June 19, 2024

Elliott Russell
Colorado Division of Reclamation, Mining, and Safety
1313 Sherman St, Rm 215
Denver, CO 80203

RE: London Borrow Pit, File No., M-2024-016
110c Construction Materials Limited Impact Application, Adequacy Response

Mr. Russell

MineWater LLC submits this response to your June 12, 2024 adequacy review for the London Borrow Pit. Each item from that letter is addressed directly below, with additional documents attached as needed.

GENERAL APPLICATION PROCEDURES

1. *As required by Rule 1.6.2(1)(g), please submit proof of publication of a public notice in a newspaper of general circulation in the locality of the proposed mining operation*

See the proof of publication in the Fairplay Flume.

2. *As required by Rule 1.6.2(1)(g), please submit proof that the public notice was provided to all owners of record of surface and mineral rights of the affected land and to the owners of record of all land surface within 200 feet of the boundary of the affected land. Proof of notice may be return receipts of a certified mailing or by proof of personal service.*

See the attached electronic confirmation of receipt from the US Forest Service as the only neighboring landowner within 200-ft of the proposed boundary of affected lands.

3. *The Division received a comment from Colorado Parks and Wildlife regarding the application. The comment is attached for your review. This comment mirrors a similar comment from CPW regarding the adjacent MineWater LLC 110D M2023015 London Mine permit. Please acknowledge and address the comment and make changes to the application as necessary. Please inform the Division if you will make the same formal commitment as M2023015 whereas heavy machinery use will cease when ten or more Bighorn Sheep are present and noise at the site will be minimized to the greatest extent possible.*

The applicant understands the CPW concerns. If there are 10 or more Bighorn Sheep present within the affected area, equipment noise will be minimized/muffled and truck hauling will cease.

EXHIBIT B – Site Description (Rule 6.3.2):

4. *Within Exhibit B, Section 3.1 Water Quality Protection an SPCC plan is referenced to prevent oil discharges and to establish a response procedure in the event of spills. Please provide the referenced SPCC plan.*

Please see the attached SPCC plan that is used for the London Mine and will also be used for the London Borrow Pit.

EXHIBIT C – Mining Plan (Rule 6.3.3):

5. *The application materials state that London Borrow Pit is located near the London-Butte Portal and a portion of the proposed site was reclaimed by the DRMS AML. Based on the proximity to historical mining features, please discuss if historical waste materials may be encountered in the area and if so, how will these be handled.*

The London-Butte Portal location has been marked on Map E-2. No historical waste is expected to be encountered, given the CDRMS AML work. In the event that any such material is discovered, mining will cease in the area, the waste material documented, and reported to CDRMS. Exposed waste will be buried to prevent exposure to stormwater runoff. Mineralized mine waste will not pass specification requirements for the borrow pit material purposes, and thus will be avoided

6. *Based on a review of Google Earth, there appears to be a small area that could be a historic underground mining feature with a waste/development rock stockpile located at 39°16'11.22"N 106° 8'49.57"W. Please provide information on this feature, the material, and how the operation will address it.*

This feature has been marked on Map E-2. It is near the top of the anticipated borrow pit. The material identified by CDRMS is likely development rock from the Maumee Tunnel. Mining will stop short of this pile toe by at least 5-feet.

7. *Please confirm that all materials extracted within the proposed 110c permit boundary will be for the construction materials and uses discussed in the application. Please note, the permit will not authorize material mined within the boundary of the proposed 110c permit to be processed for metallurgical extraction and the use of the XRT sorting equipment in the adjacent MineWater LLC 110D M2023015 London Mine permit.*

All materials produced from the London Borrow Pit are for construction purposes only. No material excavated from the borrow pit will be processed for metallurgical extraction.

EXHIBIT D – Reclamation Plan (Rule 6.3.4):

8. *In addition to salvaging processing fines, the Reclamation Plan proposes that the rock glacier matrix within the final cut slope will be washed out by precipitation events and settle on the pit floor, creating an alternative topsoil. Please describe the anticipated timeframe needed to acquire adequate materials to support the rangeland reseeding effort on the 1.9-acre pit floor. Please note, Rule 3.1.3 allows up to five years to complete reclamation once mining is completed, however, at least two of these years should likely be reserved for revegetation. Additionally, please clarify that the rock glacier matrix will settle out on the pit floor area only and not on the proccing area due to the configuration of the site and elevation difference of the pit floor.*

It is anticipated that most substitute topsoil derived from fines will be from fines produced by material screening. Fines washed out of the final rock matrix are not expected to be the primary source of fines. It is expected that screening will produce sufficient material for substitute topsoil in two years.

Sediment that washes out of the exposed rock glacier matrix will be collected in the Mining Area floor, which is maintained at least two-feet below the surrounding grade.

9. *Please provide the minimum depth of growth-medium material (fines and washed-out matrix) that will be placed on the pit floor and processing area (fines).*

High altitude soil is typically very thin. As such, an average of 4-inches of material will be placed over all disturbed areas off slope. Thin topsoil placement on remaining talus slope or even bedrock slope is not likely to be successful at this altitude.

10. *In the event these alternative growth medium materials cannot support the reseeding efforts, please propose a plan on how soils will be improved to achieve successful revegetation with the proposed reclamation seed mixture. Within Exhibit B, it is stated that the west portion of the pit contains a substitute topsoil which will be stripped from the working area; could this material be stockpiled and reserved for final reclamation of the 110c permit until an appropriate amount and quality of other materials are generated?*

Any available topsoil-like material that can be stripped from the Processing Area will be, while maintaining a grade difference or barrier with the Mining Area. The amount of material that this will produce is unknown, but assuming a depth 6-inches, this would be roughly 1000 CY of material. To topsoil the processing area and the Mining Area flat will to an average depth of 4-inches will require 1700 CY of material. The operator will maintain a stockpile of 700 CY of substitute topsoil for reclamation purposes.

EXHIBIT F – List of Other Permits and Licenses Required (Rule 6.3.6):

11. *Within Exhibit F, it is stated that no other permits are needed, however within Exhibit C, Sections 3.6.1 and 3.9 discuss an outfall and CDPHE discharge permit. Please clarify this discrepancy.*

Please see the revised Exhibit F.

EXHIBIT I – Proof of Filing with County Clerk (Rule 6.3.9):

12. *In accordance with Rule 1.6.2(2), please submit proof that the revisions associated with this letter have been placed for public review with the original application at the local County Clerk and Recorder.*

Please see the attached proof of placement for the County Clerk and Recorder copy of the application.

GEOTECHNICAL STABILITY EXHIBIT (Rule 6.5):

13. *The Geotechnical Stability Analysis states there are no known geological hazards on the proposed site. Please revise this exhibit to discuss the substantial landslide which has occurred immediately west of the proposed site. Please provide any known details on the date and known/speculated causes of the landslide.*

The landslide is distinctly west of the site, outside of the affected area. Discussion regarding the landslide has been added to the Geotechnical Stability Exhibit.

14. *Please explain the secondary geotechnical analysis provided and define Critical Seed. Please note, this model shows a Factor of Safety of 1.48.*

Because the slope stability analysis is iterative, it discontinues after so many runs. In order to ensure that the number of iterations is not generating a false positive or negative, the last iteration is loaded back into the model as the new starting point, called a Critical Seed. The same analysis is run, with the Critical Seed as the starting point. For most soil or broken rock slopes, like that at the London Borrow Pit, the effect is to generate progressively thinner slices of slope that are the critical failure circle at progressively lower Factors of Safety. Typically, based on engineering judgement, an iteration that results in a particularly thin sliver of a circle is discarded since erosion usually supersedes such slope failures. The second geotechnical analysis delivered a 5.5-ft max depth failure sliver that was roughly 100-ft long. A third & fourth geotechnical analysis was conducted for the adequacy response and shows a 0.8-ft max depth failure sliver that is roughly 70-ft long, at a Factor of Safety of 1.46. These additional analyses have been added to the Geotechnical Stability Exhibit.

