

12.0 RULE 6.4.12: EXHIBIT L-RECLAMATION COSTS

(1) All information necessary to calculate the costs of reclamation must be submitted and broken down into the various major phases of reclamation. The information provided by the Operator/Applicant must be sufficient to calculate the cost of reclamation that would be incurred by the state.

(2) The Office may request the Operator/Applicant to provide additional, reasonable data to substantiate said Operator/Applicant's estimate of the cost of reclamation for all Affected Lands.

Reclamation costs are estimated to be \$169,000. Detailed calculations are provided in Appendix 12-1.

APPENDIX 12-1

CLOSURE COST ESTIMATE

LEADVILLE MILL - RECLAMATION COST SUMMARY

Task	Reclamation Area	Rate	Duration (weeks)	Completion Date (mo)(1)	Estimated Cost
DIRECT COSTS					
10	Historic Stockpile/Tailings Areas		4	(1)	\$3,608
20	Entrance, Driveway & Roads		0	na	\$0
30	Wire Fence		1	18	\$1,610
40	Structures & Equipment		35	17	\$51,657
50	Emergency Containment Sump		16	10	\$30,372
60	Filtered Tailings Deposit		16	16	\$40,020
70	Monitoring Wells		1	2	\$1,720
80	Chemicals		4	3	\$3,597
			Subtotal Direct Costs		\$132,583
INDIRECT COSTS					
90	Mobilization & Demobilization				\$4,600
91	Liability Insurance	2.50%			\$3,315
92	Performance Bond	1.50%			\$1,989
93	Contractor Profit	15%			\$19,888
	Project Management	5%			\$6,629
			Subtotal Indirect Costs		\$36,420
			TOTAL COST		\$169,003

(1) Stockpiles will be removed within 6 months of start-up.

(2) Winter season is accounted for in the planned 18-month durations

(3) Chemical removal is not weather dependent

(4) Schedule provides 30 to 60 days of float on critical items.

Tasks 10 - Historic Stockpile & Tailings Areas**Task**

There are 3 historic ore stockpiles labeled Stockpile 1, 2 and 3, respectively. There is also one legacy tailings pile consisting of tailings deposit on the land, which was removed by Union Milling, the previous owners in order to construct a TSF. This pile was moved to the NW corner of the property under TR5 in preparation for processing. These legacy piles represent the initial material to be processed in the Mill. Once processed the areas will be reclaimed. If the ore is not milled it will be placed on the bottom of the ECS and buried. Silt fence, waddles and visqueen sheeting will be removed and disposed of. Areas will be graded to natural contours and seeded. The existing permit mandates this material be removed during the first 60-days of operation. Reclamation duration is 30 days, weather permitting. If material is removed during winter months, then reclamation will be performed the following spring.

Description:**Reclamation Parameters:**

Description	Disturbed Area	Unit	Silt Fence	Unit
Stockpile A	0.30	acres	275	lineal ft
Stockpile B	0.10	acres	200	lineal ft
Stockpile C	0.10	acres	175	lineal ft
subtotal	0.50	acres	650	lineal ft
Historic Tails	0.15	acres	210	lineal ft
Total	0.65	acres	860	lineal ft
Mulch Volume	0.50	acres	\$250.00	per acre
Seed	0.50	acres	\$425.00	per acre

Cost Estimate:

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
1.0-Pile Covers & BMPs							
Remove wattles, fence, covers	16	\$35.00	\$560	\$0.00	\$0	\$0	\$560
Haul materials to land fill	1	\$0.00	\$0	\$10.00	\$10	\$100.00	\$110
2.0-Grade & Seed							
Grading (dozer) (1)	4	\$45.00	\$180	\$75.00	\$300	\$0.00	\$480
Haul topsoil/SPGM (2,3)	8	\$45.00	\$360	\$65.00	\$520	\$0.00	\$880
Spread/dress topsoil	2	\$45.00	\$90	\$75.00	\$150	\$0.00	\$240
Apply Seed (4)	4	\$35.00	\$140	\$65.00	\$260	\$125.00	\$525
Apply Mulch (5)	6	\$35.00	\$210	\$65.00	\$390	\$212.50	\$813
3.0-Reclaim Historic Tails							
No Cost (6)	0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0
TOTAL COST							\$3,608

Estimate Notes.

