Braun

Braun Environmental, Inc.

355 S. Teller St., Suite 200, Lakewood, Colorado 80226 Office: 303-697-0950 Fax: 303-697-2140

September 17, 2021 SENT VIA EMAIL

Elliot Russell
Colorado Division of Reclamation, Mining and Safety (DRMS)
1313 Sherman, Room 215
Denver Colorado 80203

RE: Response to August 6, 2021 Adequacy Review, Mineral Mountain Project, Permit M-2014-045

Dear Mr. Russell;

Attached find responses to your comments, along with amended Exhibits C and U, including a drawing of a shaft, a site specific mill flow sheet, a list of chemicals including both designated and undesignated, SDS sheets for all of the chemicals included in the table, an emergency response plan and a receipt that the package has been given to the Teller County Clerk and Recorder. I think we have addressed all of your comments, but let me know if you have any more questions.

This has been going on for a year now, and my hope is that your goal has not been to put Mr. Barker out of business. If that is not your intent, could you work with me just a little more to see if we could get him back to work again? He does have a family to feed too.

Call me and see if we can get this moving.

Sincerely,
BRAUN ENVIRONMENTAL, INC.

C. A. Braun, P.E., CPG, REC
enc.
CAB/rl

Responses to Elliot August 6, 2021 Deficiency Letter
September 16, 2021

General Application Procedures

Comment 1 Proof of publication of a public notice in a newspaper- No further response necessary.

Comment 2 Notice 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. No further response necessary.

Comment 3 letter from History Colorado regarding the application. The letter is attached for your review. Please acknowledge and address any comments.

Response: Letter from State Historic Preservation Officer states that no adverse effects will occur to properties listed or nominated for State Register of Historic Properties, and that if human remains are discovered during ground disturbing activities, then the permitee comes under the requirements of CRS 27-80 Part 13. The permitee will follow these requirements in the event human remains are found.

Exhibit C Mining Plan (Rule 6.3.3)

Comment 4 In Exhibit C 1(e), the Operator states an additional shaft (Shaft II) will likely be needed in the near future and will be closed in the same manner as the first shaft. In accordance with Rule 6.3.3(1)(e), please submit details and designs of Shaft I and Shaft II.

Response: Exhibit C has been modified to reflect comment. In summary, Shafts I has been set into bedrock and Shaft II will be also collared into bedrock. The Shaft 1 collar has been fitted with a metal tube for ground support, to prevent spalling and to provide a base for security grating. Shaft 2 will have a collar constructed of a combination of concrete, steel, and timber in a way that will allow for the support ladders, lines, and other equipment needed for access and use. A drawing of the shaft and closure is included in the Reclamation Plan

Upon completion of mining, both Shafts I and II will be abandoned per DRMS "Best Practices in Abandoned Mine Reclamation" publication, the area above the closed opening will be mounded to shed water and the area will be planted with approved grasses.

Comment 5 In Exhibit C 1(e), Operator states "the facility remains a zero discharge facility, so the level of water use is, and will continue to be small." Additionally, in Exhibit C 1(h), the Operator states "the site has required minimal dust control to date . . . , Drilling has typically required the use of a few thousand gallons for lubrication and cooling, and the test milling requires a small amount of makeup water . . The use of these generalized statements regarding the consumption of water is not acceptable. As required by Rule 6.3.3(h), please specify how much water will be used in the operation. Additionally, please provide specific details regarding water storage at the site.

Response: For the reasons previously discussed in the Exhibit C, the amount of water to be used cannot be precisely determined, but to meet the regulatory requirement assumptions will be made concerning production and use. Section C1(h) has been updated, and the estimated amount of water required is 0.45 necessary acre feet. The water will be purchased from the Town of Cripple Creek as needed, and the town has sufficient capacity to provide the volume, the amount which is only slightly greater than the design requirements for a typical family household in Cripple Creek. Fresh water is currently stored on site in tanks, with the largest tank to be used being no larger than 10,000 gallons.

Comment 6 In Exhibit C, the Operator discusses the site is a zero water discharge facility and that mill processing water is recycled and reused. During the 2020 site inspection, the Division observed wet conditions on the decline tunnel adjacent to the tailings dewatering sump room and a small pool of water was observed against the face at the bottom of the decline tunnel. In accordance with Rule 3.1.6(1), please describe how the Operator will ensure water from the tailings is kept within the dewatering area and doesn't flow down into the workings.

Response: The inspector has jumped to conclusions regarding the "pool of water observed against the face at the bottom of the decline tunnel." Discussions with the operator found that the water was most definitely not associated with the milling, and a follow-up inspection and testing by the engineer confirmed that it had no chemicals associated with milling in it, thus it must have been from an alternate source. Other sources for this water in the mine include condensation caused by high humidity leading to sweating on the walls, and from the water used for drilling and dust suppression. Thus, the water was from one of these other sources, and the ponding of this water provided important insight into the permeability of the rock. Instead of the inspector reaching the conclusion that this water was bad, in fact it is quite the opposite. The presence of water at that location indicates that the rock in the mine has low permeability, thus it has the ability to preclude water flow through it. The water found in that area was water that had been used by the operator for drilling and dust control, and if the operator had been mucking at the time of the inspection, the water would have been consumed by mixing it with blasted rock as the rock was being trammed.

Comment 7 In Exhibit C 1(m), paragraph 2, the Operator states the tailing sand is dewatered to below saturation before placement on the waste rock pile. Please provide the percent water content of the tailings sand when it is transported to the surface for placement on the waste rock pile.

Response: Waste tailings sand is placed at a water saturation of 28 percent or less. Testing of the material has found saturation to occur at 34 to 36 percent water content. The content chosen provides a sufficient factor of safety below the saturation limit, and in practice the determination is easy and ensures that no discharge of water from the material to the adjacent rock will occur.

Comment 8 Within the 110(2) Permit Application, the Operator provided an August 6, 2014 Engineering Report titled, "Rock Testing for Acid Generation and Rock Buffering." The 2014 Engineering Report included acid-base accounting (ABA) testing which was performed prior to permit issuance. This 2014 Engineering Report, which ultimately required the Operator to convert to a 110d permit, states that materials at the site were potentially acid-producing. Within the 110(2) to 110d Conversion Application CN1, the Operator committed to storing any potentially acid generating material inside the mine and to keep it isolated from outside precipitation. Within TR1, the Operator provided the results of ABA testing for the concentrate which showed the product extracted from the ore was acid generating. During the 2020 site inspections of the site, the Division

observed ore being stockpiled at the surface prior to crushing as well as crushed ore stockpiled in the eastern half of a 3-sided structure at the surface prior to being hauled to the underground mill. The Operator states within AM1 Exhibit C 1(m), paragraph 2, the waste rock pile. Please provide details how the Operator intends to handle the mined ore prior to crushing, the crushed ore prior to milling, and the concentrate products produced from milling. Please update the EPP to address the requirement of Rule 6.4.21(6). Please note, as the Operator has already demonstrated, the ore is acid generating and therefore, if the ore is stockpiled outside of the mine and is exposed to precipitation, the Operator will need to propose additional Environmental Protection Facilities (EPFs) in accordance with Rule 6.4.21(7) for the control and containment of acid-forming materials.