Most importantly, no failure circle leaves the slope. Any failure within the mining or reclaimed slope will be maintained within the affected area. The Geotechnical Stability Exhibit has been revised to reflect this.

Please feel free to contact my office with any further questions on this application.

Regards,

Ben Langenfeld, P.E.
Lewicki & Associates, PLLC
(720) 842-5321, ex. 1
benl@lewicki.biz

Attachments

Proof of newspaper publication
Proof of public notice transmission to USFS
County Clerk and Recorder copy receipt
London Mine SPCC Plan
Revised Exhibit C
Revised Exhibit D
Revised Exhibit F
Revised Geotechnical Stability Exhibit

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PUBLIC NOTICE

MineWater LLC, 10924 Leroy Drive, Northglenn, Colorado 80233, (720) 883-6700, has filed an application for a Construction Materials Limited Impact (110c) Reclamation Permit with the Colorado Mined Land Reclamation Board under provisions of the Colorado Mined Land Reclamation Act. The proposed mine is known as London Borrow Pit, and is located at or near Section 18, Township 9 South, Range 78 West, on the 6th Prime Meridian.

The proposed date of commencement is April 2024, and the proposed date of completion is October 2028. The proposed future use of the land is rangeland.

Additional information and tentative decision date may be obtained from the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567, or at the Park County Clerk & Recorder's Office, 856 Castello Ave, Fairplay, CO 80440, or the above-named applicant. A complete copy of the application is available at the above-named County Clerk and Recorder's office and at the Division's office.

Comments concerning the application and exhibits must be in writing and must be received by the Division of Reclamation, Mining, and Safety by 4:00 p.m., 10 days after the publication of this notice.

Please note that under the provisions of C.R.S. 34-32-101 et seq. Comments related to noise, truck traffic, hours of operation, visual impacts, effects on property values and other social or economic concerns are issues not subject to this Office's jurisdiction. These subjects, and similar ones, are typically addressed by your local governments, rather than the Division of Reclamation, Mining, and Safety or the Mined Land Reclamation Board.

Published in the Park County Republican and Fairplay Flume on May 17, 24, 31 and June 7, 2024

PUBLIC NOTICE
Notice of Sale

Unless past due amounts are paid in full, Contents unknown and many boxes of per-

items to Tom French whose

From:	Voorhis, Josh - FS, CO
To:	Ben Langenfeld
Cc:	Lapointe, Cullen - FS, CO; Castillo, Francisco - FS, CO
Subject:	RE: [External Email]London Borrow Pit - 110C Notification
Date:	Monday, June 17, 2024 11:15:31 AM
Attachments:	image001.png image002.png image003.png image004.png

The email notice has been received.

Curious, if you have more details on the location of the proposed pit. I want to make sure the impacts from the pit do not include any federal lands. Much of this area has not been formally surveyed and most of the existing maps are not always accurate. Perhaps you have a map or some GIS data?

Thanks for any additional location information.

Josh Voorhis

Joshua Voorhis
District Ranger

Forest Service
Pike & San Isabel NF & Cimarron & Comanche NG, South Park RD

p: 719-836-3857
c: 719-839-1305
f: 719-836-3875
joshua.voorhis@usda.gov

PO Box 219, 320 US Hwy 285
Fairplay, CO 80440
www.fs.fed.us

Caring for the land and serving people

From: Ben Langenfeld <benl@lewicki.biz>
Sent: Monday, June 10, 2024 11:11 AM
To: Voorhis, Josh - FS, CO <Joshua.Voorhis@usda.gov>
Subject: [External Email]London Borrow Pit - 110C Notification

Hello

As part of the Colorado Division of Reclamation, Mining, and Safety public notice process for the London Borrow Pit 110c, adjacent landowners are to receive a copy of the public notice published in the local newspaper. We typically mail these notices, but have been having problems with postal delivery in Park County, so I am sending a copy of this notice electronically to make sure you get it.

Please provide a response to this email so I can show the Colorado Division of Reclamation, Mining, and Safety that this notice has made it to you.

Regards,
Ben Langenfeld, P.E.
Lewicki & Associates
benl@lewicki.biz
Office: (720) 842-5321
Cell: (303) 960-5613

Lewicki & Associates
ENGINEERING | GEOLOGY | ENVIRONMENTAL

April 11th, 2024

County Clerk & Recorder
Park County
356 Castillo Ave
Fairplay, CO 80440

London Borrow Pit
110c Limited Impact Construction Materials Reclamation Permit Application, County Copy

To Whom It May Concern

Enclosed is a notice for a 110(c) application to the Colorado Division of Reclamation, Mining, and Safety for the operation to be known as the London Borrow Pit. The applicant is MineWater, LLC. The Colorado Division of Reclamation, Mining, and Safety requires evidence that the application has been filed with your office. Therefore, please sign and date below. Thank you.

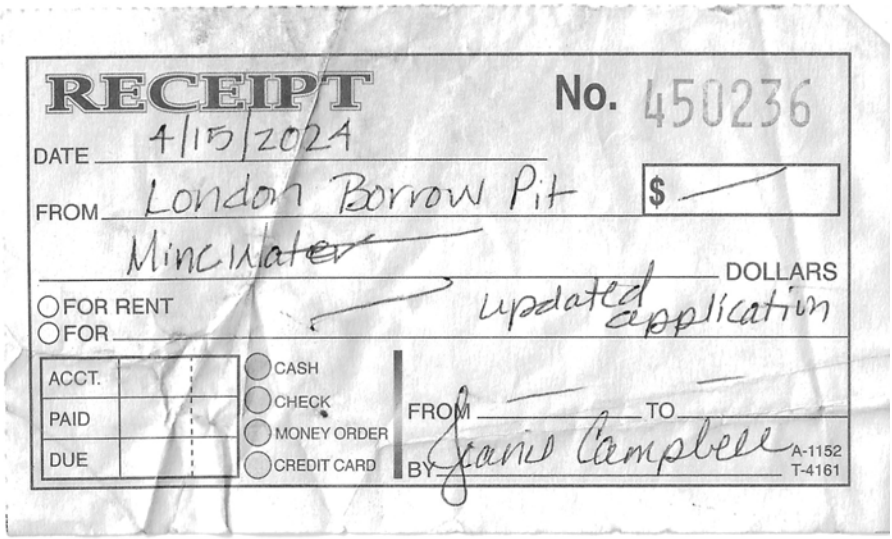
Please contact me if you have any further questions or concerns at (720) 842-5321 ex. 1.

The application was received on the following date: 4/15/2024

Received by: Jeanie Campbell

Regards,

Benjamin Langenfeld, P.E.
Lewicki & Associates, PLLC
(720) 842- 5321
benl@lewicki.biz



RECEIPT No. 450236

DATE 4/15/2024

FROM London Borrow Pit Minimater $ —

DOLLARS

○ FOR RENT updated application

○ FOR

ACCT.	
PAID	
DUE	

○ CASH
○ CHECK
○ MONEY ORDER
○ CREDIT CARD

FROM — TO —

BY Janis Campbell

A-1152
T-4161

Spill Prevention & Containment Plan

London Mine Property
Alma, Colorado

Prepared by:

MineWater LLC
Lone Tree, CO

Prepared for:

MW Sorter
Alma, Colorado

October, 2023

Table of Contents

1.0 DESCRIPTION OF MINING ACTIVITIES

This Management Plan (Plan) was developed for the London Mine Property (Property) in accordance with the Requirements published by the Colorado Department of Public Health and Environment. A copy of this Plan is maintained by the London Mine site manager who is identified in paragraph 3.1. A copy of the Plan is also maintained onsite in the office area.