- (1) Grading only Stockpile areas. Historic tails are stored on (lined) road. Road will remain post reclamation.
- (2) Topsoil is proximate to ore stockpiles. Haul using loader.
- (3) Topsoil: 0.5 acres @ 4-inch thick = 266yd³
- (4) Manually apply seed. 18.9lb/acre @ \$425/acre.
- (5) Manually apply mulch 1 ton/acre @ \$250/acre.
- (6) Tailings will be processed at start-up. Costs are included in plant operating costs

Tasks 20 - Entrance, Driveway & Roads

Task There are 2 access roads to the Mill. The main entrance is a driveway from US Highway 24 about 1/4 mile from Leadville Sanitation Water Treatment facility. A new road accessing the property from the North via CJK Milling Company's Arkansas Valley Slag Project will be constructed. These roads will remain for post-reclamation Industrial Mining (IM) use, as currently zoned in Lake County.

Description:

Reclamation Parameters:

Description	Disturbed Area	Unit (1)	Road Length	Unit
Main Access	0.92	acres	1,600	lineal ft
Upper Haul Road	0.86	acres	1,500	lineal ft
North Access Road	0.52	acres	900	lineal ft
Total	2.30	acres	4,000	lineal ft

(1) Road widths vary. 25ft width is typical width, and used to determine acreage

Cost Estimate:

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
2.0-Grade & Seed (1)							
Grading (dozer)	0	\$45.00	\$0	\$0.00	\$0	\$0.00	\$0
Haul topsoil/SPGM	0	\$45.00	\$0	\$0.00	\$0	\$0.00	\$0
Spread/dress topsoil	0	\$45.00	\$0	\$0.00	\$0	\$0.00	\$0
Apply Seed	0	\$25.00	\$0	\$0.00	\$0	\$0.00	\$0
Apply Mulch	0	\$25.00	\$0	\$0.00	\$0	\$0.00	\$0
TOTAL COST							\$0

Estimate Notes.

(1) Road will remain post reclamation.

Tasks 30 - Wire Fence

Task A 4-wire fence exists on the South, West, North, and a small portion of the East original (20.7ac Zuni Placer) property. The East side is fenced by Leadville Sanitation 9-wire fence, Colorado Department of Wildlife (CDW) mandated a animal-friendly design. Nevertheless, wildlife walk through this fence thus requiring constant maintenance. These strands will be removed post-operations to alleviate the maintenance requirement. There is no land disturbance.

Reclamation Parameters:

Description	Disturbed Area	Unit	Wire Length	Unit
4-Wire Fence (1)	0.00	acres	13,500	lineal ft
		acres		lineal ft
		acres		lineal ft
Total	0.00	acres	13,500	lineal ft

(1) 4-wire fence @ 3375ft = 13,500ft
acrage

Cost Estimate:

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
1.0-Remove 4-strand wire.							
Remove wire	40	\$35.00	\$1,400	\$0.00	\$0	\$0.00	\$1,400
Haul materials to land fill	1	\$0.00	\$0	\$110.00	\$110	\$100.00	\$210
	0	\$45.00	\$0	\$0.00	\$0	\$0.00	\$0
	0	\$25.00	\$0	\$0.00	\$0	\$0.00	\$0
	0	\$25.00	\$0	\$0.00	\$0	\$0.00	\$0
TOTAL COST							\$1,610

Estimate Notes.

Tasks 40 - Structures & Equipment**Task**

The property is in an area zoned for "Industrial Mining" by Lake County. Post operation use will be IM. Therefore all buildings will remain. However (1) equipment will be removed and either sold for use or scrap, (2) the leach pad area will be removed, and the concrete from the pad will be pushed into the ECS, (3) Remove the scale, (4) remove slurry and water lines, and (5) in the event of a hard stop, all remaining RoM will be processed and properly disposed.

Description:**Reclamation Parameters:**

Description	Value	Unit	Unit
Mulch Volume (4)	0.00	acres	\$250.00 per acre
Seed (4)	0.50	acres	\$425.00 per acre

(4) Acreage overestimated accounting for "feathering" during grading.

(4) No mulch will be applied.

(4) Manually apply seed. 18.9lb/acre @ \$425/acre.