Response: The reviewer is correct that acid based accounting testing was performed in 2014, and DRMS demanded that the permit move to a 110(d), although there was disagreement between DRMS personnel and the engineers in the interpretation of the test results from a mine chemistry perspective. In hindsight, the moving of the site from a 110(2) designation to a 110(d) designation provided flexibility for the future for the handling both potentially acid generating "earth materials" defined in Rule 1, and "designated chemicals" should DRMS ever chose to designate chemicals beyond the cyanide and mercury which Mr. Waldron had considered the only designated chemicals at that time. The reviewer is correct in that the operator committed to storing any potentially acid generating material away from precipitation, storage to either be inside the mine or inside the warehouse, isolating it from precipitation. The reviewer is also correct that the acid based accounting results for the concentrate showed that it had the ability to generate acid and its buffing capacity had been diminished. However, inside mine storage was not intended to include the potentially valuable product produced, that had to be moved and managed in order to make a product that could be salable. However, the operator is completely committed to handling and storing that product in a safe manner at a location where it is not subject to precipitation, and at the time of the inspection the DRMS reviewer made no indication that he observed concentrate stored where it would be subject to the effects of precipitation, nor did he observe any negative environmental conditions associated with the method of storage at the time. We all hope for benefit of the operator that this is a valuable product and if it is valuable, then neither the environment nor the operator would benefit from having it exposed to weather that might cause it to degrade. The operator is committed to storing the concentrates where they will not be affected by precipitation. Thus, the requirements of an EPF are met by keeping the concentrates containerized and intact and dry, if these conditions are met, they pose absolutely no threat to the environment.

The reviewer then continues on to state that during the 2020 inspection, "ore" was stockpiled on the surface, as well as "crushed ore" stockpiled in a 3-sided structure. With the recent legal wording changes that have been adopted, the reviewer has referred to some material located on the leveled area as "ore' and might be forgiven by Federal regulators as naive, but miners and engineers will not be forgiven and using incorrect terminology could cause liability issues should they fall into that potential trap which has been laid out by the reviewer. Refer to the Canadian 43-101 requirements that have been adopted by the U.S. Securities and Exchange Commission, and the recent 2018 amendments to the Securities Exchange Acts. Under this terminology, we must refer to this, not "ore" but instead mined material. In regards to this features on maps have been relabeled, as the original designation was intended to assist the regulators, and now must be modified to be technically correct.

The reviewer in incorrect regarding his determination that the "ore" is acid generating. Referring back to the report produced by Braun in 2014, this material that has been mined and placed outside, was characterized in the report as being acid-neutralizing neutral, and the underlying

material on which it was placed was characterized as being acid neutralizing. Further, the inspection of the material that was on the surface and within the enclosed structure by the engineers found no evidence that it was degrading to produce any acid, nor was it producing any acid to the adjacent surface below it. Factoring in the acid neutralizing nature of that underlying material, even in the unlikely event that a small amount of acid might be produced by the mineralized material, the acid neutralizing material below it would neutralize any acid production anyway. In the DRMS inspection reports, there is no indication that the inspectors found conditions different than those found by the Braun engineer. These observations are valid for both the material that was temporally located outside, and for the material located under the roof. It was also the conclusion of the engineer inspectors that the material under the roof was protected from precipitation and after talking to the operator, the reason that the roof had been constructed.

In this discussion, it is important to refer back to when the original regulations were written, of which I participated, that the 1995 revision (Rule 1.1(2) referring to materials contributing to "acid mine drainage" specifically stated that "**Mined and stockpiled material does not include ore or other mined product that is, or will be processed within one hundred eighty (180) days of being stockpiled and removed from the permit area**". This sentence was specifically written into the regulations to allow the operator the ability to handle and process material, while still maintaining adequate standards and environmental safeguards. The authors of the rule understood basic chemistry and knew that the degradation of minerals from weathering does not occur instantaneously, and they chose a time period that would allow the operator sufficient time to manage his materials and business, while creating little chance of danger to the environment. The physical characteristics of the materials on this site are typical of the materials found at other waste rock piles found around the Cripple Creek district, the majority of which are also non-acid generating. This subject that has been thoroughly discussed in previous documents provided to DRMS, and the Environmental Protection Plan has been modified to reflect the comment.

Comment 9 In Exhibit C 1(m), paragraph 2, the Operator states any finished product produced will be stored in the mill room, in the warehouse, or at another suitable location in shelter and protected from weather. Please note, upon approval of AM1 the Operator is only authorized to store finished product within an approved EPF designed to contain the finished product and that "another suitable location" will need to be reviewed, approved, and certified as an EPF by the Division prior to its use. Please revise the proposed language in Exhibit C 1(m), paragraph 2.

Response: Exhibit C1(m) had been modified to state that the finished product will be stored at either the mill room or warehouse. Both locations meet the requirements for containing a solid product and protecting it from exposure to precipitation.

Comment 10 In Exhibit C 1(m), paragraph 3, the Operator has generally discussed the milling process and provided a typical example flow sheet for those unfamiliar with the type of operation. The Division appreciates the general discussion and the example flow sheet, however, the Operator will need to provide the specific details of the current milling process and a detailed flow sheet to reflect the actual mill being utilized at the site. The Division is aware the Operator is in a "mineral testing stage" and changes may occur to the current process. As previously discussed with the Operator, if processing changes (other than minor tweaks) are proposed in the future, the Operator will need to inform the Division of the change in writing prior to implementation. The Division will then notify the

Operator if the change is substantial enough to require a Technical Revision to the approved plan. This is a similar concept to Item #3 on the attached AM1 Review Memo from Leigh Simmons regarding changes to the list of chemicals. Please provide the specific details of the current milling process and a detailed flow sheet to reflect the actual mill being utilized at the site.