1.1 PURPOSE AND SCOPE

This Plan covers chemical containment and prevention of spills that could impact stormwater runoff from those areas of the Property with surface disturbance and sources of chemicals of concern, which includes:

- Equipment storage areas;
- Waste rock storage areas;
- Crushed ore storage; and,
- Mine Pool Treatment reagent storage area.

This plan oversees the discharge from the London Mine Water Tunnel. Prior to June 2017, this plan included a second discharge source from the Extension Tunnel, but that discharge has been diverted to the underground mine pool for treatment prior to co-mingling with the London Mine Water Tunnel pursuant to the Compliance Order on Consent IC-160803 entered into between MineWater and the State of Colorado. Both discharges are permitted under the Colorado Discharge Permit System (CDPS) and are managed pursuant to CDPS permit number CO-0038334 (Water Tunnel) and CDPS permit number CO-0045209 (Extension Tunnel).

1.2 SITE DESCRIPTION

The Property is located approximately 12 miles northwest of Fairplay, Colorado in the N1/2 of the NE1/4 of Section 18, T9S, R78W on Park County Road 696 (Figure 1.1). Road access to the mine site from Fairplay, the County Seat of Park County, is north via Colorado Route 9, to London Junction west on Mosquito Pass Road (Park County 12), then southwest to County Road 696. Roughly 2 miles past London Junction is the small community of Park City. The Property is approximately 2 to 2.5 miles beyond Park City.

The London Mine is an inactive mine site. Historically, mining activities at the London Mine commenced in 1874 and continued until the mine was closed by the US Government in 1942 (War Production Board Limitation Order L-208, October 8, 1942) as part of World War II planning. The mine was re-opened in May, 1978 for exploration and rehabilitation of the mine property which was conducted for a period of 13 years. Active mining of the site commenced in 1988 and continued for a period of years.

All exploration and mining ceased in October 1991. The principal product from the London Mine was gold and associated precious metals. The primary activities on the site historically included exploration drilling, mining, and milling.

The Property has been in a state of care and maintenance since 1991. The total area affected by previous operations and the care and maintenance efforts encompasses several historic mine properties including the London Mine, London Butte Mine, the American Mill tailing impoundment, the London Mine Extension Tunnel, and surrounding area. In 1992 the total area consisted of roughly 5,000 acres (3,000 patented and 2,000 unpatented claims). Several claims were sold off over the years and the total area covered by this Plan is roughly 1,000 acres, with an estimated total historic mining area of roughly 130 acres.

Property boundaries for the areas covered by the Plan are shown on Figure 2. Detailed site features located within the disturbed areas of the Property are shown on Figure 3.

A general description of the different areas at the site is provided below:

- London Mine Property- The former London Mine site consists of several small office buildings, a maintenance facility, a fuel storage facility, a mixture of methanol (80%) and ethanol (13%) storage tank, sodium hydroxide solution storage tanks, the London Mine Water Tunnel discharge flume, and a sedimentation pond. Also within the London Mine Property is a crushed ore storage area and sludge storage area where sludge from the London Mine Extension Tunnel was placed after being dredged from the Extension Tunnel settling pond. Pyritic drill cuttings amended with lime pursuant to the NOI Pl6- 020 (MD01) are collocated on the sludge storage area. South Mosquito Creek cuts through the London Mine property.

- London Mine Extension Tunnel and Surrounding Area-The Extension Tunnel was historically used to dewater mine workings within the London Mine. Water discharging from the Extension Tunnel was treated in a chemical precipitation plant. Water from the treatment plant reported to a settling pond for polishing prior to release. The pH of the treated water was then adjusted using a weak acid drip prior to discharge to No Name Creek, a tributary to South Mosquito Creek. There are access roads and historical waste rock piles located within the vicinity of the London Mine Extension Tunnel. All of this has been removed, but the treatment facility remains on-site.

2.0 SITE MAP

There are two figures included with this Plan as described below.

- **Figure 1** - Is a general area map showing the location of the Property in reference to local towns and roads.

- **Figure 2** - Is a smaller scale map that shows property boundaries, drainage areas, surface flow direction, roads, streams, wetlands and location of CDPS outfalls. This Figure also provides additional site detail and shows the location of structures, roads, tailings impoundments, settling ponds, storage areas, and other features within the disturbed area.

3.0 STORMWATER MANAGEMENT CONTROLS

The permit requires that the London Mine develop and implement pollutant controls appropriate for the site. This section of the Plan provides information on stormwater management controls including the identification of the Plan Administrator, a list of potential pollutant sources, and Best Management Practices (BMPs) used to minimize impacts to stormwater and receiving surface waters from these identified sources.

Overall, stormwater controls include berms and settling features as shown within Figure 2. The "Sump" identified in the upper right corner has rough dimensions of 18' wide x 40' long x 10' depth to provide roughly 50,000 gallons of stormwater settling capacity. Once this sump fills, it overflows to a pipe connected to the two-million gallon sedimentation pond that provides settling capacity to the discharge from the London Mine Water Tunnel. The outfall from this sedimentation pond passes through a monitoring flume, where weekly discharge samples are collected and analyzed per the existing permit, and then overflow water discharges into South Mosquito Creek.

3.1 PLAN ADMINISTRATOR

Permit requires identification of a Plan Administrator who is responsible for developing, implementing and maintaining the Plan. The Plan Administrator for the London Mine:

Mr. Joseph G Harrington
MineWater Finance LLC; Manager
9233 Park Meadows Drive, Suite 108
Lone Tree, CO 80124
(720) 883-6700

Implementation of the Plan has been assigned to the Manager, MineWater LLC.

3.2 POTENTIAL POLLUTANT SOURCES AND BEST MANAGEMENT PRACTICES

Permit requires identification of potential pollutant sources at the Property and to assess the potential of these sources to impact surface water. This section also requires the identification of engineering controls and BMPs to reduce impacts from these potential pollutant sources to surface waters during spills and precipitation events. Table 3-1 summarizes the identified pollutant sources and associated BMPs for the Property.

The portions of the mine site that contributes runoff to the areas subject to the permit are summarized below and are depicted on the attached site maps:

- Equipment storage areas;
- Waste rock storage areas;
- Crushed ore storage; and,
- Mine Pool Treatment reagent storage area.

Table 3-1 Potential Sources and BMPs

Potential Pollutant Sources and BMPs			
Potential Pollutant Sources	**Likelihood of Release**	**Admin Controls**	**BMPs/Engineering Controls**
Outdoor Storage of Chemicals:			
Alcohol (mixture of methanol and ethanol) tank storage area 25% NaOH tank storage area	Minor	Inspection	Chemical storage in elevated area away from drainage. Spill drainage pathway is routed towards the on-site sump and eventually the settling pond.
Diesel fuel tank (2,000)	Minor	Inspection	Fuel tank has secondary containment of 110% of total tank volume.
Outdoor Storage of Equipment:			
Dozer Storage at London Mine Office Building	Minor	Inspection	Drip pads under large operating equipment to prevent oils and greases from entering stormwater. Stored in elevated areas away from drainage areas.
Potential Pollutant Sources and BMPs			
Potential Pollutant Source	**Likelihood of Release**	**Admin Controls**	**BMPs/Engineering Controls**
Sediment and erosion:			
Waste Rock Stockpiles	Major	Inspection	Diversion of surface run-on and run-off away from waste piles. Planning and sampling of off-site removal and reprocessing as economics allow. No Name Creek cuts through West Extension dumps so future removal will decrease storm – driven loading if it occurs.
Mine drainage discharges from Extension Tunnel and Water Tunnel	Minor	CDPS Discharge Permits	Treatment followed by settling pond. Maintenance of outfall structures and ongoing monitoring of discharge per permit.
Crushed Waste Rock Storage	Minor	Inspection	Crushed waste rock is stored within approved disturbed

			areas, graded to 10’ deep collection sump.
Crushed fines	Minor	Inspection	Crushed / sorted fines are stored within approved disturbed areas, graded to 10’ deep collection sump.
Crushed / Sorted Waste Rock	Minor	Inspection	Crushed / sorted fines are stored within approved disturbed areas, graded to 10’ deep collection sump.