Cost Estimate:

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
1.0 Remove Equipment (1)							
Coarse Ore Bin & Grizzly	0	\$0.00	\$0	\$0.00	\$0	\$3,000.00	\$3,000
Crusher & Screens	0	\$0.00	\$0	\$0.00	\$0	\$1,500.00	\$1,500
Conveyors	0	\$0.00	\$0	\$0.00	\$0	\$2,000.00	\$2,000
Fine Ore Bin	0	\$0.00	\$0	\$0.00	\$0	\$3,000.00	\$3,000
Ball Mill	0	\$0.00	\$0	\$0.00	\$0	\$2,225.00	\$2,225
Dust Collector & Ductwork	0	\$0.00	\$0	\$0.00	\$0	\$1,500.00	\$1,500
Water Tanks	0	\$0.00	\$0	\$0.00	\$0	\$1,150.00	\$1,150
Hydrocyclones	0	\$0.00	\$0	\$0.00	\$0	\$750.00	\$750
Filter Press Surge Tank	0	\$0.00	\$0	\$0.00	\$0	\$1,500.00	\$1,500
Leach Tanks	0	\$0.00	\$0	\$0.00	\$0	\$5,000.00	\$5,000
Concentrate Thickener	0	\$0.00	\$0	\$0.00	\$0	\$925.00	\$925
Filter Press	0	\$0.00	\$0	\$0.00	\$0	\$1,375.00	\$1,375
Disk Filters	0	\$0.00	\$0	\$0.00	\$0	\$875.00	\$875
Drum Filters	0	\$0.00	\$0	\$0.00	\$0	\$1,500.00	\$1,500
Pre-Leach Thickener	0	\$0.00	\$0	\$0.00	\$0	\$1,075.00	\$1,075
Air Compressor & Receiver	0	\$0.00	\$0	\$0.00	\$0	\$825.00	\$825
Pumps & Piping	0	\$0.00	\$0	\$0.00	\$0	\$3,000.00	\$3,000
Scales	0	\$0.00	\$0	\$0.00	\$0	\$800.00	\$800
Other Misc Accoutrements	0	\$0.00	\$0	\$0.00	\$0	\$1,000.00	\$1,000
Dump Fees	0	\$0.00	\$0	\$0.00	\$0	\$3,000.00	\$3,000
2.0 Remove Leach Tank Pad							
Jackhammer leach pad (2)	20	\$45.00	\$900	\$150.00	\$3,000	\$500.00	\$4,400
Push into ECS	8	\$45.00	\$360	\$75.00	\$600	\$0.00	\$960

Appendix 12-1 Reclamation Cost

Continued from previous page.

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
3.0 Demo Scale House							
Demo Scale House	2	\$45.00	\$90	\$55.00	\$110	\$0.00	\$200
Haul to Landfill	2	\$45.00	\$90	\$110.00	\$220	\$200.00	\$510
Jackhammer foundation	4	\$45.00	\$180	\$150.00	\$600	\$0.00	\$780
Push into ECS	4	\$45.00	\$180	\$75.00	\$300	\$0.00	\$480
4.0 Slurry and Water Lines							
Remove Pipes & Supports	32	\$45.00	\$1,440	\$65.00	\$2,080	\$0.00	\$3,520
Grade	8	\$45.00	\$360	\$75.00	\$600	\$0.00	\$960
Mulch	4	\$35.00	\$140	\$65.00	\$260	\$0.00	\$400
Seed	4	\$35.00	\$140	\$65.00	\$260	\$212.50	\$613
5.0 Process Remaining RoM (3)							
Crush Coarse Ore	2	\$0.00	\$0	\$100.00	\$200	\$0.00	\$200
Grind Fine Ore	4	\$0.00	\$0	\$300.00	\$1,200	\$0.00	\$1,200
Neutralize with Lime	0	\$0.00	\$0	\$0.00	\$0	\$544.00	\$544
Flush with water (Pumping)	0	\$0.00	\$0	\$0.00	\$0	\$250.00	\$250
Labor	16	\$40.00	\$640	\$0.00	\$0	\$0.00	\$640
TOTAL COST							\$51,657

Estimate Notes.

- (1) Equipment removal costs based on lump sum demolition estimates.
- (2) \$500 "other" cost added as provision for parts.
- (3) Estimate Based on the following:
 - Plant is operating at full capacity and all bins/tanks are full
 - Cost to process is same as plant operating costs
 - All material and water in the ball mill, conditioning tanks, leach tanks will be pumped out as plant opex rate and process to TSF
 - Lime will be added to neutralize material at 3.4kg/ton to reach 9 pH. Lime cost is \$400/t
 - Process water will report to Tailings Dam
 - Fresh water in ECS will report to sewer system. Water will be pumped from ECS, so no water cost.

