

February 2, 2018

Amy Titterington, Geologist USDA Forest Service Pike/San Isabel National Forests Leadville Ranger District 810 Front Street Leadville, CO 80461

RE: Mt. Elbert Mining Company's Willow Creek Mine MPO # 2810-021201-MPO-2016-001 Response to request to submit a Modified Plan of Operations

Dear Ms. Titterington,

Please accept the enclosed Modified Plan of Operations for Mining Activities form on behalf of Mt. Elbert Mining Company (MEM).

Items 1 and 2 are address in Section IV.B. The post-reclamation cross-sections are enclosed. All figures include the private-USFS property boundary.

Items 3 and 4 are addressed in Section IV.C as narrative. The overburden/waste material and topsoil stockpiles are also located on Exhibit IV.B.

Item 5 regarding topsoil quality and volume is located in two sections. The anticipated volume of topsoil is presented in Section IV.C. The quality of topsoil is included in Section V.H. According to soil information provided by USFS in 2011 and the soil key provided by J.Krezelok, the soil series include Leighcan and Troutville. These series are sandy loam and extremely stoney soils covered by decomposing organic matter.

Item 6 is addressed on Exhibit IV.B.

Item 7 is addressed in Section V.H. The cut-and-fill approach will NOT be used to reconstruct slopes. The waste rock and overburden will be replaced, pushed into place and compacted as a backfill operation.

Item 8 is addressed in Section V.H. Backfill material will be pushed with a dozer. Blasting will not be necessary.

Environmental Alternatives Inc.

1107 Main Street, Cañon City, CO 81212 e-mail: eai@bresnan.net Phone: 719-275-8951 Item 9 is not addressed in the MPO as the pit wall will be backfilled during reclamation rather than implementing a cut-and-fill approach.

Item 10 is addressed on Exhibit IV.B. The high wall access road commences near the fresh water ponds in the southeast corner of the private ground. The access road follows the edge of the stormwater diversion ditch.

Item 11 is addressed on Exhibit IV.B and in Section V.H. The primary erosion control is the diversion ditch designed by Blue Earth Solutions in 2014. This diversion ditch is located on Exhibit IV.B. In the event the diversion ditch is breeched, contour furrows will be constructed as described in Section V.H.

Items 12 and 13 are addressed in Section IV.A. In the event of non-performance, Mt. Elbert grants USFS personnel and subcontractors access to the subject property and stockpiled material across the ground owned by Mt. Elbert.

Item 14 is addressed in Section V.A. Details of the CDPHE approved air quality plan are provided as requested.

Item 15 is addressed in Section V.D. Scenic values will be preserved by maintaining the stand of trees on the east side of the private ground and reclaiming contemporaneously with mining. Approximately 10 acres will be timbered and topsoil salvaged at a time.

Item 16 is addressed in Section V.H. Mr. John Voorhis recommended the tree planting plan presented.

Item 17 regarding erosion control is addressed in Section IV.C and V.H. and was stated earlier in the explanation for Item 11 above. Matting will not be used for erosion control but rather contour furrows will be constructed as needed. Regarding the use of mulch in reclamation, Section V.H now clarifies that certified weed free straw mulch will be used.

Please feel free to contact me directly with any questions at <u>eai@bresnan.net</u> or 719-275-8951.

Respectfully submitted,

Angela M. Bellantoni Ph.D.

Cc: Dennis Schonnescein, MEM Becky Hicks, MEM Dustin Czapla, DRMS

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Sub	mitted by:	Signature	- <u>Kuran julo T</u> Tyle	Director 15 2016 Date		
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10.000		I. GENEI	RAL INFORMATION	production of the second secon		
A.	Name of Mine/Proje	ct: Willow Creek Mine				
8.	Type of Operation:	Glacial till mining				
C.	If continuing a previous operations. (check of	ontinuing) operation? (check lous operation, this plan (⊡r ne)	eplaces/⊡modifies/⊡suppleme			
D.	Proposed start-up of	late (<i>mm/dd/yy</i>) of operation	: 05/01/17			
E.	Expected total dura	tion of this operation:	5 to 10 years			
F.	If seasonal, expected date (mm/dd/yy) of annual reclamation/stabilization close out: 11/01/27					
G	Expected date (mm	/dd/yy) for completion of all	required reclamation:	11/01/2025		
		1	. PRINCIPALS			
A.		phone number of operator: b., LLC, 32460 Inverness Driv	ve, Evergreen, CO 80439			
ι σό	Name, address, and phone number of authorized field representative (if other than the operator). Attach authorization to act on behalf of operator. Angela M. Bellantoni, Environmental Alternatives Inc., 1107 Main Street, Cañon City, CO 81212					
C.	Name, address and Monte Cristo LLC, P. Evergreen, CO 8043	O. Box 3388, Evergreen, CO I	i the claims (if different than the 80437: Phillips Mining & Reclamat	operator): ion, 32460 Inverness Drive,		
	RECE	IVED				
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	Ranger [ho rs space is needed to fill out a bloc District	k of information, use additional sheets an	House .		

