5.0 EXHIBIT D – RECLAMATION PLAN
(SEC 6.3.4)

5.1 MILL SITE SOILS

A Natural Resource Conservation Service (NRCS) soil survey summary for the permit area (Appendix 5-1, *NRCS Soil Survey*, April 18, 1990) is as follows:

- ~~The soil is Leadville~~ Mill site soil is sandy loam.
- Slopes range from 3 to 35%; (Section 6.3.4(b));
- Topsoil salvaging activities may be difficult due to the shallow soil depths ~~and rock~~.
- Approximately **1,500yd³** ~~250st~~ of topsoil **and suitable plant growth material**[27] is currently stored on site for future reclamation purposes. The stored material will provide less than 1 inch of topsoil over existing disturbed areas.

5.2 RECLAMATION SEED MIX

Recommended (Arkansas Valley Seed) approved by CDRMS seed mix is shown in Table 5-1. ~~includes~~ (Section 6.3.4(c)). **The seed mix as accepted by the Division in other reclamation projects was recommended by Arkansas Valley Seed.**

TABLE 5-1: RECLAMATION SEED MIX

Species	Scientific Name	Variety	Pls lbs/Acre
Yarrow	Achillea lanulosa		0.1
Groundsel	Senecio atratus		0.1
Lupine	Lupinus perennial lupine		1.0
Slender wheatgrass	Elymus trachycaulus	San Luis	1.4
Nodding brome	Bromus anomalus		2.5
Sheep fescue	Festuca ovina	Covar	0.5
Hard fescue	Festuca ovina duriuscula	Durar	0.5
Red fescue	Festuca rubra	Penniawn	0.5
Tufted hairgrass	Deschampsia caespitosa		0.5
Redtop	Agrostis alba		0.1
Blue wildrye	Elymus glaucus		1.75
Muttongrass	Poa fendleriana		0.5
		TOTAL pls lbs/acre (drilled)	9.45

[27] A1AR1Q47

- Arizona Fescue, 4.5pounds live seed (PLS) per acre. 50% of seed mix- 2.25 lbs,
- Nodding Brome, 19 PLS per acre. 10% of seed mix-1.9 lbs,
- Junegrass, 10 PLS per acre. 20% of seed mix-3.8 lbs, and
- Western Wheatgrass, 16 PLS per acre. 20% of seed mix.[28] ~~-~~3.2 lbs

5.3 POST MILL LAND USE

The mill site area is zoned "Industrial/Mining" where future land use **will be Industrial.**[29] ~~efforts will be designed to establish "wildlife habitat"~~. The Mill does not have an active mine within the permit boundary. Final reclamation mill site grading topography is shown in Figure 6-3 and Figure 6-4.

5.4 RECLAMATION PLAN

Upon cessation of the milling operation, the following site restoration and reclamation activities will be undertaken:

- Chemicals and petroleum hydrocarbons will be removed from the site and disposed or recycled in accordance with Federal and State regulations. ~~Designated~~ Chemicals or acid forming materials requiring detoxification or stabilization will be neutralized using lime prior to disposal. **Metallurgical test work indicates that ~~3.4kg~~** between 8-12lb **of lime ($Ca(OH)_2$) per ~~tonne~~** ton-RoM **of ore would be required to neutralize acid forming material to a pH of about ~~9.0~~** 11**. ~~This converts to approximately 6.4lb-lime/ton-RoM~~. For reclamation this amount will be doubled to ~~13.6~~** 16-24 **lb-lime/ton-RoM** as required**. Given a maximum of ~~135~~** 400**-tons of RoM that can be in the system and which is not neutralized, ~~approximately,~~** at maximum 2.4 **~~1~~ ton**s **of lime will be required. Water is essentially the only fluid in the system and does not require neutralization** as it goes through a cyanide detoxification process before reporting to the TSF**. Reagents account for a small fraction of fluids, are generally neutral by nature, and also will not require neutralization. ~~1~~** 24 **ton**s **of lime (Table 4-9, page 4-11) will be kept on-site at all times**[30]**~~;~~**