Tasks 50 - Emergency Containment Sump**Task**

Redeaming the ECS includes; (1) pumping out fresh water into sewer, (2) folding HDPE leak detection, and GCL liners into the containment area, (3) grading the embankment into the containment area, (4) placing topsoil, and (5) mulch and seeding. The fresh water will be tested to confirm it is suitable for pumping into the sewer. The ECS was constructed as a cut and fill volume balance, confirming adequate material exists to fill the hole. Any excess material due to liner and leach pad concrete that will be placed in the ECS will be graded to approximate original contours.

Description:**Assumption Parameters:**

Description	Value	Unit	Cost	Unit
Fresh Pond Water	300,000	gal.		
Fresh Pond Water	1,250	tons		
Lime	2.00	lb/100-g	\$200.00	per ton
Ferric Sulfate	0.50	lb/ton	\$320.00	per ton
Pumping Rate (3)	45	gpm		
Operating hours (4)	120	hrs		
Head (5)	110	ft		
Pump efficiency (6)	75%	typical		
HP	2.00	calculated		
Energy	179	kWh	\$0.18	per kWh
ECS Fill Volume (8)	18,700	yd3		
ECS Cut Volume (8)	6,000	yd3		
ECS Graded Area (8)	3.3	acres		
Topsoil Volume (9)	1,775	yd3		
Mulch Volume (10)	3.3	acres	\$250.00	per acre
Seed (11)	3.3	acres	\$425.00	per acre
Total				

Cost Estimate:

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
1.0-Pump Out Fresh Water							
Water Test (1)	0	\$0.00	\$0	\$0.00	\$0	\$250.00	\$250
Lime (2)	0	\$0.00	\$0	\$0.00	\$0	\$600.00	\$600
Ferric Sulfate (2)	0	\$0.00	\$0	\$0.00	\$0	\$99.96	\$100
Pumping Cost (power)	0	\$0.00	\$0	\$0.00	\$0	\$32.23	\$32
2.0-Fold Liners into Hole							
Detach Liner (7)	8	\$35.00	\$280	\$0.00	\$0	\$0.00	\$280
Fold Liners into Embankment	16	\$35.00	\$560	\$0.00	\$0	\$0.00	\$560
3.0 Fill and Grade ECS							
Fill ECS	80	\$45.00	\$3,600	\$100.00	\$8,000	\$1,402.50	\$13,003
Grade Excess to AoC	32	\$45.00	\$1,440	\$100.00	\$3,200	\$0.00	\$4,640
4.0 Place Topsoil/SPGM							
Apply Topsoil/SPGM	40	\$45.00	\$1,800	\$100.00	\$4,000	\$0.00	\$5,800
5.0 Mulch & Seed							
Apply Mulch	20	\$45.00	\$900	\$85.00	\$1,700	\$825	\$3,425
Seed	8	\$35.00	\$280	\$0.00	\$0	\$1,402.50	\$1,683
TOTAL COST							\$30,372

Estimate Notes.

- (1) Water test to confirm suitability for sewer. If not suitable, water will be treated in plant Detox tank.
- (2) Treat water in unlikely event treatment is required. Assumes worst case to balance pH & detox CN
- (3) Pumping rate: $300,000 \text{ gal} \times (\text{hr}/60\text{-min}) / (24 \text{ hr}/\text{day} \times 5 \text{ day}) = 42 \text{ gpm}$. USE 45gpm, 1.25" PVC pipe.
- (4) Assume 5 days to pump out ECS.
- (5) Head is 60ft height plus 47ft head loss due to PCV pipe friction, round up to nearest 10 ft.
- (6) 75% is typical pipe efficiency
- (7) Cut around edges and inner corners.
- (8) Calculated from survey.
- (9) $3.3 \text{ acres} \times 4" = 1,775 \text{ yd}^3$
- (10) $3.3 \text{ acres} \times 2" = 900 \text{ yd}^3$ at \$4/yd³ delivered.
- (11) Manually apply seed. 18.9lb/acre @ \$425/acre.

Tasks 60 - Filtered Tailings Deposit

Task The FTD will be contemporaneously reclaimed. Activity involve compacting tailings, placing 4-6" of topsoil/SPGM followed by 2"-4" mulching and 18.9lb/ac seeding. At the end of FTD life, the containment pond will be reclaimed by filling the facility with soil along with burying the liner. Note that slurry and water pipe removal is accounted for in Task 40.

