit	5	days	\$ 85.00	\$ 425.00
					\$ 425.00
Expenses					
	Transportation (90 mi. r/t from Grand Junction)	450	mi	\$ 0.51	\$ 229.50
	Misc. supplies (gloves, cleaners, containers etc.)	1	ls	\$ 200.00	\$ 200.00
					\$ 429.50
Laboratory Cost					
	BTEX (8015B)	15	ea	\$ 60.00	\$ 900.00
	Chlorides	15	ea	\$ 25.00	\$ 375.00
					\$ 1,275.00
Soil Testing:					\$ 4,329.50
Cost per locations					\$ 288.63

Assumptions:

- A technician is needed for 5 days at the beginning of the reclamation.

Surface and Ground Water Well Testing for Contamination - 14 samples (5 - wells, 3 domestic, 6 seeps/springs)						
Labor						
		Quantity	Unit	Unit Price		Total
	Soils Technician	40	hrs	\$ 55.00	\$	2,200.00
					\$	2,200.00
Expenses						
	Transportation (90 mi. r/t from Grand Junction)	360	mi	\$ 0.51	\$	183.60
	Misc. supplies and shipping of samples	1	ls	\$ 350.00	\$	350.00
					\$	533.60
Laboratory Cost						
	BTEX (8015B)	14	ea	\$ 60.00	\$	840.00
	Chlorides	14	ea	\$ 25.00	\$	350.00
					\$	1,190.00
	Water Testing:				\$	3,923.60
	Cost per locations				\$	280.26

Assumptions:

- A technician is needed for 5 days at the beginning of the reclamation.

Monitoring well abandonment			5 Wells		
Mobilization & Demobilization from Grand Junction (4 hrs each way)					
	Quantity	Unit	Unit Price		Total
Transportation (90 mi. r/t from Grand Junction)	180	mi	\$	0.51	\$ 91.80
Soils Technician	8	hrs	\$	55.00	\$ 440.00
Abandonment					
Abandonment of monitoring well (5 x 50' wells)	250	ft	\$	7.85	\$ 1,962.50
					\$ 1,962.50
	Total cost:			\$	1,962.50
	Cost per locations			\$	392.50

-Rates taken from the OPS EPS 2009

Remove & Dispose of Operating Equipment

Crew Rate				
	Qty.	Unit	Rate	Total
Electrician	1	ea	\$ 55.83	\$ 55.83
Ironworker	1	ea	\$ 53.08	\$ 53.08
Laborer - Common	4	ea	\$ 27.79	\$ 111.15
Equipment Operator - Level 2	2	ea	\$ 33.56	\$ 67.13
				<u>\$ 287.19</u>
Equipment & Fee Rates (Quantities are by the hour)				
	Qty.	Unit	Rate	Total
Work Truck - Crew Cab	1	ea	\$ 13.50	\$ 13.50
Reach Fork	1	ea	\$ 30.00	\$ 30.00
Backhoe -446B	1	ea	\$ 47.00	\$ 47.00
Dump Truck & Driver	1	ea	\$ 90.43	\$ 90.43
Disposal (40 Tons estimated with an average of 1 Ton removed per hour)	1	ea	\$ 75.00	\$ 75.00
				<u>\$ 255.93</u>
Hourly Rate				<u>\$ 543.12</u>
Daily Rate				\$ 4,344.96
Weekly Rate				<u>\$ 21,724.80</u>

Assumptions:

- All metal items such as fencing & tanks will be recycled.
- Disposal of 40 tons includes (pipes, culverts, bird netting, concrete post cases, equipment, etc.).

Remove & Dispose of Poly-Pipe System (alternate removal for approximately 1 mile)

Crew Rate

	Qty.	Unit	Rate	Total
Laborer - Common	2	ea	\$ 27.79	\$ 55.57
Equipment Operator - Level 2	1	ea	\$ 33.56	\$ 33.56
				<u>\$ 89.14</u>

Equipment & Fee Rates

	Qty.	Unit	Rate	Total
Work Truck - Crew Cab	1	ea	\$ 13.50	\$ 13.50
Reach Fork	1	ea	\$ 30.00	\$ 30.00
Flatbed Truck, Trailer, & Driver	1	ea	\$ 90.43	\$ 90.43
				<u>\$ 133.93</u>

Hourly Rate

\$ 223.07

Daily Rate

\$ 1,784.56

Estimated 4 days of removal needed:

\$ 7,138.24

Disposal (13 Tons estimated) (5 lbs/lb of material)	13.2	ea	\$ 75.00	\$ 990.00
				\$ 8,128.24

Contingency 10.0% \$ 812.82

Bonds 1.5% \$ 134.12

Contractor OH&P 20.0% \$ 1,815.04

\$ 10,890.21

Disposal of Pond Fluids (Assumed to be non-hazardous)

Assumed water elevation in the pit (ft)	N/A
Volume of pit fluid at elevation (bbl)	78,559
Volume in gallons (factored)	3,299,478
% of total pond volume (pits 3 & 4 combined)	100.0%

This was 50% on McIntyre 3 & 4. The volumes are so much smaller, I put it up to 100%
Also, I took the total pit volume - not the usable. Usable = 61224 bbls

Description	Qty.	Unit	Trips		Time	Unit	Time	Unit	Rate	Total
Pump fluid into wells through existing polypipe system (97% of factored volume)	3,200,494	gallons			0	wk	3	days	\$ 675.33	\$ 2,025.99
Fuel for Pumps	1	ls					1	ls	\$ 2,000.00	\$ 2,000.00
Pump, fill, and dispose of pit fluid at treatment plant (3% of factored volume)	98,984	gallons	18	ea	18	hrs	2	days	\$ 2,393.46	\$ 5,423.87
Total Gallons removed	3,299,479	gallons	330	ea						
Disposal at municipal facility fee (\$5/1000 gallons)	98,984	gallons							0.005	\$ 494.92
Total cost estimated to remove all fluids									\$	7,944.79
Cost per gallon to dispose of fluids (\$/gallon)									\$	0.0024

Crew Rate - For pit fluid returned to local wells via existing polypipe system.

Laborer - Common	1	ea	\$	26.82	\$	26.82
Laborer - Foreman	1	ea	\$	30.60	\$	30.60
					\$	57.42
Equipment & Fee Rates						
Work Truck - Crew Cab	2	ea	\$	13.50	\$	27.00
					\$	27.00
Hourly Rate					\$	84.42
Daily Rate					\$	675.33

Crew Rate (2 trucks) - Disposal at a municipal facility

	Qty.	Unit	Rate	Total
Laborer - Common	1	ea	\$ 26.82	\$ 26.82
Truck Driver	2	ea	\$ 34.43	\$ 68.86
			Subtotal	\$ 95.68
Equipment & Fee Rates				
Water Truck - 130 barrel vac. Truck	2	ea	\$ 95.00	\$ 190.00
Work Truck - Crew Cab	1	ea	\$ 13.50	\$ 13.50
			Subtotal	\$ 203.50
			Total Hourly Rate	\$ 299.18
			Daily Rate	\$ 2,393.46

Estimate Cycle Time

Fill Water Truck	6 minutes
(1 minute hook-up/disconnect + 7 min fill)	
Travel time to disposal facility	50 minutes
Empty Water Truck at Well or facility	20 minutes
Return to Pit	39 minutes
Avg. down time for items such as fuel	5 minutes
Total Cycle time per truck	120 minutes

Remove & Dispose of Pond Liners

Description	Qty.	Unit	Production	Unit	Days	Unit Cost	Total
Cut and remove liner	189,000.00	sf	69,540	sf/day	2.7	\$ 3,516.87	\$ 9,558.36
(2) Flatbed Truck, Trailer, & Driver	30	hrs	2	trips/day	2.5	\$ 180.86	\$ 3,617.23
Disposal*	65.5	tons				\$ 75.00	\$ 4,914.00
Subtotal							\$ 18,089.59
Unit Price (Remove & Dispose per sf)							\$ 0.0957

Liner Demolition & Loading

* Assumes 0.3 lbs/sf for the membranes, 1.0 lbs/sf for the Geonet and a 30% increase amount in contaminant (such as sludge or clay) waste.