[28] A1AR1Q17
[29] A1AR3Q1
[30] A1AR1Q43

- Mill equipment will be dismantled, sold, recycled or disposed off-site in approved facility.
- Debris, refuse, and other solid waste will be disposed in an approved ~~mono-fill or~~ landfill;
- Utility infrastructure will be disposed, sold, or recycled off site including poles, pumps, junction boxes, fences and ~~mill~~ power lines.
- Culverts ~~and monitoring wells~~ will be removed and landfill disposed, ~~off-site~~;
- Drainage will be reclaimed and revegetated where necessary,
- ~~Wells will be abandoned in accordance with Colorado Division of Water Resources criteria~~;
- Monitoring wells will be plugged in accordance with Colorado Division of Water Resources (DWR) criteria and a well abandonment report will be filed.
- ~~Roads and other mill-disturbed areas (9.9ac) will be graded (4,000yd^3) to blend with the approximate original contour.~~ Permit area is 20.7 acres where roads and other mill-disturbed areas (3.3 ac) will be graded (4,000yd^3) to blend with the approximate original contour. **No constructed slopes within the permit area will exceed 3.0(H) to 1.0(V) unless approved by CDRMS**;[31]
- **Tailings in the TSF will be covered by up to 8 inches of embankment material. This material originates from the sides of the embankment and consists of an estimated 3,600 yd^3. Then, approximately 4 inches of topsoil - supplemented with up to 4 additional inches of suitable plant growth material, as available onsite[32] - will be placed over this material and seeded using the specified seed mix. Approximately 1,400yd^3 of topsoil and suitable plant growth material will be required. This material was removed during TSF construction and exists at the site as shown in Figure 6-2. No imported material will be required**.[33] TSF reclamation activities will geochemically characterize tailing prior to placing the cover, topsoil, or suitable alternative cover material. The geochemical characterization process is described in Section 5.5; [34]
- The TSF will be capped with 18in of suitable material prior to initiating revegetation activities

[31] A1AR1Q32
[32] A1AR3Q4
[33] A1AR1Q18
[34] A1AR1Q20

- **Reclaimed areas (excluding tailings discussed above) will be covered with 4in of topsoil and suitable plant growth material, which was recovered and restored during TSF embankment construction. Volumetric estimates indicate there is sufficient material stored on site to address reclamation requirements, so no salvaging of non-disturbed areas will be required.**[35]
- ~~The tailings storage area reclamation activities will include geochemical characterization of surface tailings material prior to placing topsoil or suitable alternative cover material;~~
- ~~Geochemical characterization will be conducted to demonstrate that the tailings are not toxic or hazardous and that the topsoil material will support vegetation.~~
- Disturbed or compacted areas will be ripped, scarified, topsoil placed, and seeded. Weed free straw mulch will be applied and crimped at a rate of **2.0st/ac** ~~1.0st/ac~~; [36]
- ~~If necessary, soil amendments will be applied when soil tests indicate nutrient deficiencies for the plant species to be established~~ If soil or alternative media sample results deem it necessary, soil amendments will be applied;
- Storm Water control Best Management Practices (BMPs) will be installed to ~~convey water around or through disturbed areas to~~ minimize on and off-site erosion and sedimentation impacts, ~~and.~~ **A detailed description of the stormwater management is provided in ~~Section 4.3.13, Drainage Control~~** Appendix 14-1**.**[37]
- ~~Reclamation seed will be drilled at a rate of 9.45 pls lbs/acre as recommended by Arkansas Valley Seed. Should broadcast seeding methods be used instead, the seed application will be twice or 18.9 pls lbs/acre~~.
- ~~Seeds will be applied at a rate of approximately 50lbs per acre using drill seeding methods. If broadcast seeding methods are used, the seed application rates will be twice the amount recommended for drill seeding methods~~ **Seed drilling planting methods will be used, with an application rate of 9.45 pls lbs/acre. If broadcasting seeding methods are to be used, the seed application rate application will be 18.9 pls lbs/acre.**[38]

[35] A1AR1Q22
[36] A1AR1Q20
[37] A1AR1Q21
[38] A1AR1Q23

Following the completion of ~~initial reclamation~~ Phase 1 reclamation activities, the mill site will be placed under a post mill monitoring and a maintenance program. Monitoring activities will identify areas requiring ~~fence or sign repair; the repair of eroded reclaimed lands; the control of noxious weeds and reclaiming areas were re-vegetated area have failed~~ site repair; including the repair of 6-inch rills formed on reclaimed lands; the control of noxious weeds and re-vegetated reclaimed area that have failed.