Response: The current process includes crushing, grinding, gravity separation, and flotation. Crushing is performed in jaw and cone crushers, grinding occurs in a ball/rod mill. The product moves to the gravity equipment and the flotation tanks as was discussed in detail in Exhibit C. To make it simpler for the reviewer, a site specific detailed flow sheet has been added to Exhibit C showing the process and steps that have been and will be used.

Comment 11 AM1 proposes the continued use of a surface crusher which may be moved underground. When the crusher is located on the surface, the Operator will need to utilize stormwater BMPs and periodically remove accumulated crusher fines. Please discuss how stormwater will be controlled near the crusher and provide a plan to periodically clean-up crusher fines.

Response: The reviewer appears to have some confusion on the process being used at this site, and must be thinking of "spillage" that might occur at gravel quarries, where the fines that might spill off of the crusher are the least valuable product. On this site, the entirety of product produced by the crusher has equal economic value, and all of the material including small amounts of fines might miss the outfall chute need to be collected, recombined and moved on to the next step of the process. As was seen during the DRMS inspection, the crushing equipment is covered to minimize exposure to weather, and as good housekeeping practice, spillage is cleaned up regularly and recombined with the rest of the crusher product. As a review, also recall that the material entering and exiting the crusher has been tested and found to be acid neutral, and the material on which the equipment has been set is acid neutralizing, thus in the unlikely event any small amount of acid might be generated anywhere during the crushing process, it would be neutralized by the underlying rock. In effect, this could also be considered to meet the intent of an EPF in that no release into the environment is possible. In addition to the DRMS inspection, the engineer's inspections have found no evidence of acid generation associated with this process that might negatively affect the environment. The operator will commit to maintaining good workmanlike practices and to not allow spillage build up. As was thoroughly described in the original permit documents, storm water in this area is managed via a shallow berm located on the outer edge of the waste rock pile (Exhibit E1-A). The crusher is located within that contained area, so any water that might be generated where this equipment is located will be contained within the secondary containment.

Comment 12 As the Operator is "still in a prospecting and mineral testing stage" and "since the Earth's rocks are not necessarily homogeneous, neither is the content and exact composition of the minerals in those rocks", the Operator will need to propose a periodic waste stream characterization plan in accordance with Rules 3.1.5, 3.1.6, 6.4.21(6)(c), and 6.4.21(14). Results from this periodic characterization (tailings chemistry, SPLP, ABA, TCLP, etc.) will determine if the Operator is authorized for the continued placement of mill tailings sand on the unlined waste rock dump regardless of changes in the ore body or changes to the milling process.

Response: Review of Rule 3.1.5 finds that paragraphs (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), and (11) have been all addressed in the Reclamation Plan. The reviewer must be referring to

Paragraph (5) reads "*All refuse and acid forming or toxic producing materials that have been mined shall be handled and disposed of in a manner that will control unsightliness and protect the drainage system from pollution.*" This paragraph has been addressed in the Environmental Protection Plan (Sections 6, 14, and 19).

Review of Rule 3.1.6 finds that paragraphs ((1) regarding hydrology and water quality does not apply since there is no surface water, and no groundwater has been encountered in this mine or others in the nearby vicinity. Paragraph (2) relating to earth dams does not apply since the site has no impoundments meeting that definition. Paragraph (3) has been addressed in the reclamation plan and since there no surface or underground water has been found within the permit area, no sampling is possible with regards to (4), and (5) does not apply to this permit area.

Review of Rule 6.4.21(6)(c) states, *"Based upon acceptable site-specific analyses of site construction materials, waste rock, ore, product stockpiles, and mill tailings, if applicable, provide an assessment of the nature, concentrations and expected fate of potential acid mine drainage-forming materials."*

Testing of rock that would be mined and processed was performed in 2014 prior to issuance of the original permit. The acid base accounting testing characterized both the mineralized rock and the non-mineralized rock found within the permit area. The non-mineralized rock was determined to be acid neutralizing. The testing of the mineralized rock found the neutralization potential to equal the acid generating potential, with a result that it was neutral rock that had neither the ability to generate free acid or neutralize acid. Further testing ordered by DRMS was performed in 2020 of the sand material or tailings, and the results were exactly as would have been expected, that since the mineral that was potentially acid generating had been removed, and the material had changed from neutral to acid neutralizing. Based on those tests, it was concluded that from an acid based accounting prospective, the sand material was benign, with no pH lowering ability that could lead to the mobilization of metals, thus "acid mine drainage-forming materials could not exist.

Review of 6.4.21(14) is titled geochemical data and analysis, and specifies that testing be performed as:

"(a) Such evaluations shall be site specific and appropriate for the types of materials exposed or to be exposed by the mining and reclamation operations.
(b) Such evaluations shall be conducted on materials that are representative of the composition of the mineral, rocks or materials that are exposed or to be exposed during the proposed life of the mining operations.
(c) Such evaluations shall be appropriate for the intended use or fate of the material exposed or to be exposed during the proposed life of the mining operations, and on a case-by-case basis shall include evaluation of weathering effects, shall simulate, to the extent reasonable, the conditions under which the material will be used, stockpiled or disposed and which shall reasonably be expected to prevail after mining and reclamation operations have ceased.
(d) Such evaluations shall be performed on both ore and overburden, and shall identify the most reasonable sources, probable fate, and transport mechanisms of metal and acid-producing minerals that may be mobilized by ordinary weathering reactions that are likely to prevail after mining and reclamation operations have ceased. Such analyses may include only those tests that are necessary to satisfy the conditions of Subsection 6.4.21(14)(c), and such evaluations may be prioritized, in descending order of importance, as follows: (i) mineralogical analyses; (ii) trace element analyses; (iii) major element analyses; (iv) microprobe or other comparable analyses.

(e) Where a net neutralizing, metal adsorption or metal ion exchange potential over the long-term cannot be demonstrated, the Operator/Applicant shall fully describe measures to prevent unpermitted discharges, and how reclamation, sufficient to achieve the post-mine land use will be assured."

The Environmental Protection Plan in Section 14 has addressed the above issues, in that the work relied on the materials that were discovered by exploration. That exploration provided the opportunity to collect materials that were representative of what would be encountered during mining, and what would be placed on the surface. In addressing paragraph (d) both the petrology and the rock forming minerals on the site have been thoroughly studied and in fact, a few years ago, one DRMS reviewer had to be educated with details of the rock units of the Cripple Creek area when he mistakenly corrected the engineer and the engineer had to instruct the reviewer. To understand the elements and to support the composition of the rock forming minerals, ICP analysis has been performed and the results have been provided to DRMS. The major elements are the ones that comprise the rock forming minerals in the Cripple Creek area, and these elements are well known, published, and are equivalent to those at the site. We do not consider item (iv) microprobe analysis useful for assessing environmental parameters for this site at this time.