D. Name, address and phone number of any other lessees, assigns, agents, etc., and briefly describe their involvement with the operation, if applicable:

	(Name of claim, if applicable, and the legal la	and departintion where the an					
	(Name of claim, if applicable, and the legal land description where the operation will be located.)						
MC#	Name	Section	Township	Range			
CMC 277776	Zorro #1	6	11S	80W			
CMC 260707	Jewel #1	6	11S	80W			
CMC277777	Zorro #2	6	11S	80W			
CMC 277755	Jewel #2	6	11S	80W			

IV. DESCRIPTION OF THE OPERATION

A. Access. Show on a map (USGS quadrangle map or a National Forest map, for example) the claim boundaries, if applicable, and all access needs such as roads and trails, on and off the claim. Specify which Forest Service roads will be used, where maintenance or reconstruction is proposed, and where new construction is necessary. For new construction, include construction specifications such as widths, grades, etc., location and size of culverts, describe maintenance plans, and the type and size of vehicles and equipment that will use the access routes.

New access development will not be necessary for this project. The proposed mining abutts the west boundary of the currently CO DRMS permitted mine. Public land will be accessed from private ground owned by Mt. Elbert Mining Co. In case of non-performance, Mt. Elbert grants access across the private ground to USFS personnel and subcontractors to the subject property and to stockpiled material needed for reclamation of USFS property. Please refer to Exhibit IV.A.Access Map.

B. Map, Sketch or Drawing. Show location and layout of the area of operation. Identify any streams, creeks or springs if known. Show the size and kind of all surface disturbances such as trenches, pits, settling ponds, stream channels and run-off diversions, waste dumps, drill pads, timber disposal or clearance, etc. Include sizes, capacities, acreage, amounts, locations, materials involved, etc.

Please refer to Exhibit IV.B. Site Development Plan. Post reclamation cross-sections are provided as Exhibit IV.B-A thru H Post-Reclamation Cross-Sections

C. Project Description. Describe all aspects of the operation including mining, milling, and exploration methods, materials, equipment, workforce, construction and operation schedule, power requirements, how clearing will be accomplished, topsoil stockpile, waste rock placement, tailings disposal, proposed number of drillholes and depth, depth of proposed suction dredging, and how gravels will be replaced, etc. Calculate production rates of ore. Include justification and calculations for settling pond capacities, and the size of runoff diversion channels.

Surface mining will continue west from current mining operation requiring three to five miners. Site activity is limited by the long winter season in the area. Mining will commence after the snow thaw, approximately late April or early May, and will continue until prohibitied by snow fall, approximately October, each year. The target reserve will be excavated with front end loader and transported to a mined material stockpile near the trommel on the private ground by dump truck or conveyor, depending on distance from the mining face. As mining progresses away from the processing area, a conveyor will be more efficent and less environmentally impacting for mined material transport. A front end loader will feed the processing plant from the stockpile. Site activities rely on two generators powered by diesel fuel engines that are located on the private ground. Prior to mining, a logging contractor will be hired to remove timber. Timber will be sold or chipped on site to be used as mulch during reclamation. Approximately 4-6 inches of topsoil will be removed with a loader and added to exisiting stockpiled located on private ground for use during reclamation. Approximately 21,600 cu.yds. of topsoil will be salvaged and placed in the topsoil stockpile located approximately 800 ft from the active mine bench. Glacial till material, the target reserve, will be mined from the active face using a front end loader. Mined ore will be transported to the mill located on the private ground. Waste rock and gravel/sand, approximately 101,700 cu.vds, will be placed in temporary stockpiles, approximately 1,380 ft from the mine face bence, for reuse in rebuilding the pit floor and rebuilding 3H:1V slopes during reclamation. The waste material termporary stockpile located on the private ground will be approximately 506 ft long by 313 ft wide and 27 feet in height. Reclamation will occur contemporaneously with mining using a bulldozer to rebuild and compact slopes and pit floor as mining progress northward. Mined walls will slope 1H:1V with 10 ft benches every 15 feet in depth. Anticipated depth of mine is 90 feet bgs affecting approximately 30 acres of the 74.9 acres in the proposed unpatented claims. Blue Earth Solutions performed a surface water drainage evaluation and engineered diversion structures in 2013. Surface water drainage structures were constructed according to the engineering plan in 2014. Blue Earth Solutions will update the structures as needed with project development. Two infiltration ponds and one sedimentation pond exist on the private ground to which surface water is diverted. Designed storage volumes are 0.06, 0.12 and 1.7 acre-feet respectively. The ore will be milled at the existing mill located on the private ground. Maximum production is 200 tons/hour requiring 300 gallons of water per minute. Water is recirculated through the fresh water ponds located on the private ground.