5.5 OPERATING SAMPLING AND ANALYSIS PROGRAM ~~GEOCHEMICAL RECLAMATION PROCESS~~[39]

Geochemical characterization will be as follows:

5.5.1 INITIAL TESTING

Geochemical characterization will be as follows. Ore geochemical CDRMS acceptance criteria will be met prior to processing. Sampling operating procedures (SOPS) and analysis will include:

- **Completing a chain of custody form,**
- **Obtaining representative samples**
- **Analyzing and rejecting ore that exceeds the following geochemical**

Prior to accepting each production run ("Batch") of toll ore ("RoM") to be treated at the mill, it will be required that it be tested to assure it meets pre-specified Acceptance Criteria. For each Batch, Acceptance Criteria will include testing to assure that RoM:

A. Can be economically processed within the operating limits of the mill; and

B. Meets mill facility permitted conditions.

Acceptance testing will be performed by an independent laboratory before the RoM arrives on-site. The process will be as follows:

1. **Seller and Buyer agree to "Economic Terms". E.g. payment based on RoM grade, process recovery, market prices, treatment costs, etc.**

[39] A1AR1Q24/Q45/Q46/Q48

2. **Batch of RoM to be processed is identified. This may, for example, be a specific stope in a mine, or a stockpile of RoM on the surface.**
3. **The Batch is surveyed to determine quantity and to collect a Representative Sample.**
4. **The Representative Sample is collected and sent to the Laboratory for testing using proper chain of custody procedures.**
5. **Economic Performance testing is completed to test Economic Terms (per Purchase or Milling Agreement) and determines the RoM Purchase Price.**
6. **Tailings Characterization testing is performed using SPLP for RoM and pH for leachates in tailings produced in the laboratory.**

Only RoM passing the Acceptance Criteria will be allowed onto the mill property. Material failing the Acceptance Criteria will be rejected and will not be allowed onto the property.

5.5.2 TAILINGS CHARACTERIZATION TESTS

Tailings Characterization Testing will include SPLP, XRF and pH testing. Table 5-2 will be submitted quarterly to the Division for each new ore body, waste dump, or mine.

TABLE 5-2: ANALYTE REPORT

Analyte	Detection Limit[1] (mg/L)	Observed Value[2] (mg/L)	XRF Baseline[3] (ppm)
Antimony (Sb)			
Aluminum (Al)		"	"
Arsenic (As)		"	"
Barium (Ba)		"	"
Beryllium (Be)		"	"
Boron (B)		"	"
Cadmium (Cd)		"	"
Chromium (Cr)		"	"
Cobalt (Co)		"	"
Copper (Cu)		"	"
Cyanide [Free] (CN)		"	"
Fluoride F)		"	"
Iron (Fe)		"	"
Lead (Pb)		"	"
Lithium (li)		"	"
Mercury (Hg)		"	"
Manganese (Mn)		"	"
Molybdenum (Mo)		"	"
Nickel (Ni)		"	"
Total Nitrate+Nitrite		"	"
Selenium (Se)		"	"
Silver (Ag)		"	"
Zinc (Zn)		"	"

7. **Denotes Detection Limit of SPLP test method.**
8. **Observed Value of tailings. From laboratory test work.**
9. **Grade of analyte in tailings using XRF to establish bounds of representative sample.**

The SPLP will be the basis for determining acceptance/rejection of the Batch. SPLP tests will be conducted at a pH range of 6.5 – 9. XRF analysis will be used to determine the Representative Sample baseline of the Batch, as tested in the laboratory.

5.6 RECLAMATION & CLOSURE COSTS (SEC 4.3.4(2))[40]

UMC will reclaim the site for its zoned use, Industrial/Mining (IM). As such the access road, mill building (structure only), power and sewer lines, firewater system, and stormwater BMPs currently on site will not be reclaimed as they will be required for future zoned use.