Description:

Assumption Parameters:

Description	Value	Unit	Cost	Unit
Topsoil Volume (1)	2,000	yd ³		
Mulch Volume (1.2)	12.0	acres	\$250.00	per acre
Seed (1.4)	12.0	acres	\$425.00	per acre

Cost Estimate:

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
1.0 Cover DSF							
Place Topsoil/SPGM (2)	120	\$45.00	\$5,400	\$100.00	\$12,000	\$0.00	\$17,400
Grade Topsoil/SPGM	24	\$45.00	\$1,080	\$100.00	\$2,400	\$0.00	\$3,480
2.0-Fold Liners into Hole							
Detach Liner (5)	4	\$35.00	\$140	\$0.00	\$0	\$0.00	\$140
Fold Liners into Embankment	8	\$35.00	\$280	\$0.00	\$0	\$0.00	\$280
3.0 Fill and Grade Pond							
Fill Pond	40	\$45.00	\$1,800	\$100.00	\$4,000	\$0.00	\$5,800
Grade Excess to AoC	8	\$45.00	\$360	\$100.00	\$800	\$0.00	\$1,160
3.0 Mulch & Seed							
Apply Mulch (3)	26	\$45.00	\$1,170	\$85.00	\$2,210	\$3,000.00	\$6,380
Seed (1.4)	8	\$35.00	\$280	\$0.00	\$0	\$5,100.00	\$5,380
TOTAL COST							\$40,020

Estimate Notes.

- (1) Volumes and areas as per design.
- (2) Topsoil applied 4 to 6" thick.
- (3) Mulch applied 2 to 4" thick, approximately 1 ton per acre.
- (4) Manually apply seed. 18.9lb/acre @ \$425/acre.
- (5) Cut around edges and inner corners.

Tasks 70 - Monitoring Wells

Task Only CJK Milling-owned wells, MW-2 and MW-3 will be capped. EPA and Asarco/Newmont owned wells will remain as is.

Description:

Reagent Inventory

Description	Value	Unit	Cost	Unit
MW-2				
Depth	53.0	ft		
Diameter	4.0	inches		
Volume	2.0	yd3		
MW-3				
Depth	66.0	ft		
Diameter	4.0	inches		
Volume	3.0	yd3		
Concrete	6.0	sacks	\$5.00	per sack

Cost Estimate:

Task	Task Hours	Labor Rate (\$/hr)	Labor Cost (\$)	Equipment Rate (\$/hr)	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)
1.0 Cap Wells							
Labor	12	\$45.00	\$540	\$85.00	\$1,020	\$0.00	\$1,560
Fill with Aggregate (2)		\$45.00	\$0	\$100.00	\$0	\$100.00	\$100
Fill with Concrete (3)		\$45.00	\$0	\$85.00	\$0	\$30.00	\$30
		\$45.00	\$0	\$0.00	\$0	\$30.00	\$30
TOTAL COST							\$1,720

Estimate Notes.

- (1) Labor for all well capping activity.
- (2) Aggregate delivered at only transport cost (delivery cost \$100)
- (3) Concrete use 90-lb sacks for last 2 feet
- (4) Manually apply seed. 18.9lb/acre @ \$425/acre.

Tasks 90- Mobilization & Demobilization

Task Description: Estimate for mobilization and demobilization assumes equipment will be required 2 times during the reclamation period.

Reagent Inventory	Description	Value	Unit	Cost	Unit

Cost Estimate:									
Task		Task Hours	Labor (1) Rate (\$/hr)	Mob/Demob Rate (\$/hr)	Events	Equipment Cost (\$)	Other Cost (\$)	Total Cost (\$)	
1.0 Mobilization and Demobilization									
Tractor/Lowboy			included	\$500.00	8	\$4,000	\$0.00	\$4,000	
Front-end loader			"	\$75.00	2	\$150	\$0.00	\$150	
Bulldozer			"	\$75.00	2	\$150	\$0.00	\$150	
Water Truck			"	\$75.00	2	\$150	\$0.00	\$150	
Boom Truck			"	\$75.00	2	\$150	\$0.00	\$150	
TOTAL COST								\$4,600	

Estimate Notes.
(1) Labor rate is included.