D. Equipment and Vehicles. Describe that which is proposed for use in your operation (Examples: drill, dozer, wash plant, mill, etc.). Include: sizes, capacity, frequency of use, etc.
Front end loader with a 5 to 8 vd buckets will be the primary mining equipment. D-8 bulldozer, and 10 vd dump truck

may be used.. All other project equipment is located on the private ground i.e. mill, personal vehicles, etc.

E. Structures. Include information about fixed or portable structures or facilities planned for the operation. Show locations on the map. Include such things as living quarters, storage sheds, mill buildings, thickener tanks, fuel storage, powder magazines, pipelines, water diversions, trailers, sanitation facilities including sewage disposal, etc. Include engineering design and geotechnical information for project facilities, justification and calculations for sizing of tanks, pipelines and water diversions, etc. Structures will not be constructed on USFS property. All structures and tanks are located on the private ground to the east.

V. ENVIRONMENTAL PROTECTION MEASURES (SEE 36 CFR 228.8)

A. Air Quality. Describe measures proposed to minimize impacts on air quality such as obtaining a burning permit for slash disposal or dust abatement on roads.

CO Department of Public Health and Environment, Air Pollution Control Division issued permit 10LK2463F for fugitive dust at the Willow Creek Mine. Fugitive dust is controlled using water spray application on roads and active mine faces with a 4000 gallon water truck. Stockpiles with a life expectancy of more than two year are seeded with a temporary seed mix. The target material is glacial till that does not require sizing but is fed directly into the wet trommel. Reclamation occurs contemporaneously with mining, thus exposing the minimal amount of unvegetated disturbed ground. The operation does not require slash burning. Traffic speed limit is 15 miles per hour or less on site roads.

- B. Water Quality. State how applicable state and federal water quality standards will be met. Describe measures or management practices to be used to minimize water quality impacts and meet applicable standards.
 - 1. State whether water is to be used in the operation, and describe the quantity, source, methods and design of diversions, storage, use, disposal, and treatment facilities. Include assumptions for sizing water conveyance or storage facilities.
 - 2. Describe methods to control erosion and surface water runoff from all disturbed areas, including waste and tailings dumps.
 - Describe proposed surface water and groundwater quality monitoring, if required, to demonstrate compliance with federal or state water quality standards.
 - Describe the measures to be used to minimize potential water quality impacts during seasonal closures, or for a temporary cessation of operations.
 - If land application is proposed for waste water disposal, the location and operation of the land application system must be described. Also describe how vegetation, soil, and surface and groundwater quality will be protected if land application is used.

Water will be used in the milling process on the private ground. Approximately 3000 gallons will recirculate through the processing mill using settling ponds that are currently constructed on the private ground. The operator is party to an agreement with the City of Aurora for supplying water. Water will not be discharged but rather will have opportunity to infiltrate from sedimentation ponds. Above ground ditches convey water to the site from Turquoise Lake and Mt. Elbert watershed. Water is stored in the freshwater ponds that serve as recirculating water and sedimentation ponds.
 Upgradient stormwater channels will be constructed to divert surface water to infiltration and sedimentation ponds. Potential erosion from loose material areas and stockpiles will be mitigated with straw waddles or straw bales placed at the toe of the stockpile or slope.