[40] A1AR1Q25, A1AR3Q14

As shown in Table 5-3, overall direct reclamation costs are estimated to be about $59,900**. Indirect costs including mobilization and demobilization of equipment, liability insurance for operations, performance bond, contractor profit, and project management are estimated to be about** $17,400**. Total reclamation costs are estimated to be about** $77,300**. This estimate is shown in Appendix 5-2.**

TABLE 5-3: RECLAMATION COST SUMMARY

Description	Cost ($)
Task 1 – Reclaim storage facility	$21,190
Task 2 – Cap Monitoring Wells	$1,225
Task 3 – Remove on-site chemicals	$4,900
Task 4 – Process remaining RoM piles	$3,935
Task 5 – Remove mill equipment	$26,200
Task 6 – Mobilization/Demobilizatio	$2,440
Direct Costs	**$59,890**
Liability insurance	$1,497
Performance bond	$898
Contractor profit	$8,983
Project management	$5,989
Indirect Costs	**$17,368**
Reclamation Cost Estimate	**$77,258**

~~Site reclamation and closure estimated costs are summarized in Appendix 5-2, *Reclamation Cost Estimate*. UMC updated CDRMS generated cost estimates to incorporate TSF reclamation and closure costs. The revised reclamation cost estimate is approximately $63,218 which includes:~~

- ~~Mill demolition and removal;~~
- ~~TSF capping and revegetation;~~
- ~~Road reclamation and grading (culvert removal);~~
- ~~Installing post mill drainage structures;~~
- ~~Replacing topsoil or suitable alternative material;~~
- ~~Seeding, and as necessary, applying fertilizers to mill affected lands;~~
- ~~Applying mulch to mill affected lands; and~~
- ~~Installing drainage BMPs.~~

The site will be reclaimed consistent with its current Industrial Mining-zoned purpose. The access road, mill building (structure only), power and sewer lines, and

firewater system~~, and stormwater BMPs~~[41] currently on site will not be reclaimed as they will be required for future facility use.

The following reclamation tasks will be performed:

5.6.1 TASK 1 – RECLAIM TAILINGS STORAGE FACILITY

Existing low-grade-acid producing historical stockpiles, low grade acid producing stockpile and soils geochemically impaired by stockpiled materials will be placed in the TSF. Areas affected by removed stockpiles will be graded, seeded, mulched (2 tons/acre), and if necessary, fertilized.

~~Exposed tailings will be covered with embankment material.~~ **The 3ft freeboard minimum will be maintained during operations. For reclamation, the embankment including that portion including the freeboard will be pushed with a dozer to cover the exposed tailings. The design of this cover included a crown, which will allow for a positive drainage during meteoric precipitation events and will prevent water from accumulating within the lined TSF as shown in Figure 6-3 and Figure 6-4.[42]**

Exposed TSF tailings will be covered with embankment material. The embankment including that portion including the freeboard will be pushed with a dozer to cover the exposed tailings. The design of this cover included a crown, which will allow for a positive drainage during precipitation events and will prevent water from accumulating within the lined TSF as shown in Figure 6 3 and Figure 6 4.

No tailings will be place in the TSF once the three-foot minimum is reached. For reclamation, the embankment including that portion accounting for the freeboard will be pushed with a dozer to cover the exposed tailings. The TSF crowned cover design enhances positive drainage and eliminates ponding. (See Figures 6-3 and 6-4) The cap will be covered with topsoil and/or suitable plant growth material, seeded and mulch will be applied.

The embankment will be graded, and the surface will be covered with topsoil and suitable plant growth material, followed by seeding. The cost for this task is approximately $21,200.

[41] A1AR3Q2
[42] A1AR3Q5/Q6

5.6.2 TASK 2 – MONITORING WELLS ABANDONMENT ~~CAP MONITORING WELLS~~

Monitoring wells MW2 and MW3 will be plugged in accordance with Colorado Division of Water Resources abandonment criteria. The cost for this task is approximately $1,225.

~~Monitoring wells MW2 and MW3 will be capped by filling the entire well with aggregate, and the last 2ft with concrete.~~

5.6.3 TASK 3 – REMOVE ON-SITE REAGENTS

On-site reagents will be disposed in accordance with manufactures and material safety data sheets (MSDS) criteria. Fresh process water (10,500gal), and potable water (2,000gal) will report to the municipal sewer system. Fire water (10,000gal) will remain on site for post-milling industrial uses.

Remaining RoM material remaining upon mill closure will be disposed in the TSF.

The cost for this task is approximately $4,900.