Comment 13 During the 2020 site inspections of the site, the Division observed the Operator was placing tailings sand in an excavated trench within the western portion of the waste rock pile. Within the Attachment A, Plan to Handle Tailings submitted within TR1, the Operator stated that future tailings would be incorporated into the waste rock pile in the same manner as the existing tailings sand. Please provide details on how the Operator will ensure placed tailings sand is protected from wind and water erosion in accordance with Rule 6.3.3(1)(l), Rule 6.3.4(1)(e), and CRS 34-32-116(7)(i). Please describe how much freeboard will remain within the trench to ensure the sand is contained, to help prevent possible sedimentation off of the waste rock pile, and allow the tailings to be adequately covered and isolated from any future public in accordance with TR1.

Response: The first important fact is that the tailing sand has approximate the same composition of the rock in the waste rock pile. The only significant difference is that the material has a more uniform size, that size being classified as sand size, and is acid neutralizing. Thus, the most important consideration concerning the placement of this material is that it be protected from wind and erosion. The operator's design prior to the 2020 inspection was to construct a trench within the waste rock pile, place the sand material mixed with rock in that trench until it reached a level of approximately one foot below the top edge of the trench. The trench would then be backfilled with waste rock, so as to form an armored cover of mixed size material including larger rock. The method worked well and the engineer's site inspection found no evidence that any of the sand material was anywhere except inside the trench where it had been placed. There is no record that DRMS inspectors found anything different than the engineer.

In the future, the method will continue in the same safe manner as was done previously. A trench will be dug, the mixed sand and rock material will be placed in the trench to fill it to within one foot of the top of the trench, and the trench will be cover with blasted acid neutralizing rock, having approximately the same composition as the sand.

Comment 14 In Exhibit C 1(m), paragraph 2, the Operator states, since the tailings sand has been found to be suitable as plant growth media, the materials could be used as a supplement to existing soils for reclamation. This statement contradicts TR1 whereas the Operator stated the final concentrations of arsenic in the tailings sands is not known but if

the Operator were to perfect his processing methods that it was possible it could be used for a growth media additive. The Operator stated testing for remnant arsenic concentrations would need to be performed prior to using it for this purpose. Please commit to submitting a revision to the permit if, in the future, the Operator will use tailings sand as growth media or as an additive to growth media for use in reclamation. The Operator will need to perform a characterization of the future tailings sand and will need to demonstrate the tailings sand would be beneficial as growth media or as a growth media supplement.

Response: While practical from a technology perspective in other states around the world, in Colorado from a regulatory perspective it appears to be unfeasible. The last sentence in Section 1(m) original paragraph 4 has been removed and the material will not be considered as a growth media.

Comment 15 In accordance with Rule 6.3.3(1)(e), please provide a table to account for all existing structures (permanent and temporary) and mine-related refuse/debris which has accumulated at the site. In addition to the detailed accounting, the Operator may submit a signed and notarized letter from the landowner identifying which structures are requested to remaining after reclamation is complete for the landowners use. In accordance with CRS 34-32-109(6), the Operator will need to submit a demonstration (correspondence from Teller County) that structures requested to remain comply with local land use zoning and are compatible with the selected post-mining land use. The Division will utilize the information provided in the accounting to determine the costs associated with the removal and disposal of the items for the reclamation cost estimate

Response: All buildings are temporary, and buildings, refuse and debris, and equipment will be removed upon cessation of mining. Table 1 is a list of items to be removed.

Table – List of existing structures

Item
Shop-warehouse
Covered material storage
Crusher Portable
Containers (5)
Office Trailer (1)
Misc. Parts and construction items
Mine Portal
Shaft (2)

Comment 16 Both maps submitted with AM1, *Exhibit Map E* and *Onsite Chemical Storage Map* were not signed as required by Rule 6.2.1(2)(b). The *Exhibit Map E* labels the mill access route and mill room but does not show the outline of these features as depicted on the *Onsite Chemical Storage Map*. Please revise these maps accordingly.

Response: This version of the maps will be signed, and the underground access-way to the mill room will be added.

Comment 17 Any changes or additions to the application on file with the Division, must also be reflected in the public review copy. Please submit proof that the public review copy has been updated or a copy of the response to this adequacy letter has been added to it.

Response: A copy has placed with the Teller County Clerk and Recorder and a receipt from that office is provided.

Comment 18 In Exhibit C 1(e), the Operator states there is an overhead powerline and a water supply line that is now in place and although the Operator can use these lines, they are a part of the underlying property and will stay with the property after mining ceases. These are considered permanent man-made structures and the Operator will need to comply with Rule 6.3.12 for these structures. Additionally, Exhibit E map needs to be revised to show the names of the structure owners in accordance with Rule 6.3.5(2)(b). Please note, there is a sample structure agreement form within the application packets available on the Division's website for compliance with Rule 6.3.12(a) or 6.3.12(b).

Response: The powerline was installed for the operator at the operator's expense. The utility is an asset that will be transferred to the owner of the underlying property upon cessation of operations. The operator will be responsible for the cost and repair of his own power line if it becomes damaged.

Comment 19 Multiple sections of the Exhibit U Addendum to the Designated Mining Operation Environmental Protection Plan (EPP) state "No Changes", however, after a brief review of the original EPP and subsequent Adequacy Review Responses, several sections do need to be updated and revised based on the changes proposed in AM1. Please submit a complete EPP for the Division to review. To reduce the potential for confusion in the permit file, if there are no changes to a particular section, please still include this information so there is one complete EPP instead of having multiple EPP versions and associated adequacy review responses.

Response: The reviewer was taken at his word, and the amendment was submitted as per the reviewer's instructions. Now the reviewer's word has changed and, his new word will be followed and a revised Environmental Protection Plan will be submitted.

Comment 20 The proposed EPFs within AM1 require more detailed descriptions, including actual capacities, construction details dimensions and drawings, materials, linings, and permeabilities, and that those facilities designs are supported by engineering certificates. Pursuant to Rule 6.4.21(7)(e) a description concerning the release response procedures, redundancies and back-up measures to control, prevent, and mitigate releases of the designated chemicals from the containment facilities is required. All EPFs (Environmental Protection Facilities) are required to be designed and constructed in accordance with Rule 6.4.21 and certified in accordance with Rule 7.3. Pursuant to Rule 7.3.1(5), no chemicals used in the extractive metallurgical process or toxic or acid-forming materials shall be placed in constructed facilities until the Board or Office accepts the certification of the facility.