3. Current operations do not require groundwater or surface water monitoring.

4. The sedimentation, infiltration and recirculating ponds are unlined, allowing water to percolate during the winter season when the site is closed and water is no longer added to the ponds.

C. Solid Wastes. Describe the quantity and the physical and chemical characteristics of solid waste produced by the operation. Describe how the wastes will be disposed of including location and design of facilities, or treated so as to minimize adverse impacts. Operation waste including typical business trash and personal trash will be hauled off site by a commercial waste hauler. Trash storage containers will be located on the private ground. Portable sanitation facilities are located on the private ground.

D. Scenic Values. Describe protection of scenic values such as screening, slash disposal, or timely reclamation.

The viewshed to the east will be screened by maintaining the existing stand of trees in the east portion of the private ground. Mining and milling equipment will be located on the private ground or in the bottom of the pit, out of site from surrounding areas. The claims are located at the toe of the mountain in a remote area of Lake County. Timber removal and topsoil salvaging will be necessary on approximately 10 acres intially. This will allow mining for approximately 2-3 years of mining, depending on weather. As mining nears the north limit of the timber and topsoil salvaged area at the end of year 2 or beginning of year 3, timber removal and topsoil salvaging will occur on the next 10 acre area. Contermporaneous reclamation and mining will reduce impact to viewshed. As mining progresses northward, reclamation will be performed south of the mine face, minimizing exposed mine face.

Fish and Wildlife. Describe measures to maintain and protect fisheries and wildlife, and their habitat (includes threatened, endangered, and sensitive species) affected by the operations.
 During CO DRMS permitting process, no threatened, endangered or sensitive fish and wildlife species were identified.

Process water will infiltrate the ground rather than being discharged into a surface water stream thus downgradient fisheries will not be impacted by the operation.

F. Cultural Resources. Describe measures for protecting known historic and archeological values, or new sites in the project area. Cultural resources have not been identified at this site since mining began in 1983. Mining will not occur in areas identified as historically or archaeologially sensitive by an oversight agency. In the event an artifact is discovered during mining, the District Ranger will be immediately notified, mining will stop in the area and mitigating activities will commence as directed by the oversight agency.

G. Hazardous Substances.

- Identify the type and volume of all hazardous materials and toxic substances which will be used or generated in the operations including cyanide, solvents, petroleum products, mill, process and laboratory reagents.
 Hazardous substances will not be used or stored on public ground. All petroleum products and equipment solvents/oils are stored in the maintenance building located on the private ground. All tanks are appropriately located in secondary containment structures.
- 2. For each material or substance, describe the methods, volume, and frequency of transport (include type of containers and vehicles), procedures for use of materials or substances, methods, volume, and containers for disposal of materials and substances, security (fencing), identification (signing/labeling), or other special operations requirements necessary to conduct the proposed operations. Hazardous substances will not be used or stored on public ground. The perimeter of the open pit mine will be excavated and bermed to divert surface spills away from the mine pit.
- Describe the measures to be taken for release of a reportable quantity of a hazardous material or the release of a toxic substance. This includes plans for spill prevention, containment, notification, and cleanup.
 In the event of a hazardous substance release on the private ground, the local emergency agency and state agency will be notified, followed by immediate containment action.

H. Reclamation. Describe the annual and final reclamation standards based on the anticipated schedule for construction, operations, and project closure. Include such items as the removal of structures and facilities including bridges and culverts, a revegetation plan, permanent containment of mine tailings, waste, or sludges which pose a threat of a release into the environment, closing ponds and eliminating standing water, a final surface shaping plan, and post operations monitoring and maintenance plans. At the close of each mining season, before winter precipitation prevents site access, slopes and site disturbances will be compacted with a dozer. Straw waddles and/or bales may be strategically placed to divert surface drainage to ponds during spring thaw.

Reclamation will be performed contemporaneously with mining, progressing from north to south. As the target reserve is mined out in a 3-5 acre area, waste rock and overburden from the new mining area will be placed in the mined out area to the south. Slopes will be reconstructed using waste material to 3H:1V or gentler, very near to pre-mining slopes due to the minimal amount of product removed from the mined material. The overburden/waste material will be backfilled/replaced onto the mined bench with a loader and dozer. All reconstructive/reclamation activity will be performed with a dozer pushing and shaping loader placed material. Pit edges will be contoured with a bull dozer to blend with surrounding topography.