3.3 IDENTIFICATION OF DISCHARGES OTHER THAN STORMWATER

Representatives from the London Mine performed a visual check of the property to assess whether or not there were discharges from the site other than stormwater. In summary, there were two separate mine water discharges from the London Mine. One is mine water from the London Mine Extension Tunnel (CDPS Permit CO-0045209) and the other is groundwater from the London Mine Water Tunnel (CDPS Permit CO-0038334).
Both of these mine water discharges are covered under separate CDPS permits, but by agreement under IC-160803 have been combined into one Permit for the Water Tunnel and are being treated under that permit.

Typical discharge from mine sources on-site exhibit around 2,000 uS/cm electrical conductivity and a low pH (below 6 SU). Water arising from contact with non-mineralized areas exhibits electrical conductivity between 200- 550 uS/cm, and a neutral pH above 6.5 up to 8.5. Water sources and springs that arise about the site are periodically assessed to determine if the source (typically of unknown origin) is from melt-water or mine-water.

4.0 COMPREHENSIVE INSPECTION

The owner (MW Sorter) has identified a qualified entity, MineWater LLC who is responsible for conducting annual comprehensive inspection of the property through its manager, Joseph Harrington or his designate. Typically, the annual inspections are performed during the early to mid-summer months during and immediately after the snow has melted. More frequent inspections may be performed, when practicable, or as identified in the engineering controls for a given site element such as the fuel tank lined basin which must be monitored and drained of melt water prior to overtopping during ongoing snow melt.

4.1 ANNUAL INSPECTIONS

An annual, comprehensive inspection is required and typically includes:

- Visual checks of disturbed areas and potential pollutant sources, including:
- Equipment storage areas;
- Waste rock storage areas;
- Water treatment chemical tank storage area;
- Crushed ore storage;

- Erosion control measures and integrity of BMPs are also checked during the annual
- inspection.
- Any identified need for repair and maintenance of the stormwater controls that are noted during the inspection must be repaired as soon as practicable. The Plan will be updated, as necessary, based on the results of the inspection.

4.2 INSPECTION RECORDS

- Records of the annual stormwater inspection are maintained for a period of at least 3 years from the date of the last inspection. The inspection records should include the following information:
    - Scope of the inspection — areas inspected;
    - Name of individual conducting inspection;
    - Date(s) of inspection;
- Significant observations relating to the implementation of the Plan (note: Significant observations include: locations of discharges, locations of previously unidentified sources of pollutants, locations of BMPs and controls needing maintenance or repair, locations of failed BMPs that need replacement, and locations where additional BMPs are needed.
- The inspection records must also document incidents of noncompliance, if any, with the Plan.

5.0 CONSISTENCY WITH OTHER PLANS

The only other related plans that could be identified are the CDPS permits that address discharges from the Water Tunnel (number CO-0038334, outfall 001A and from the Extension Tunnel (number CO-0045209). This Management Plan (Plan) is consistent with the requirements of these CDPS permits. Park County Ordinances Article VII, Section 7-602 "Drainage, Erosion, and Sedimentation Control" includes requirements for reducing erosion during construction activities that disturb greater than one acre.

General Principles (paragraph 1) requires temporary or permanent covers on all disturbed areas as soon as possible after final grading, that water be conveyed around, through or from disturbed areas at non-erosive velocities, and that disturbed areas are stabilized using permanent vegetative cover or storm-water quality control measures.

6.0 REVIEW HISTORY

The Plan is reviewed and updated, as necessary on an annual basis. A summary of review and changes made is provided in the table below.

Review Date	Revision No.	Next Review Date	Summary of Changes Made
August	01	Aug 2024	Release of Document

7.0 REFERENCES

- EPA's Stormwater Management for Industrial Activities
- CDPHE General Stormwater Permit, Metal Mining Operations and Mine-Waste Remediation (COR-040000)
- Stormwater Management Plan Guidance-Contents and Requirements: Metal Mining Operations and Mine-Waste Remediation

FIGURES

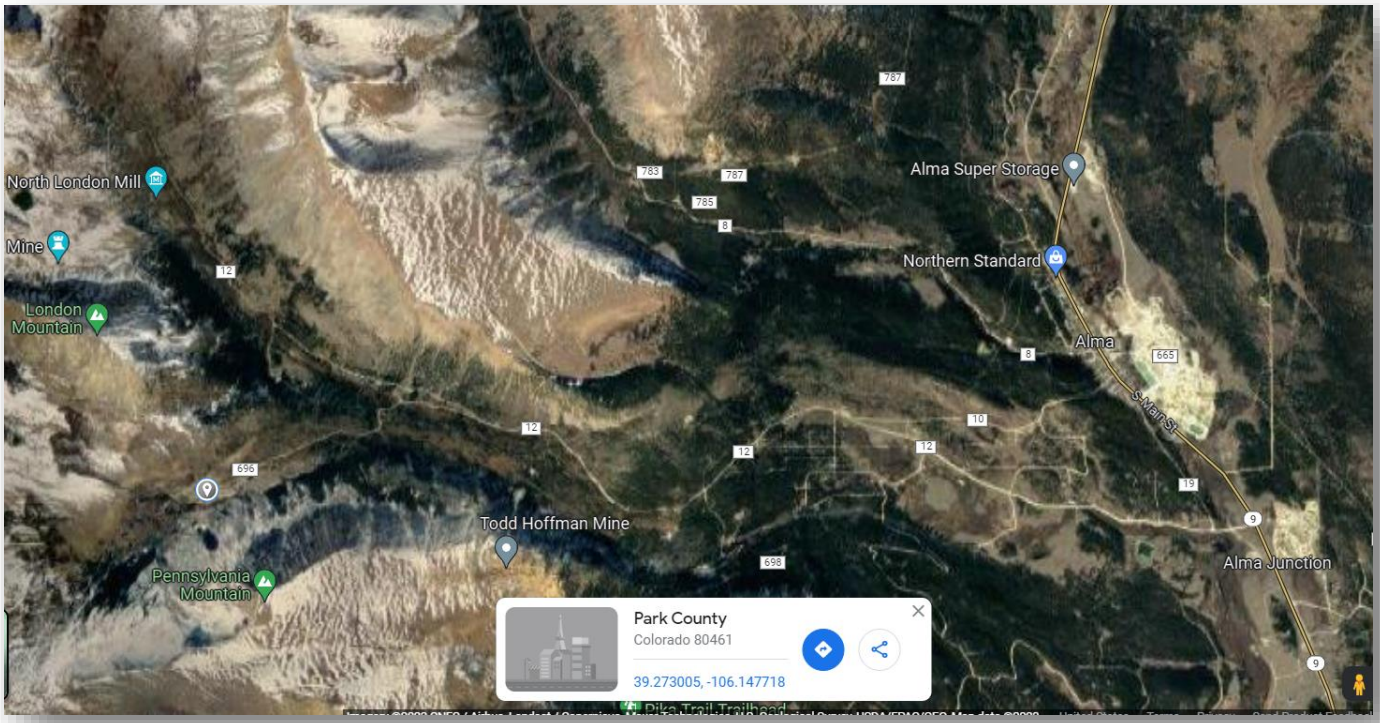


Figure 1: Location of the London Mine in relation to the town of Alma.