~~On-site reagents will be removed from site, and properly disposed with the exception of remaining lime which will be placed in the TSF and copper sulfate which will also be placed in the TSF. Copper sulfate is relatively benign, and no more than approximately 100lbs of copper sulfate will be on site. Placing this material in the TSF will have minimal impact on the environment.~~

~~Fresh process water (10,500gal), and potable water (2,000gal) will report to the municipal sewer system. Fire water (10,000gal) will remain on site for post-milling industrial use.~~

5.6.4 TASK 4 - RECLAIM LOW-GRADE STOCKPILES

The low-grade stockpile material will be placed in the TSF and these areas will be graded and seeded. The contaminated soil beneath the three low-grade stockpiles will also be removed and placed in the TSF concurrent with placement of the low-grade stockpile material.[43] This task will be completed concurrently with the transferring of this material into the TSF within 60 days as mandated by the Division. The cost for this task is approximately $3,935.

[43] A1AR3Q3

5.6.5 TASK 5 – REMOVE MILL EQUIPMENT

Mill equipment will be sold, scrapped, or salvaged. The access road, mill building (structure only), power and sewer lines, firewater system, and stormwater BMPs currently on site will remain for future facility use. (See Appendix 5-2-Closure Cost Estimates). The cost for this task is approximately $26,200.

~~Mill equipment on site will be removed and transported to a nearby (approx. 1 mile) salvage yard.~~

5.6.6 INDIRECT COSTS

Indirect costs are factored from direct costs and reflect current industry rates.

APPENDIX 5-1

RECLAMATION PLAN
NRCS SOIL SURVEY

SOIL DESCRIPTION REPORT

SURVEY AREA - CHAFFEE-LAKE AREA, COLORADO. PARTS OF CHAFFEE AND LAKE

Map Unit Symbol	Description
LeE	LEADVILLE SANDY LOAM, 3 TO 35 PERCENT SLOPES Leadville soil is very deep and well drained. It formed in glacial outwash. Typically, the surface layer consists of dark grayish brown sandy loam 1 inch thick. The subsurface layer is pink stony sandy loam 7 inches thick. The subsoil is extremely stony clay loam 32 inches thick. The substratum is extremely stony loam to a depth of 60 inches or more. The soil is medium acidic to a depth of 8 inches and slightly acidic and neutral below that depth. Permeability is moderately slow, and available water capacity is moderate. Surface runoff is medium to very rapid, and the hazard of erosion of unprotected soil by water is moderate to very high.
Mp	MINE PITS AND DUMPS Mine pits and dumps are piles of waste rock or waste smelter materials.
TrE	TROUTVILLE GRAVELLY SANDY LOAM, 3 TO 35 PERCENT SLOPES Troutville soil is very deep and will drained. It formed in glacial outwash and till. Typically, the surface layer is dark grayish brown gravelly sandy loam 2 inches thick. The subsurface layer is pale brown gravelly sandy loam 12 inches thick. The lower subsurface layer is very gravelly sandy loam 6 inches thick, and the subsoil is extremely stony sandy loam 20 inches thick. The latter two layers include lamella of sandy clay loam. The substratum is a layer of stones, cobbles, gravel, and sand to depth of 60 inches or more. The soil is slightly acidic to a depth of 14 inches and neutral below that depth. Permeability is moderately rapid, and available water capacity is low. Surface runoff is slow to very rapid, and the hazard of erosion of unprotected soil by water is slight to very high.

Category Codes: soi

APPENDIX 5-2

RECLAMATION PLAN
RECLAMATION COST ESTIMATE

Attachment
Reclamation Cost Estimate
Leadville Mill
Lake County, Colorado

Reclamation Summary	Task				Cost
	DIRECT COSTS				
	1 Reclaim Tailing Storage Facility			$	21,190.35
	2 Cap Monitoring Wells			$	1,225.00
	3 Remove On-Site Chemicals			$	3,375.00
	4 Process Remaining ROM Materials			$	3,432.00
	5 Removal Mill Equipment			$	26,200.00
	6 Mobilization -Demobilation			$	2,440.00
	SUBTOTAL			**$**	**57,862.35**
	-				
	INDRECT COSTS				
	Indirect Costs				
	Mobilization/Demobilization				
	Liability Insurance	0.025	%	$	1,446.56
	Performance Bond	0.015	%	$	867.94
	Contractor Profit	0.15	%	$	8,679.35
	Project Management	0.05	%	$	2,893.12
	SUBTOTAL			$	13,886.96
				$	**27,773.93**
Reclamation Cost Estimate				**$**	**85,636.28**