To address erosion control during reclamation, the diversion ditch above the mine bench will remain until vegetation is established on the slope. In addition if erosion rills manifest during reclamation, contour furrows will be shaped into the slope at 90 ft vertical feet intervals down the slope. The contour furrows will be approximately 20 ft long and spaced approximately 50 ft apart.

According to the NRCS Official Soil Series Descriptions and the soil key provided by J.Krezelok, Troutville and Leighcan soil series are sandy loam, sometimes extremely stoney up to 10 inches deep covered by 0-4 inches of undecomposed forest debris and partially decomposed organic matter. The salvaged topsoil material will be replaced from 4 to 6 inches deep on the slopes and pit floor and tracked with a bulldozer to compact.

In the fall, the prepared areas will be seeded, mulched with certified weed free straw mulch, crimped and fertilized (if recommended by the local soil conservation district). The site will be monitored annually for weed infestation with implementation of weed control as recommended by Lake County Weed Control Officer or District Ranger. Ponds and structures and disturbances on the private ground will be reclaimed in accordance with the approved CO DRMS 112 Permit. The site will be monitored at least annually until the bond is released.

In cooperation and under the direction of CO Forest Service and/or US NRCS, one acre islands of 1-0 stock lodgepole pines will be planted across the reconstructed/backfilled slope. Eight to 12 islands will be constructed across the reclaimed slope to break-up the homogenous nature of the site. Each island will be planted with up to 100 trees.

VI. FOREST SERVICE EVALUATION OF PLAN OF OPERATIONS

A. Required changes/modifications/special mitigation for plan of operations:

Bond. Reclamation of all disturbances connected with this plan of operations is covered by Reclamation Performance Bond No. _____, dated (mm/dd/yy) _____, signed by _____ (Principal) and _____ (Surety), for the penal sum of _____. This Reclamation Performance Bond is a guarantee of faithful performance with the terms and conditions listed below, and with the reclamation requirements agreed upon in the plan of operations. This Reclamation Performance Bond also extends to and includes any unauthorized activities conducted in connection with this operation.

The bond amount for this Reclamation Performance Bond was based on a bond calculation worksheet. The bond amount may be adjusted during the term of this proposed plan of operations in response to changes in the operations or to changes in the economy. Both the Reclamation Performance Bond and the bond calculation worksheet are attached to and made part of this plan of operations. Acceptable bond securities (subject to change) include:

- 1. Negotiable Treasury bills and notes which are unconditionally guaranteed as to both principle and interest in an amount equal at their par value to the penal sum of the bond; or
- 2. Certified or cashier's check, bank draft, Post Office money order, cash, assigned certificate of deposit, assigned savings account, blanket bond, or an irrevocable letter of credit equal to the penal sum of the bond.

VII. TERMS AND CONDITIONS

- A. If a bond is required, it must be furnished before approval of the plan of operations.
- B. Information provided with this plan marked confidential will be treated in accordance with the agency's laws, rules, and regulations.
- C. Approval of this plan does not constitute certification of ownership to any person named herein and/or recognition of the validity of any mining claim named herein.
- D. Approval of this plan does not relieve me of my responsibility to comply with other applicable state or federal laws, rules, or regulations.
- E. If previously undiscovered cultural resources (historic or prehistoric objects, artifacts, or sites) are exposed as a result of operations, those operations will not proceed until notification is received from the Authorized Officer that provisions for mitigating unforeseen impacts as required by 36 CFR 228.4(e) and 36 CFR 800 have been complied with.
- F. This plan of operations has been approved for a period of _____ or until (*mm/dd/yy*) _____. A new or revised plan must be submitted in accordance with 36 CFR part 228, subpart A, if operations are to be continued after that time period.

VIII. OPERATING PLAN ACCEPTANCE

We have reviewed and agreed to comply with all conditions in this plan of operations including the required changes, modifications, special mitigation, and reclamation requirements.

We understand that the bond will not be released until the Authorized Officer in charge gives written approval.

Signature of Operator (or Authorized Representative)	(Date) <i>(mm/dd/yy)</i>
IX. OPERATING PLAN APPROVAL	a an faoin fao faoint an faointeachachach ag suite an sin george grup a' suite anna 1556 ann an suite anna ann
(Name)	(Title)
Signature of (Authorized Officer)	(Date) (<i>mm/dd/yy</i>)
Burden and Non-Discrimination Statement According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond number. The valid OMB control number for this information collection is 0596-0022. The time required to complete this information	

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