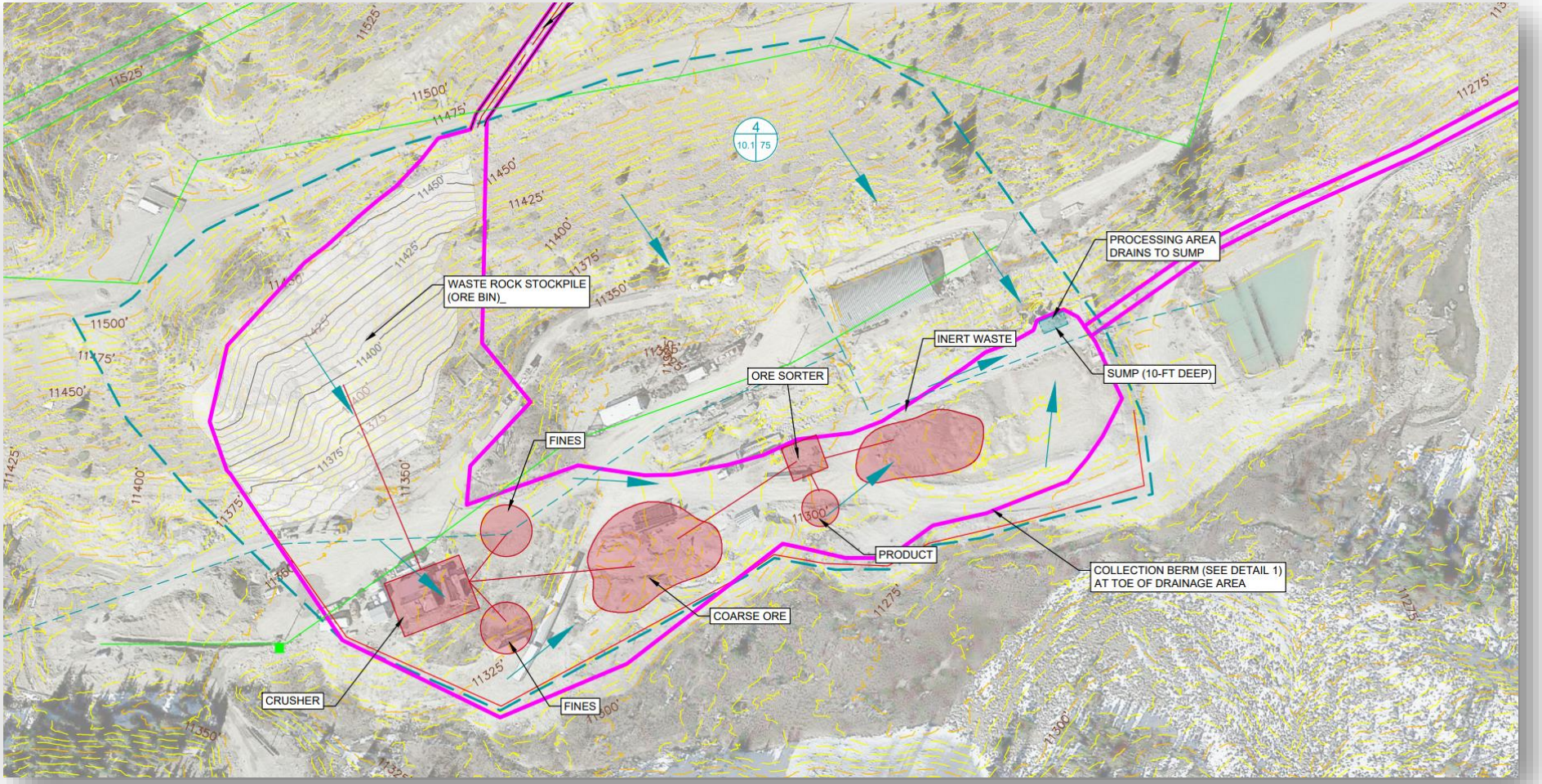


Figure 2: Overall site map of the London Mine.

EXHIBIT C MINING PLAN

1. General Mining Plan

Map E-2 outlines the mining plan, indicating that the mining activity will impact roughly 7.1 acres of the 9.9 acre affected area. Rock glacier will be mined using dozers and excavators for use in construction materials such as rip-rap, crushed rock, sand, screened rock, and substitute topsoil. Mining will extend to the bottom of the deposit, maintaining final mining slopes at 1.5H:1V along the perimeter. Because of the nature of rock glaciers, the final cut slope will be left at a 1.5H:1V and allowed to weather in. This means the exposed matrix will be allowed to be washed out by precipitation events. This sediment will be collected on the floor of the pit and then revegetated. The rock glacier is expected to extend to approximately the elevation of the creek.

Any historical metal mine waste that is exposed during mining will be buried to prevent exposure to stormwater runoff. Mineralized mine waste will not pass specification requirements for the borrow pit material purposes, and thus will be avoided. If any historic mine waste is encountered in the Mining Area, CDRMS will be notified.

No blasting will occur at the London Borrow Pit. If refuse, acid, or toxic materials are unexpectedly encountered, these materials will be removed from the site and disposed of appropriately.

Cross sections of mining can be seen on Map E-3.

2. Mining Timetable

Mining operations at the London Borrow Pit are expected to take approximately 7.3 years to complete, based on an annual average production of 70,000 tons. Actual production rates will fluctuate based on market conditions. An approximate mining timetable based on this production and the phased mining plan is shown in Table D-1.

Table D-1 Mining Timetable

Description	Time Required
Construction of access road and working area.	1 months
Mining	7 years
Closure grading	1 month
Substitute topsoil and seeding	1 month
Total	7.3 years

3. Mine Facilities and Operation

The site will contain the following facilities and equipment:

Facilities:

- Portable toilet

Equipment:

- Front-end loaders
- Bulldozers
- Water trucks
- Excavators
- Conveyors
- Crushing and Screening Equipment

The operator will provide portable toilets and bottled water to employees on site during operations.. All facilities will be removed during reclamation.

4. Topsoil and Overburden Handling

No topsoil or overburden exist on the site.

5. Site Access

The London Borrow Pit will be accessed via existing roadways on site. This road will remain in place after mining is completed.

6. Water Information, Rights, and Augmentation

All water right issues such as availability of water for this operation, consumption rates, dust control, etc. are presented in Exhibit G – Water Information.

7. Schedule of Operations

Mining operations will occur as dictated by demand. Mining, screening, and processing will be conducted on site with portable equipment throughout the year.

8. Park County Impacts and Impacts

No impacts to Park County services or infrastructure.

EXHIBIT D RECLAMATION PLAN

1. General Reclamation Plan

The maximum disturbed area under this permit is 7.1 acres out of the 9.9-acre permit area and reclamation is limited to the flat areas within the disturbed areas.. Reclamation plans can be viewed on Map E-4. Post-mining land use will return the site back to rock glacier and dry rangeland with native grasses on the flat areas and consistent with existing land use in the area. Because of the nature of rock glaciers, the final cut slope will be left at a 1.5H:1V and allowed to weather in. This means the exposed matrix will be allowed to be washed out by precipitation events. This sediment will be collected on the floor of the pit and then revegetated.