Response: Per the DRMS regulations, the "EPF" designation was originally intended for repositories for waste rock and large quantities of hazardous or potentially hazardous materials, and not intended for storing a drum or two of some non-hazardous reagent. I remember this well, as I was part of the development of those changes that were made to the regulations in 1995. Somehow the original intent has been bastardized to include what the EPA would consider simple secondary containment as addressed in Title 40 Code of Federal Regulations (CFR) Part 264, with more specific requirements for liquid products and secondary containment defined in the Clean Water Act (CWA, 33 U.S.C. ' 1251, Pub. L. No. 95-217, 91 Stat. 1567 (1977), and specifically in 40 CFR Part 112. Per EPA requirements, containment is for liquid quantities meeting a certain volume threshold, and in this case, as good stewards of the land, we believe it important to provide secondary containment for smaller quantities to protect the environment. Per the intent of the EPA and its requirements, the containment for liquids is to contain the quantity held by the largest container. Per the mining plan, the total quantity of chemicals stored will be 1,000 gallons or less, and the largest container will be 300 gallons. Stored solids are not addressed by EPA in those regulations, and standard of the industry practice call for them to be stored in a manner consistent with that specified in the SDS. Thus, these materials are to be stored in their containers, if shipped in such, and if transferred to another container, that container is to be compatible with the chemical stored inside. In order to protect personnel and the environment, they are to be kept under cover and away from precipitation, unless outside storage would result in no chemical changes in the compound. A description concerning a release response is already included in Section 6 of the Environmental Protection Plan.

There site contains one chemical storage area located near the mill room having dimensions of 6 by 20 feet. Per the bastardized definition, that area will be called the EPF. That area is completely surrounded on all sides, top and bottom, by solid non-fractured alkaline volcanic rock having acid neutralizing capacity of 13 tons $CaCO_3$ per kiloton of rock, with an effective permeability of about 1×10^{-8} centimeters per second, similar to that of concrete. The rock is to be covered with a concrete floor having a thickness of 4 inches (thickness of a finished 2 x 4) which provides a smooth surface where spills could be easily removed should they occur. Containers as large as 300 gallons will be stored in this area, either within manufactured secondary containment trays, or within the secondary containment created by the concrete floor within an area capable of containing the entire volume of the container. Design drawings might be appropriate for a real EPF, but seems an excess for a 6 x 20 foot slab of concrete.

As discussed previously, the environmental protection facility designation was not intended to describe a simple chemical storage area, and in this context, none of the paragraphs in Rule 7.3, as it relates to warehouse storage of chemicals make much sense. If indeed this bastardized interpretation is to be adopted, then it appears that for this little storage area, the Board, per 7.3.1(1), is going to need to accept the pouring of about a cubic yard of concrete and the tramming of a manufactured spill bucket into the storage area is to be performed in phases, with the next phase dependent on the acceptance of the last. Pouring concrete and carrying a piece of plastic cannot be done in too many phases. I am not sure what 7.3.1(2) means as it applied to the storage area, but it appears to mean

that a monolithic concrete floor cannot be allowed, which is a contradiction, since the reviewer has orally ordered that a concrete floor be installed. Paragraph 7.3.1(3) refers to designing capacities with regard to storm events, which are not pertinent to storage inside a warehouse setting, and this is further evidence that the reviewer is misusing a rule intended for waste rock-type facilities, unless he is considering designing for Noah's flood, which would not be a 2- or 10-year storm event. 7.3.1(4) refers to quality assurance and control certifications, which seems ridiculous to pour a simple concrete pad, and carry in a spill bucket. The last 7.3.1(5) appears to be feasible, and the presence of the concrete floor and the spill containers can be certified of something if the Board should desire.

Comment 21 The mill includes the processing of acid-generating material as well as the use of designated chemicals, therefore pursuant to Rule 6.4.21, an expansion of the proposed EPF 1 or a proposed additional EPF to include the entire mill facility is required.

Response: The reviewer is once again incorrect, in that based on all testing, the "mill" is not processing acid generating material. Instead, the only acid generating material, or potentially acid generating material is the processed final product. The mill located below the ground surface, is totally encased within the Cripple Creek Breccia, an acid neutralizing rock which in itself satisfies the requirement for containment of acid-forming materials as defined in Rule 1.1(15). In fact, the Environmental Protection Agency (EPA) in 1992 in a report titled "Site Visit Nerco Minerals, Cripple Creek Operations" their personnel specifically recognized the nature of the rock and stated specifically as quoted, that "*It is important, to note that the alkaline nature of the diatreme and the presence of carbonate minerals has resulted in relatively low potential for acid generation in the Cripple Creek area*." (EPA, 1992). This fact was obvious to the EPA, is obvious to the casual observer across the entire Cripple Creek district, and has already been discussed previously for this site, with those observations have been confirmed by laboratory by testing. A second requirement for containment is necessary and that is whether the rock forms a hydrologic barrier. As with other hydrothermally altered alkaline lithic tuffs, the Cripple Creek breccia has a permeability in the range of 1×1^{-8} centimeters per second, similar to the permeability of concrete. Geologic mapping of the mill area had found no open fractures where any significant increase in permeability might occur. Thus, the rock itself has the properties necessary to neutralize any acid that might come in contact with it, and to also contain any spills of chemicals that might occur. Secondary containment will rely on the rock formations, a concrete floor to provide additional containment protection and allow good housekeeping, and commercial of locally fabricated spill trays.

Comment 22 The Operator proposes the Mill Room as EPF 1 within Section 7 Facilities Evaluation in the EPP. The Operator states, since the room had to be excavated out of solid rock with low permeability, any spills will be retained until cleanup can be conducted. It is unclear if the Mill Room contains any faults, cracks, fractures, or fissures that are either natural or created by the blasting involved to excavate the room. Please describe how the Operator intends to verify and certify containment of EPF 1 pursuant to Rule 6.4.21 and 7.3.

Response: The operator is a trained geologist and has thoroughly mapped the chemical storage room prior to movement of any equipment and materials into it. The novice sometimes has visions of open fissures, and caverns full of crystals, and that conventional mine blasting for underground openings has the ability to create fractures that are remote from the opening that has been created. As has been proven in studies, and demonstrated on the site, no open faults or fractures capable of any significant fluid flow were found to exist, and a simple knowledge of elementary rock mechanics, produces a clear conclusion that the type of blasting performed at this site does not have the ability to fracture rock more than a few inches beyond the opening created. No naturally or blast induced fractures have been found that would allow fluid flow through them. The same rock conditions currently exist in the mill room as has been described above in the responses to Comments 20 and 21. In order to make promote good housekeeping and to expedite the cleanup of any drips or spills that might occur, the operator is installing a concrete floor having the same specifications as the floor described in paragraph 3 of the response to Comment 20.