Crew Rate (4 cut & roll crews)

	Qty.	Unit	Rate	Total
Laborer - Common	12	ea	\$ 27.79	\$ 333.45
Laborer - Foreman	1	ea	\$ 30.60	\$ 30.60
Equipment Operator - Level 2	1	ea	\$ 33.56	\$ 33.56

Equipment & Fee Rates

Reach Fork	1	ea	\$ 30.00	\$ 30.00
Compressor, hose, & tools	4	ea	\$ 3.00	\$ 12.00
Subtotal				\$ 439.61
Daily Rate (8hrs)				\$ 3,516.87

Liner Cutting

3 Laborer to cut, 6 to roll, 1 to assist with load & 1 Equip. Operator to operate the Backhoe or Reach Fork

Liner (per layer with 3 layers)	63000	sf	(36 mil liner is recognized as slightly smaller)
Length of Liner (square root of area)	251	lf	
LF of cutting per liner	2899.05	lf	
Cutting rate per hour (4 crews)	400	lf/hr	
Cutting time per liner	7.247625	hrs	
Removal rate per hour (sf/hr)	8693		(Assumes 205' of a 20' wide roll per hour)
Number of liners per pond	3		
Total hours for all liners	21.74		
Total weeks for the removal	0.5		

Disposal Sites

Pitkin County Landfill	59	mi
Delta County Landfill	60	mi
Montrose County Landfill	82	mi
Worst Case (Montrose)	82	mi

	Distance	Unit	Speed (mph)	Time
Site to Hwy 133	4	mi	15	0.3
Hwy 133 & 92 to State Hwy 50	55	mi	30	1.8
Hwy 50 to Disposal Facility	23	mi	50	0.5
	82	mi		2.6
Round to the nearest full hour to include unload time				3 hrs
Round Trip				6 hrs
Total Trips to dispose of liner waste (66 tons)				4.37 trips
Round up to the next whole total trip value				5 trips

Backfill, Compact Site, & Restore Site								
	Description	Qty.	Unit	Production	Unit	Days	Unit Cost	Cost
	Rip Clay Layer	8	hrs	225,000	sf	1	\$ 256.06	\$ 2,048.51
	Push Soil (Dozer Crew 150ft max)*	6562.80	cy	1,598	cy/day	4.1	\$ 2,270.81	\$ 9,324.50
	Haul, and Place Stockpiled Soil	26251.20	cy	4,464	cy/day	5.9	\$ 4,525.88	\$ 26,615.11
	Spread Soils and Compact**	33289.31	cy	3,000	cy/day	11.1	\$ 3,375.98	\$ 37,461.30
	Finish work (20.5 Acres)	4.50	Acres				\$ 1,500.00	\$ 6,750.00
	Disc, Seed & Mulch	4.50	Acres			2.0	\$ 1,000.00	\$ 4,500.00
	Post Closure Weed Control (2 days of spraying)	1.00	ls				\$ 8,000.00	\$ 8,000.00
	Compaction Tests (6 per day)	67	tests				\$ 75.00	\$ 4,993.40
	Subtotal - Backfill & Compaction						\$	99,692.83
	Unit Price (Backfill & Compact per cubic yard)						\$	2.99

Bulldozer Crew - (2 Dozers)				
Crew Rate	Qty.	Unit	Rate	Total
Laborer - Common	1	ea	\$ 27.79	\$ 27.79
Equipment Operator - Level 2	1	ea	\$ 33.56	\$ 33.56
Equipment & Fee Rates				
Bulldozer (D8T)	1	ea	\$ 222.50	\$ 222.50
Subtotal				\$ 283.85
Daily Rate (8hrs)				\$ 2,270.81

Original Site Volumes	
Fill Volume	0 cy
Cut Volume	32,814.00 cy
Class 6 road base***	475.31 cy
Type L Riprap (Drain Rock) -	21.10 cy
(Clear water ditch w/rock check dams)	
	33,289.31 cy

Scraper Crew - (4 scrapers)				
Crew Rate	Qty.	Unit	Rate	Total
Laborer - Common	1	ea	\$ 27.79	\$ 27.79
Equipment Operator - Level 3	2	ea	\$ 50.37	\$ 100.74
Equipment & Fee Rates				
Scraper (627G)	2	ea	\$ 232.50	\$ 465.00
Subtotal				\$ 565.74
Daily Rate (8hrs)				\$ 4,525.88

Crew Rate (Spread & Compact)				
	Qty.	Unit	Rate	Total
Truck Driver	1	ea	\$ 25.37	\$ 25.37
Equipment Operator - Level 2	2	ea	\$ 33.56	\$ 67.13
Equipment & Fee Rates				
Water Truck - 2500 gallon (1,250 gals/hr usage)	1	ea	\$ 67.50	\$ 67.50
Bulldozer (D8T)	1	ea	\$ 162.00	\$ 162.00
Compactor, Vibratory (815F)	1	ea	\$ 100.00	\$ 100.00
Subtotal				\$ 422.00
Daily Rate (8hrs)				\$ 3,375.98

* It is assumed that approx. 20% of all soil volumes can be moved with the dozer.