2. Topsoil and Overburden Replacement

No topsoil or overburden exists. Fines will be salvaged from screening operations to create substitute topsoil for the flat areas. Sediment that washes out of the exposed rock glacier matrix will be collected in the Mining Area floor, which is maintained at least two-feet below the surrounding grade.

An average of 4-inches of material will be placed over all disturbed areas off slope. Thin topsoil placement on remaining talus slope or even bedrock slope is not likely to be successful at this altitude.

Any available topsoil-like material that can be stripped from the Processing Area will be, while maintaining a grade difference or barrier with the Mining Area. The amount of material that this will produce is unknown, but assuming a depth 6-inches, this would be roughly 1000 CY of material. To topsoil the processing area and the Mining Area flat will to an average depth of 4-inches will require 1700 CY of material. The operator will maintain a stockpile of 700 CY of substitute topsoil for reclamation purposes.

8.1. Substitute Topsoil from Fines

Fertilizer may be used to enhance the productivity of fines-based substitute topsoil that is placed for reclamation.

3. Haul Roads and Access

One access road will connect the site to the existing London Mining complex. This road will remain in place after reclamation.

4. Reclamation Timetable

Reclamation earthworks will occur as mining progresses throughout the site.

5. Revegetation Plan

Once topsoil is placed on the appropriate locations, the seed mix shown below should be immediately used. It has been developed for high altitude rangeland. Seeding will take place in the fall, prior to the anticipated snowfall for the year.

Table E-2 Reclamation Seed Mix:

Species	Portion of Mix (%)	Seeding Rate (PLS lbs/acre)
Letterman Needlegrass	15	3.3
Nodding Bromegrass	20	4.0
Slender Wheatgrass	20	4.4
Arizona Fescue	20	1.8
Muttongrass	24.9	0.5
Silver Sagebrush	0.03	0.4
Louisiana Sage	0.01	0.2
Western Yarrow	0.01	0.2
Silvery Lupine	0.05	0.8
Total	**100**	**15.6**

The rates above are for drill seeding. Seed application rates will be doubled when using broadcast methods.

Certified weed free hay or straw mulch will be applied after seeding at the rate of 2,000 lbs per acre. Mulch will be applied mechanically where possible, but slope constraints and weather may necessitate manual placement.

6. Post-Reclamation Site Drainage

Map E-5 shows arrows indicating the approximate direction of drainage throughout the site. Final reclamation surfaces will be graded such that onsite drainage waters flow in a similar path to the original pre-mining path; however, the majority of surface water will infiltrate the porous landscape within 72 hours.

7. Weed Control

Measures will be employed for the control of any noxious weed species and the objective is to control undesirable plants on the site. Plants identified through the Colorado Noxious Weed Act (C.R.S. 35-5.5) and the County Noxious Weed List as undesirable and designated for management within the County will be removed. Plants identified as noxious weeds will be managed by control measures. A Weed Control Plan will be utilized as follows:

1) Each April, a weed survey will be taken of the permit area.

2) If any weedy patches or noxious plants are identified, chemicals approved for use by the weed control staff of County will be sprayed by backpack sprayer or 4-wheeler.

3) After reclamation, weed surveys and spraying will continue until perennial cover and production of the site meets DRMS requirements and bond release is obtained.

The Division and County staff will be consulted regarding any weed infestation areas and control measures to be implemented prior to their initiation. The plan does not contemplate total weed removal on the property. Past experience shows that some initial weed cover in the first year following retopsoiling is beneficial to reclamation efforts in rangeland sites. Weeds provide shade for new grasses, are a means of holding snow on the seedbed longer, and protect seedlings from wind and water erosion until the planted species firmly take hold.

All areas of the mining operation will be monitored closely throughout the year allowing the Operator to determine if any additional weeds become present. If any new weed species are found, the County and the Division will be consulted to formulate the best plan to mitigate the new infestation.

8. Revegetation Success Criteria

Areas will be deemed adequate when vegetation is established to control erosion and noxious weeds are not present in any significant amounts and all of the conditions of Rule 3.1.10 are met.

9. Monitoring Reclamation Success

Monitoring reclamation on an ongoing basis will allow minor revisions to assure efficient and successful reclamation. The Operator plans to use the local NRCS office to assist in determining the ability of the reclaimed land to control erosion. If minor changes or modifications are needed to the seeding and reclamation plan, revision plans will be submitted to the Division, as required. It is hoped that the Division will provide assistance in evaluating the success of ongoing reclamation processes. All areas disturbed and reclaimed and any other important items regarding reclamation will be submitted in the required annual reports to the Division.

10. Reclamation Bond

Reclamation activities during the worst-case scenario include highwall knock-down and grading the active mining area, topsoiling and seeding the active pit floor areas (mining and processing), Reclaimable disturbed area includes open mining areas and the processing area. Fertilizer and weed-free mulch may be applied, as needed.

The bond for the site will be based upon $2,500 per acre. The site will have 7.3 acres of mining disturbance. Since a fraction of an acre is counted as a whole acre by the Division, the bond will be 8.0 acres x $2,500.00 per acre = $20,000.00.

EXHIBIT F OTHER PERMITS REQUIRED

Colorado Dept. of Public Health and Environment discharge permit.

RULE 6.5: GEOTECHNICAL STABILITY EXHIBIT

There are no known geologic hazards within the affected area itself. Roughly 170 feet to the west is the remanent of a landslide that occurred in 2011. The landslide material is west of the London Fault while the material being mined by the London Borrow Pit is east of the fault. According to US Geological Survey reports, the material west of the of the fault is predominantly Minturn Formation, which is weaker than the Precambrian rocks east of the fault. Landslides in Precambrian rocks are rare unless shearing, faulting, or alteration has induced low rock mass strength. Figure 1 and Figure 2 both show how the different materials sit on the two sides of the London Fault. The glacial deposit and landslide deposit can be clearly differentiated visually, with the glacial deposit spread in the expected fan shape over the underlying bedrock. The landslide deposit shows a clear scarp at the top of its failure.

The cause of the landslide is not known to the applicant or Lewicki & Associates. However, given the weaker and more landslide prone type of rock east of the London Fault, it is likely that simple weathering led to the landslide.