Comment 23 The Operator proposes the Warehouse-Storage Building as EPF 2 within Section 7 Facilities Evaluation in the EPP. The Operator states EPF 2 is a steel shipping container with an impermeable floor and impermeable walls. Please discuss if the integrity of the steel shipping container could be compromised if a spill of any of the proposed chemicals or a mixture of multiple chemicals that are identified on the Chemical List and stored within the facility. Please provide details on if a sealant or epoxy coating has been or will be applied to the floor and or walls of the containment structure pursuant to Rules 6.4.21(6) and 6.4.21(7).

Response: The warehouse-storage building will no longer be used for designated chemical storage. All references to it have been deleted from the verbiage in the exhibits and maps.

Comment 24 The Operator states that should a spill occur in EPF 2, it would pool and then migrate towards the door, where if the pool became deep enough and should the door seal leak, fluid would reach soils. Although Adequacy Item #16 requires the Operator to submit more specific details of the EPFs, please provide the containment capacity and describe how containment is achieved in EPF 2 (for example, door curbing/lips).

Response: The warehouse-storage building has been eliminated and will no longer be used for designated chemical storage. All references to it have been deleted from the verbiage and maps.

Comment 25 For both proposed EPFs, the Operator states all chemicals are to be stored in their original containers, or in labeled reagent containers, in designated areas on the floor, on pallets off of the floor level, and with spill trays underneath the containers as applicable. This statement requires additional clarification; please acknowledge if the Operator is committing to storing all chemicals on/within secondary containment pallets/trays located on the floor of EPF 1.

Response: All chemicals will be stored in the mill room storage area, so that if a leak in a container or release occurs, sufficient secondary containment will be in place to retain the contents of the largest container.

Comment 26 The AM1 Chemical List shows the maximum total quantity of chemicals listed 5,625 gallons of liquid and 5,800 pounds of dry chemicals. The AM1 Chemical List also contains a note which states "Column 4 of the Table shows maximum amount of any one chemical that might ever be on hand. As very few chemicals listed will be used past testing stage, the total volume of chemicals on hand at any one time will be less than 1,000 gallons". The contradiction between the list and the note is not acceptable. As required by Rule 6.4.21(5) and Rule 8.3.2(3), please clearly identify the maximum quantities of each chemical which will be stored on site at any one time. This information will also need to be incorporated into the Emergency Response Plan (Adequacy Item #31). The Division will use this information to calculate a reclamation cost estimate for the disposal of the maximum total quantity of all listed designated chemicals and other chemicals that will be stored and used on site at any given time. Please provide the actual proposed quantities in column 4 of the Chemical List that will be stored on site at any one time.

Response: As is usual, with the reviewer, instead of working with the permitee to understand an issue or discussing it, comes to a crazy conclusion. There is no conflict in the numbers, and both the table and discussion are exactly correct. Further both were constructed after careful consideration and were based on the specific instructions from DRMS personnel. Once again, per DRMS specific instructions, the list of chemicals includes all of those that might be used or be present on the site. A professional with any chemistry training would conclude, the use of all of those chemicals simultaneously at one time would be ridiculous and would guarantee failure of the project. And, even though the reviewer did an excellent job of adding up the numbers on the table to reach a total, only certain chemicals out of the list will be used at one time, and those chemicals will include a limited number of the chemicals contained on the list. Thus, as already stated, the total volume of chemicals from that list that will be on the permit area at any one time will be less than 1,000 gallons.

Comment 27 The AM1 Chemical List shows sodium silicate as a liquid but specifies a maximum quantity of 1,000 pounds. All of the other 25 chemicals provided on the Chemical List use gallons when identifying the quantity of a liquid chemical and pounds for dry chemicals. Please revise the table to accurately describe the state of sodium silicate and the maximum quantity that will be on site.

Response: Thank you for the pointing out the error. It has been corrected.

Comment 28 The Operator compiled all of the Safety Data Sheets (SDS) for chemicals stored on site and listed on the AM1 Chemical List. Upon review of these SDS sheets the Division found: a. The Potassium Amyl Xanthate SDS sheet is missing from AM1 materails [sic]. Please provide the SDS sheet for Potassium Amyl Xanthate per Rule 6.4.21(5)(c).
b. The Polyfroth H57 SDS sheet is illegible. Please provided a new SDS sheet for Polyfroth H57 per Rule 6.4.21(5)(c).

Response: The xanthate sheet has been added and a legible Polyfroth H57 sheet has been added to replace the original.

Comment 29 The Operator has provided a Chemical List with AM1 which specifies one designated chemical (Potassium Amyl Xanthate) in Table 1 and 25 "General Chemicals" in Table 2. As defined by Rule 1.1(19) designated chemicals are toxic or acidic chemicals used within the permit area in extractive metallurgical processing, the use of which, at certain

concentrations, represents a potential threat to human health, property or the environment. Based on the Division's review, any chemical with an NFPA (National Fire Protection Association) health hazard rating of 2 or higher, and/or physical hazard of 2 or higher, or a chemical that carries a significant hazard to human health, property or the environment is considered a designated chemical. Staff review has determined several chemicals proposed in Table 2 are considered designated chemicals, will need to be shifted to Table 1, and the EPP needs to be updated to reflect the addition of these designated chemicals. This list includes but is not limited to:

Response: I am happy to hear that the run around game we have been playing for the last year finally has resolution. While it is my professional opinion that the designation chosen is not technically correct, at least we can now move forward. DRMS now has a list of 24 designated chemicals that people in this regulated group can see. I have moved Polyfroth H57, Tennafroth 250 to the designated list for now, because I feel their names sound scary. It is my recommendation that for this designated mining operation, that all chemicals be considered designated, so it will be easier on both the operator and DRMS personnel. The operator will see if the chemical has a 2 on the label and will automatically put it in the designated column. This will put the operator on an even stance with construction sites where handling conforms to the SDS. It is also good to see that DRMS is now concerned about worker's health as everyone needs good health, and it is even more impressive that common items sold in the local grocery store that are used in foodstuffs and for household cleaning are now designated chemicals.

Comment 30 Please provide an evaluation of each of the chemicals stored together in proposed EPFs, or any other area or spill situation where there is a mixing potential, including a discussion of the potential bi-products, including safety or environmental hazards that may be created if the chemicals were to mix in accordance with Rule 6.4.21(5). Please also discuss the ventilation systems of the chemical storage areas.