**6 in lift with (3 passes per lift), @ 1,000 cy/hr w/6 hrs per day = 3000 cy/day (for 1 crew)

*** Road base and Type L Riprap to be mixed in with soils and compacted.

Site Management Costs							
Staff	Time	Unit	Duration	Unit	Rate	Total	
Site Superintendant	5	wks	200	hrs	\$ 65.00	\$ 13,000.00	
Project Manager	3	wks	120	hrs	\$ 75.00	\$ 9,000.00	
Equipment Operator - Level 3	1	wks	40	hrs	\$ 50.37	\$ 2,014.71	
Laborer - Common	4	wks	160	hrs	\$ 27.79	\$ 4,445.98	
Equipment							
Office Trailer	0	mos			\$ 300.00	\$ -	
Portable Toilets	1.5	mos			\$ 200.00	\$ 300.00	
Water Truck (40 x 2,500 tanks)	3	wks			\$ 3,400.00	\$ 10,200.00	
Grader or Bulldozer with road blade	1	wks			\$ 3,140.00	\$ 3,140.00	
Work Truck - Crew Cab	5	wks			\$ 540.00	\$ 2,700.00	
Field Expenses							
Office Supplies	1	mos			200	\$ 200.00	
Utilities (Water, Electric, Phones)	1.5	mos			600	\$ 900.00	
Erosion Control materials	1	ls			8000	\$ 8,000.00	
Subcontractor Costs							
Civil Engineer (site visits)	10	ea			\$ 1,000.00	\$ 10,000.00	
Surveyor	1	ls			\$ 5,000.00	\$ 5,000.00	
Geotechnical Fees	1	ls			\$ 4,000.00	\$ 4,000.00	
						\$ 72,900.69	
Weekly Rate						\$ 14,580.14	

Labor Rates										
Labor Group		Rate	Fringe	Subtotal	Basic Payroll Tax (10.73%)	Worker's Comp. Ins. (13%)	Subtotal	Liability Ins. (1.5%)	Per diem	Total
Electrician		\$ 28.00	\$ 9.24	\$ 37.24	\$ 4.00	\$ 4.84	\$ 46.08	\$ 0.69	\$ 9.06	\$ 55.83
Ironworker		\$ 24.58	\$ 10.47	\$ 35.05	\$ 3.76	\$ 4.56	\$ 43.37	\$ 0.65	\$ 9.06	\$ 53.08
Laborer - Common		\$ 11.11	\$ 3.80	\$ 14.91	\$ 1.60	\$ 1.94	\$ 18.45	\$ 0.28	\$ 9.06	\$ 27.79
Laborer - Foreman	Foreman (Add 15% to Common)	\$ 12.78	\$ 4.37	\$ 17.15	\$ 1.84	\$ 2.23	\$ 21.22	\$ 0.32	\$ 9.06	\$ 30.60
Truck Driver	Semi & Water	\$ 14.93	\$ 5.27	\$ 20.20	\$ 2.17	\$ 2.63	\$ 24.99	\$ 0.37	\$ 9.06	\$ 34.43
Equipment Operator - Level 2	Bulldozer, Backhoe & Reach Fork	\$ 15.93	\$ 3.58	\$ 19.51	\$ 2.09	\$ 2.54	\$ 24.14	\$ 0.36	\$ 9.06	\$ 33.56
Equipment Operator - Level 3	Excavator & Scraper	\$ 23.67	\$ 9.22	\$ 32.89	\$ 3.53	\$ 4.28	\$ 40.69	\$ 0.61	\$ 9.06	\$ 50.37

Rates taken from the Davis Bacon Wage Decision Number:

CO120013 01/13/2012 for GUNNISON County, Colorado.

CO120012 01/06/2012 for MESA County, Colorado.

Per diem			
\$ 75.00	hotel	\$ 35.00	man/day

Facility ID #421065

SG Interests - McIntyre Flowback Pits 1 & 2 Reclamation Estimate

Estimate of Probable Pit Closure Cost - Schedule

Schedule of work	total hrs estimated	wk1	wk2	wk3	wk4	wk5
Mobilization	16					
Demo	32					
Fluids	40					
Liners	24					
Dirt	122					
Demobilization	16					