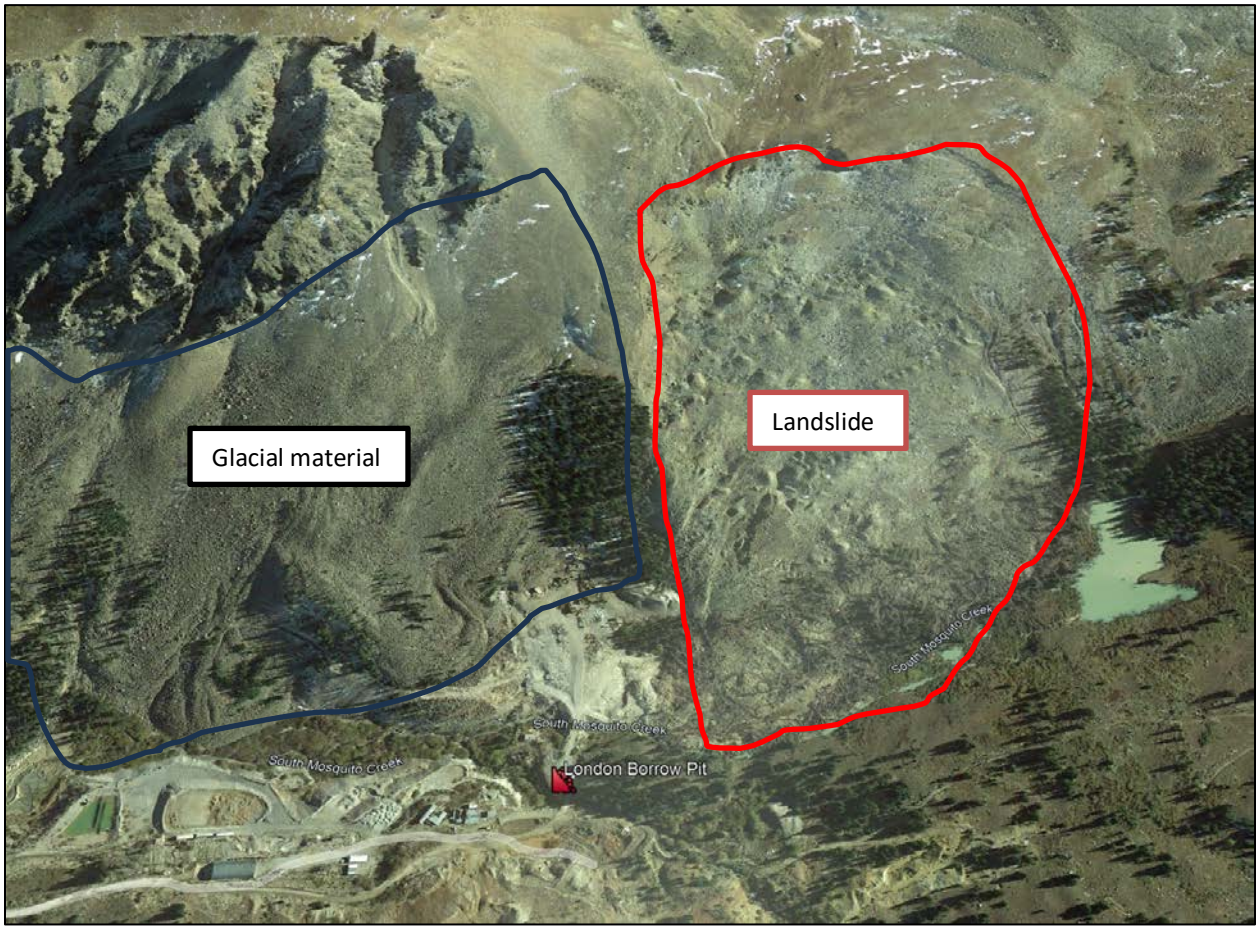


Figure 1. Google Earth Oblique View from 2011, following landslide.

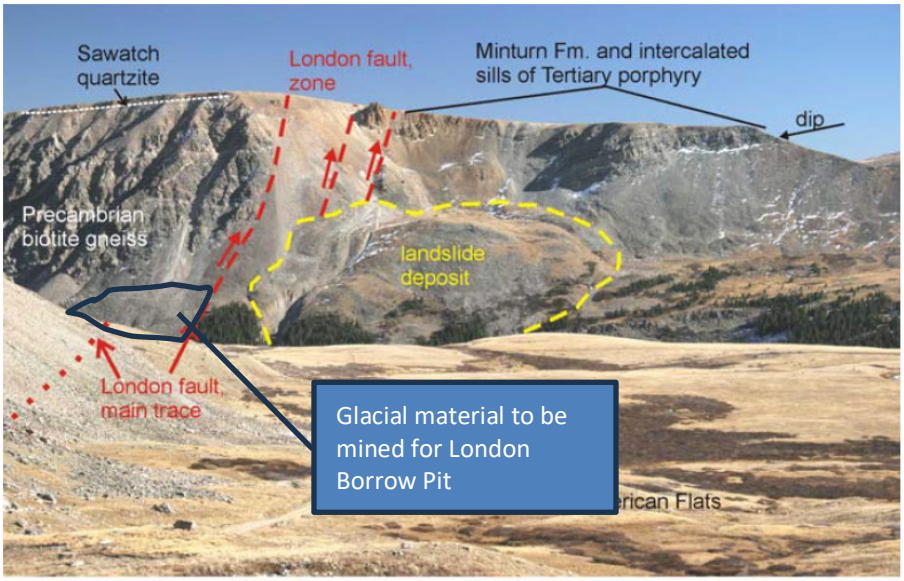


Fig. 19. View of the north face of Pennsylvania Mountain. Dark gray rocks on the right are southeasterly dipping beds of the Minturn Formation in the footwall of the London fault. Rocks on the left are Proterozoic biotite gneiss. Fault is in the center of the photo and is partially obscured by landslide deposits. Note the dark red to rust colored overturned beds of the Minturn Formation near the fault along the ridgeline (UTM83 400612, 4347766). Photo by V. Matthews.

Figure 2. Figure from Climax Quadrangle Geologic Map, Lake and Park Counties, Colorado, Author's Notes