Response: As DRMS professionals should already know, or if they might have spoken with either the State of Colorado Department of Public Health and Environment, or the Environmental Protection Agency, they would find that these chemicals are environmentally mostly benign. They pose a health risk if used improperly so per the new DRMS ideas, they are now to become designated. Since the chemical families of the organic compounds are related, the health risk remains the same upon mixing, and all of the chemicals are designed to function together. Based on their use in historic mining and processing, the small amount of risk in using them is confirmed over and over by them having been safely used for many years. One interesting chemical that was placed on the designated chemical list is aluminum sulfate. This scary sounding chemical, when it is not used for milling, it is used around the house for cooking, as an astringent, as an additive for vaccines, and for drinking water purification. Based on this new DRMS finding, it is recommended that the operator not let his wife into the storage area when she decides to make pickles, and it is recommended that she buy the chemical from the McCormick & Company, a company that sells spices by a less scary name, but with exactly the same SDS information. Another interesting chemical that DRMS has decided to list is pine oil which the reviewer himself has recommended for use at this site, since it was not yet called a designated chemical when he made the mine inspection

last summer. This now designated chemical is used as a typical household cleaner sold in any grocery store and it is hoped that DRMS can save a few lives by stopping the general population from using it in their homes and offices. The odor of this scary chemical was detected in the 1313 Sherman building, so that might be good reason for employees to continue to stay away from their offices. As with the storage of all chemicals, they are to be stored separately in separate containers, and once again users need to adhere to the information contained on the SDS, with workers being careful that unintentional mixing does not occur.

The SDS sheets were designed to provide all information necessary for the proper storage and handling of chemicals, and a review of those sheets find that there are no special conditions listed for safe storage. Thus the products are to be stored under typical storage conditions using typical ventilation as would be assumed for any normal warehouse. The chemicals are shipped in enclosed trucks or containers, and a warehouse having the same characteristics as the box van, or container, which delivered it would be equal. Storage of chemicals below the ground surface in the chemical storage room is no different than above ground, so the ventilation requirements are the same. Mine-related structures located below the ground surface normally consist of openings that are longer in one dimension than in the others, thus positive ventilation is normally used to move air in these conditions. The basic standard for air in mines is to maintain a minimum oxygen concentrations of 19.5 percent, to move the gasses including any waste gases and suspended particles, and to regulate temperature and humidity. Forced air ventilation is used on this property, and the ventilation includes both the areas where mining occurs, and also at the mineral processing and chemical storage area rooms. Oxygen concentrations are actively monitored, along with observations from the olfactory senses to keep personnel safe. This testing occurs in all areas in which personnel are actively working.

Comment 31 Please provide the anticipated or known residual concentrations of chemicals in the tailings and concentrated ore, pursuant to Rule 6.4.21(5)(b) and 6.4.21(6)(c).

Response: The fate of the chemicals has been thoroughly discussed in the October 30, 2020 report, in the February 12, 2021 responses, and in the April 14, 2021 documents. In review once again, all of the organic compounds that are intended for use in processing, are present in the process at very low concentrations, and due to their chemical makeup they degrade rapidly. The rapid degradation of the compounds is obvious based on a simple knowledge of chemistry that should have been gained in middle-school, and a review of the information contained in the SDS's. This has additionally been proven in practice per orders of DRMS, and testing of the materials found no detectable concentrations of the reagents in either the sand or the retained product. Thus, it can be easily concluded that both the known and anticipated concentrations of the reagents are, and will be, well below laboratory detection limits. It is also important to note that, since neither the EPA nor CDPHE consider any of these chemicals to be hazardous, thus even

if some small amount might ever be detected in the future, neither agency would consider a detectable concentration to be a hazard to either human health or the environment.

Comment 32 Pursuant to Rule 6.4.21(6)(b)(i), please commit to only storing chemicals within designated EPFs as described in Exhibit U. Specifically, chemicals will be immediately offloaded from the transport vehicle into its designated storage space. Chemicals may not be stored in common areas awaiting future handling or putting away. Additionally, please provide details regarding how chemicals will be moved (forklift, dolly, by hand, etc.) from the mill room or the warehouse to their desired location, pursuant to Rule 6.4.21(6)(b)(i). Please discuss how the Operator will ensure chemicals are contained during this transport and include a plan to handle spills during transport between EPFs.

Response: The chemicals will be stored only in the chemical storage area located at the mill room, and any chemicals used will be moved directly from transport to the storage area as soon as they arrive on site. Transport between the surface to the mill room will via tram and then to the storage area using a hand truck. Handling spills is included in Section 6 of the Environmental Protection Plan and in the Emergency Response Plan.

Comment 33 Pursuant to Rule 6.4.21(6), please describe how equipment that comes into contact with the chemicals in Table 1 will be detoxified and/or disposed of. Specifically, discuss the following: a. Personal protective equipment
b. Replacement of equipment, flowlines, etc.
c. Empty chemical containers or disposable mixing containers.

Response: In review, all of the chemicals that are listed by DRMS as being designated chemicals, are considered by the CDPHE and EPA to be nonhazardous to the environment, and based simply on the Occupational and Safety Administration hazcom coding, DRMS has listed them, while making no consideration for dose, exposure, concentration or any other important parameter. In fact two of the newly designated chemicals are common household compounds, one used for cooking and the second as a household cleaner. In specific response,

a. Personal protective equipment includes items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests and full body suits. All personal protective equipment should be safely designed and constructed, and should be maintained in a clean and reliable fashion. It should fit comfortably, encouraging worker use. If the personal protective equipment does not fit properly, it can make the difference between being safely covered or dangerously exposed. When engineering, work practice, and administrative controls are not feasible or do not provide sufficient protection, employers must provide personal protective equipment to their workers and ensure its proper use. Today, the U.S. Environmental Protection Agency (EPA) is encouraging all Americans to recycle materials where possible, and to properly dispose of personal protective equipment (PPE), especially during the COVID-19 pandemic. Contact with chemicals with PPE should be minimized, and any large spilled quantities onto PPE should be returned to the original containers as possible. Since the organic chemicals used are environmentally safe and non-toxic in small concentrations, and those chemicals

degrade naturally, so any used PPE that can no longer be used is to be placed into a plastic bag and disposed of as normal solid waste.

b. As described above, since the concentrations of the chemicals used are environmentally safe and non-toxic in small concentrations, and they degrade naturally, any used equipment, flowlines, etc. can be emptied of fluids and disposed of as normal solid waste.

c. Per EPA guidance, empty chemical containers are to be recycled when possible. For non-recyclable containers, the containers are to be fully emptied of any residual product, and since of the chemicals used are environmentally safe and non-toxic in small concentrations, all containers for the chemicals listed can be disposed of as normal solid waste.