Attachment
Reclamation Cost Estimate
Leadville Mill
Lake County, Colorado

Task 1 Reclaim Tailings Storage Facility	No.	Task Description		Unit Rate	Cost ($)	Notes
a) See Figures 6-3 and 6-4 in Permit Application. b) Estimates based on productivity indecies and work performed by contractors to construct TSF emabankment. c) Costs escalated to 4Q 2020 d) Area of TSF surface area is 109,207ft2. 2.51 acres. e) Topsoil required at 4" thickness is 1500yd3. I) Seed mix requirement 18.9lbs/acre @ S425/ac per ArkansasValleyFeed & Seed. g) Mulch applied at rate of tons/acre at cost of $250/acre. Estimate for straw delivered. h) Apply mulch and crimp using agricultural implement.	1	Grade Embankment(Dozer)	4,000	$ 1.83	$ 7,320.00	Grade embankment to cover tailings and establish
	2	Move SPGM to TSF	700	$ 2.19	$ 1,533.00	
	3	LoadTopsoil @ Stockpile	648	$ 2.60	$ 1,684.80	
	4	Haul Topsoil to TSF (Truck)	648	$ 1.55	$ 1,004.40	Truck productivity is loader limited
	5	Spread Topsoil	1,500	$ 3.65	$ 5,475.00	Average thickness of 4 inches
	6	Remove & Dispose Debris	ls	$ 1,500.00	$ 1,500.00	Estimate
	7	Seed Mix (Acres)	2.51	$ 425.00	$ 1,066.75	Seed cost expressed in $/acre
	8	Broadcast Seed (Acre)	2.51	$ 160.00	$ 401.60	Broadcast manually with hand spreader
	9	Mulch seeded area	2.51	$ 230.00	$ 577.30	Mulch cost expressed in $/acre
	10	Apply and crimp mulch	2.51	$ 250.00	$ 627.50	
					$ -	
					$ -	
Task 1 Reclaim Tailings Storage Facility cost estimte total					**$ 21,190.35**	

Task 2 Cap Monitoring Wells	No.	Task Description	Qty(yd3)	Rate($/yd3)	Cost ($)	Notes
a) 2 wells each at 100ft well @ 4in dia. Approx 2.5 b) Use -1inch aggregate to fill well. Delivered c) Use 90-lb sacks concrete, hand mix to fill last 2 ft	1	Mobilize Equipment & Labor	ls		$ 1,000.00	Deliver aggregate and labor to complete tasks
	2	Fill Wells with Aggregate	2.5	$ 50.00	$ 125.00	
	3	Fill Wells with Concrete	ls		$ 100.00	
Task 2: Cap Monitoring Wells cost estimte total					**$ 1,225.00**	

Task 3 Remove On-Site Reagents	No.	Task Description	Qty Unit	Rate ($/drum)	Cost ($)	Notes
a) Reagentswill be picked up at site by approved hazardous waste disposal company, and hauled to EPA-approved disposal facility with chain-of-custodydocumentaiot n. b) Estimates based on actual costs incurred by UMC to removed reagents at site when the mill was purchased. c) Any remain ing lime will be placed in TSF for added neutralizing of tailingsmaterial. d) Copper sulfate inventory- 5 bags @ 20lb/bag = 10Olb - is small quanity and will be dissolved, pumped through tails thickener and placed in TSF.	1	Hydrated Lime	40 bag	$ -	$ -	Will be used to further neutralize tailings in TSF
	2	Copper Sulfate	5 bag	$ -	$ -	Small quanity placed in TSF
	2	Xanthate	2.0 drum	$ 675.00	$ 1,350.00	
	3	Pine Oil	2.0 drum	$ 675.00	$ 1,350.00	
	4	Flocculent	1.0 drum	$ 675.00	$ 675.00	
	5	Cyanide				
	6	**OTHERS?**				
Task 3: Remove On-Site Reagents cost estimte total					**$ 3,375.00**	