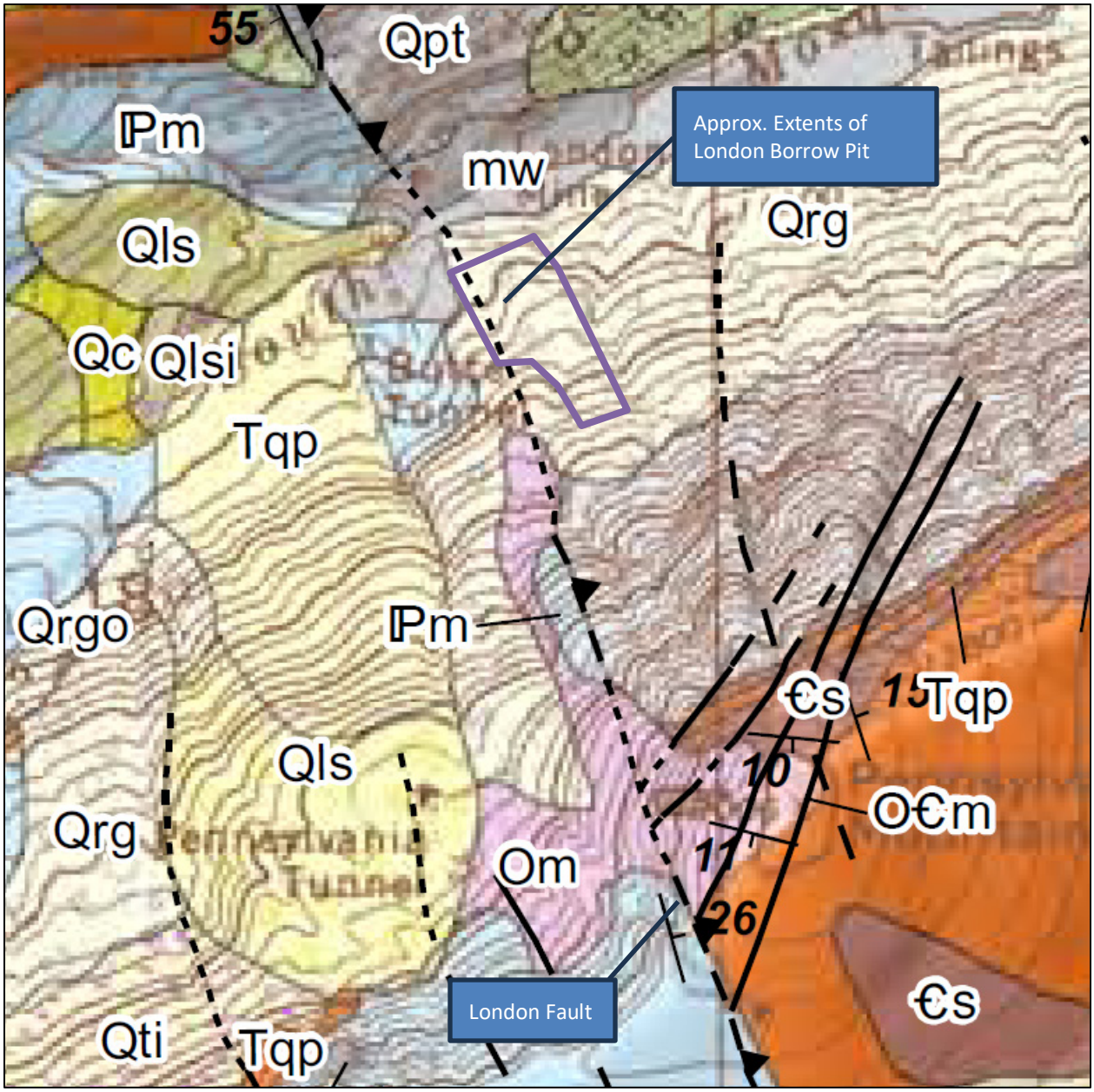


Figure 3. Portion of Climax Quadrangle Geologic Map, Lake and Park Counties, Colorado Focused on the London Borrow Pit

Geologic Units Around London Borrow Pit and Landslide

mw - Mine waste (latest Holocene) – Unsorted silt, sand, and rock fragments deposited by humans during mining. Includes coarse-grained waste rock (spoil), fine-grained tailings, and areas of graded bedrock veneered with spoil. West of the Range crest, mapped in Evans Gulch and at the Climax Mine. East of the range crest, mapped on Pennsylvania Mountain, the London Mine, South London Mine, and the American Mill. The average thickness of the unit is

generally less than 30 ft, except at the Climax Mine. Mine waste may be subject to settlement when loaded if not adequately compacted.

Qrg -- Rock glacier deposits, undivided (Holocene) - Poorly sorted, angular to sub-angular boulders, cobbles, gravel, and sandy silt. Mapped in most of the cirques in the quadrangle as smaller rock glacier deposits and lobes. Composed almost exclusively of the hardest, well-jointed rocks exposed on cirque headwalls, such as Precambrian crystalline rocks and Tertiary porphyries. The surface of the rock glacier is typically clast-supported, matrix-free, and composed of angular to subangular, predominantly boulder-sized rock fragments. The interior of the deposit contains more matrix, but is rarely exposed. Downslope movement is the result of slow creep of interstitial ice or an ice core. Rock glaciers commonly have a lobate or tongue-like morphology and form in cirque basins where sediment supply is abundant. Includes rock glaciers that are generally inactive, but may contain some small areas of later Holocene reactivation too small to map. Maximum thickness about 60 ft.

Qls -- Landslide deposits, undivided (Holocene to late Pleistocene) – Chaotically arranged debris ranging from clay to boulder size (diamicton). Mapped throughout the quadrangle. West of the Mosquito fault, where landslides were derived from the failure of Minturn Formation and Tertiary porphyry, deposits have a higher silt and clay component. East of the Mosquito fault, where landslides are generally derived from failure of altered Precambrian crystalline rocks, deposit texture tends to be coarser. Surface of deposits commonly hummocky, and source area of landsliding is generally identifiable (top of scarp area indicated by thick dashed lines with ticks in direction of sliding). Larger landslide deposits may be more than 50 ft thick.

Tqp - Quartz monzonite porphyry (Eocene)—Grayish-tan- to light-brown- to purple weathering porphyritic quartz monzonite comprised primarily of quartz, plagioclase, orthoclase, biotite, and hornblende. Orthoclase phenocrysts comprise as much as 20 percent of the rock and quartz phenocrysts about 10 percent. Euhedral biotite forms 1 to 3 percent of the rock volume and is much more abundant than the sparse hornblende. Phenocrysts range in size from 1 to 3 mm and are set in fine-grained matrix. The quartz monzonite porphyry is highly similar to the megacrystic porphyry (Tqpm) in appearance except for the presence of megacrysts in the Lincoln porphyry; for this reason, the quartz monzonite porphyry is believed roughly contemporaneous with the megacrystic quartz monzonite porphyry.

The Qrg material is the target deposit for mining at the London Borrow Pit. The Qls material is the landslide material. Tqp is the bedrock beneath the Qls material, partially exposed by the 2011 landslide.

1. Slope Stability Analysis

Based on a slope stability analysis, buildings or other structures within 200' of the London Borrow Pit affected area will not be affected by mining excavation. Sufficient buffers will be maintained to structures. Maps E-2 and E-4 shows these buffers. Map E-3 shows the mining and reclamation slopes of the mine. The main slope within the borrow pit was examined for slope stability.

The material properties are derived from Table 2.5 in the SME Mining Reference Handbook[1], as there is no site-specific strength data of the material available. Therefore, all materials are matched to a classification from this table that best matches the materials in terms of description. The native rock talus material is best classified as blasted granite. A summary of the material properties can be seen in Table 6.5-1.

Table 6.5-1 Material Properties

Material	Unit Weight (lbs/ft)	Cohesion	Friction Angle
Blasted granite	110	0	45

The final mining and reclamation slope (1.5H:1V) was analyzed.

2. Mining and Reclamation Slopes

Factor of Safety is expressed in terms of strength divided by stress as a ratio. It is arrived at by an iterative computer process where a slope failure is assumed, the strength and stress of that slope failure are calculated, and those values are compared to determine a lowest factor of safety. In the case of the London Borrow Pit slope stability analysis, the Bishop's Method of Slices was the iterative calculation used, and the software GALENA was used to model slopes and calculate the factor of safety. One slope closest to major structures (see Figure GS-1) was analyzed to look at the factor of safety. Table GS-1 lists the analysis conducted and their respective factors of safety.

GALENA data tables and analysis result figures are attached as Appendix GS-1.

[1] Original source: Hoek and Bray 1977

Table GS-1. Factors of Safety for Slope Stability

Slope Condition	Lowest Factor of Safety (static)	Nearest Structure
Final Slope	1.46	None

3. Conclusion

The Final Slope lowest factor of safety is 1.46. This is lower than the CDRMS minimum for this site of 1.5. However, analysis of the FoS = 1.51 failure circle show that it is entirely within the final slope, demonstrating no offsite impacts if there is a slope failure. Failure circles for both 1.45 and 1.51 factor of safety can be seen in the Appendix GS-1 GALENA figures.

The slope stability analysis in this permit has been prepared according to appropriate engineering standards and practices.

Ben Langenfeld, P.E.

P.E.# 0047151

APPENDIX GS-1 GALENA INFORMATION

STATE OF COLORADO

Russell - DNR, Elliott <elliott.russell@state.co.us>

London Borrow Pit

Ben Langenfeld <benl@lewicki.biz> Fri, Jun 21, 2024 at 3:06 PM
To: "Elliott Russell (DNR-DRMS)" <elliott.russell@state.co.us>
Cc: "jgh@minewater.com" <jgh@minewater.com>

Elliott

Please fine the adequacy response for the London Borrow Pit attached.

Ben Langenfeld, P.E.

Lewicki & Associates

benl@lewicki.biz

Office: (720) 842-5321

Cell: (303) 960-5613

From: Elliott Russell (DNR-DRMS) <elliott.russell@state.co.us>
Sent: Wednesday, June 12, 2024 3:57 PM
To: Ben Langenfeld <benl@lewicki.biz>
Cc: jgh@minewater.com
Subject: Re: London Borrow Pit

Hey Ben,

[Quoted text hidden]
[Quoted text hidden]

London Borrow Pit-Adequacy Response COMBINED.pdf
3552K