Attachment
Reclamation Cost Estimate
Leadville Mill
Lake County, Colorado

Task 4 Process Remaining RoM Material	No.	Task Description	Qty Unit	Rate($/ton)	Cost ($)	Notes
a) Assume plant is at full capacity at time of reclamation. Dry materialtotal 351 coarse ore bin, 100t fine ore bin = 1351total material. b) Operatingcosts based on UMC's TechnicalE-conomicModel at 75Vd (3.75Vh @ 20hr/day) c) All material and water in ball mill, conditioning tank, float cells and thickeners will be pumped out at same cost as dry material. Material will be run through ball mill, then routed through float cells and to tailings thickener before reporting to TSF. d) Lime will be added at ball mill to neutralize material. Metallurgical testwork on CrossMine ore indicates 3.4kg of lime [Ca(OHb] is requiredto bring pH to 9.0. For purpose of this estimate, assume 2X this amount will be required. 6.8kg/tonne= 13.6lb/st = 0.007stlime per st-ore. Given 135 st of ore must be treated, then: 0.007st-lime /st-ore x 135st-ore = 0.945st-lime is required. Assume 1 st lime will be required. d) Process water 3,900galwill be pumped through float cells and concentrate and tailings thickener to TSF. Reagents in the system will also be pumped out with the process water. This will dilute the reagents and flush out the process system. Reagent amount in the system is minir and will have di minimus affect on tailings chemist ry in the TSF. e) Fresh water 10,600galwill be drained into sewer system via gravity.	1	Crush Coarse Ore	35 tons	$ 4.11	$ 144.00	Based on UMC Technical Model
	2	Grind Coarse Ore and Fine Ore	135 tons	$ 2.62	$ 354.00	$4.72 basis without recirculatingload factor, 1.8
	3	Neutralize material with Lime	1 ton	$ 400.00	$ 400.00	$400/st-deliveredprice.
	4	Flush System with process water	135 tons	$ 0.25	$ 34.00	Pumpingcost.
	5	Labor (2 personnel)	. .		$ 2,500.00	2 personnel each @ $35/hr

Attachment
Reclamation Cost Estimate
Leadville Mill
Lake County, Colorado

Task 5 Remove Mill Equipment	No.	Task Description	-	-	Cost	Notes
a) Remove all mill equipment from site. Equipment is salvaged, sent to recycle yard 1 mile west of property on Highway 24. b) Building/structure will remain for post-mliling industrial use. c) Assumes all equipment is salvage. Most equipment will, however, have economic value.	1	Coarse Ore Bin & Grizzly			$ 1,825.00	
	2	Crusher			$ 1,500.00	
	3	Conveyors (1 Bucket & 5 Belt Units)			$ 1,875.00	
	4	Fine Ore Bin			$ 2,675.00	Other cost is torch cutting.
	5	Ball Mill			$ 2,225.00	
	6	Dust Collector & Ductwork			$ 1,275.00	
	7	Water Storage Tanks			$ 1,150.00	
	8	Hydrocylcones			$ 750.00	
	9	Conditioning Tank			$ 425.00	
	10	Gravity Circuit (Concentrator & Table)			$ 450.00	
	11	Flotation Cells			$ 1,075.00	
	12	Concentrate Thickener			$ 925.00	
	13	Filter Press			$ 1,375.00	
	14	Tailings Thickener			$ 1,075.00	
	15	Disk Filter			$ 875.00	
	16	Concentrate Hopper			$ 425.00	
	17	Air Compressor			$ 350.00	
	18	Receiver Tank			$ 475.00	
	19	Pumps & Piping			$ 1,950.00	
	20	Building)			$ 525.00	
	21	Dump Fee			$ 3,000.00	
Task 5: Remove Mill Equipment					**$ 26,200.00**	

Task 6 Mobilization & Demobilization	No.	Description	Round Trips	-	Cost ($)	Notes
	1	Tractor/Lowboy	4		$ 2,200.00	Rental rates include labor and contractor margins
	2	Front-End Loader	1		$ 60.00	
	3	Bulldozer	1		$ 60.00	
	4	Water Truck	1		$ 60.00	
	5	Boom Truck	1		$ 60.00	
Task 6 Mobilization & Demobilization					**$ 2,440.00**	