Comment 34 Pursuant to Rule 6.4.21(6), please discuss the decommissioning process with regards to mixed or diluted chemicals contained within tanks and flowlines. Please provide the maximum volume of mixed and diluted chemicals that would need to be disposed of during a forfeiture situation.

Response: The total volume of water in circulation within the process circuit is approximately 5,000 gallons, and as has been discussed in detail in previous correspondence, the concentrations of the chemicals in that process water are in the parts per million range, and recall that the concentrations of xanthate used during processing were only slightly higher than the LC50 96-hr. toxicity for freshwater fish. As has also been discussed previously, the organic compounds in the concentrations used, have been determined to be not toxic, and degrade rapidly, generally within a few days or weeks. If forfeiture should ever occur, the time required for DRMS to seize control of the site would be significantly longer than the expected lifespan of the chemicals in the circuits. Thus the working fluid would be expected to be non-toxic well before disposal might become necessary. The preferred method of disposal of nontoxic water is either by local land application of by evaporation. Any alternate disposal method would increase the expense unnecessarily and raise the risk of having it move along public roads to some remote licensed disposal facility.

Comment 35 Pursuant In accordance with Rule 8.3, please submit an Emergency Response Plan for Designated Chemicals proposed to be stored on site.

Response: An emergency response plan has been written and is included.

Amendment to

Mineral Mountain Gold LLC

Colorado 110 (d) Mining Permit

Exhibit C

September 16, 2021

EXHIBIT C
AMENDMENT TO MINING PLAN

September 16, 2021

Introduction

On June 2, 2020, Division of Reclamation and Mining Safety (DRMS) personnel performed a site inspection, and conducted a follow-up on July 15, 2020. On August 19, 2020, the Colorado Mined Land Reclamation Board (CMLRB) found the Operation in violation of C.R.S. 34-32-124 for failure to comply with a permit. The Board ordered that the Operator file a Technical Revision within fifteen days of mailing of the Order to propose a plan to appropriately dispose of xanthate and flotation concentrate currently stored on site, and to either excavate and haul uncharacterized mill tailings off-site to an appropriate disposal, or have a third party sample and characterize the mill tailings to determine if they can be left in place. The Order also required that Operator file an Amendment Application updating the Mine Plan and Environmental Protection Plan to describe current and proposed mining and milling activities at the site. The operator immediately contacted professionals to perform site investigations and to test the materials that had been identified by Division of Reclamation and Mine Safety (DRMS) personnel.

As had already been determined prior to issuance of the 2015 permit, the Board required testing found that the regulated metallic elements remaining in that tailings sand met all normal U.S. Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) standards for that locale. Additionally, it was found that in spite of its scary sounding name, xanthate is a simple organic compound, made of common elements from the first three rows of the periodic table, and in fact consists of the very same elements that make up proteins in the human body. It, and its family of chemicals, have been used for processing minerals in Colorado for the last 100 years, with no evidence that any significant negative issues have ever occurred when it is used as recommended by the manufacturers and distributors. Neither the EPA nor the CDPHE consider xanthate to be a hazardous substance or hazardous to the environment, and as a result have never developed any standard tests to detect its presence or to quantify it. Per the orders of the CMLRB, a test was specifically developed for this site, and as would be expected, based on the chemical characteristics of the compound, no detectable concentrations were found in the tailings sand, in the concentrates, or in the residue remaining from the evaporated process water. It is well known that this compound is used in mining at low concentrations and that it degrades rapidly in the environment. The investigation concluded that the sand tailings met EPA and CDPHE environmental standards, thus posed no hazard to human health of the environment as had already been known by every applicable government agency except DRMS. Since the material is non-hazardous and if the operator would wish, it can be disposed of as any other solid waste at a licensed Subtitle D landfill. The investigation then concluded that since the sand tailings meet regulatory standards, the best and most environmentally friendly option will be to leave them in place on the site, as was being done in 2020, and as specified in the Tailings Disposal Plan that has already been submitted.

As indicated in Section (1)(a) of the Original Mine Plan, the operation is still in prospecting and mineral testing stage. If the prospecting and mineral testing is successful, the size and rate of operation could be similar to the current level of effort. If that is the case, then the prospecting and testing can smoothly transform to mining and processing, using the same disturbance footprint, similar chemistry, and similar tailings sand placement. If the current prospecting and testing should indicate that a significant change in mining and processing methods be employed that might materially affect the environment, or if the footprint should need to be significantly expanded, than an additional amendment to the permit might be required.

While the original mining plan simply and correctly described the operation that was occurring during in the summer of 2020, per the CMLRB order, the description to be expanded in this amendment to comply with that order, and includes the chemical xanthate as a "designated chemical", which DRMS has added to its list since 2015. Additionally, since some time has passed since the original permit was put in place, and more information has been gained from the work that has been performed at the site, this additional information is also included in this amendment. The changes are identified per section of this exhibit.

A Deficiency letter was sent on August 6, 2021 identifying additional items by Elliot Russell, DRMS personnel. The items included giving new chemicals the "designated chemical" designation, including two common items commonly used in the household, one being used for cooking and an second used for cleaning. The items also include the requirement for additional detail to answer questions that reviewer had concerning the process. The questions were answered in detail and where applicable, further modifications and additions were made to this document. As required by the reviewer, this document replaces previous documents.

(1)(a) The site is currently undergoing prospecting as defined in C.R.S. 34-32-112, and it is hoped that mining, defined under C.R.S. 34-32-8, can occur sometime in the future, possibly as soon as August 15, 2014. In the event mining, as defined, cannot initiate within 180 days from finalization of the permit, per Rule 1.13.2, even though the project is currently, and will still be in, exploration stage at that time, Division of Reclamation, Mining and Safety (DRMS) will recognize that the choice was not of the operator, but the choice of DRMS personnel and that the change might be premature per the statue. As the project is still in prospecting stage, it would be best that it would be in mining stage before starting and ending dates were chosen. The project remains in prospecting stage, and it appears that successful operation might be possible. At this time, a best estimate for end of project is 10 years from the current date, or May 2031. If substantial economic material is found, the life of the project could be extended beyond that date.

(1)(b) The thicknesses of the "A and B Horizon" soils range from 4 inches to about 12 inches across the permit area. Minimal additional surface disturbance is anticipated, beyond the

current approximate 4.5 acres of disturbed area. In the event any additional surface is disturbed, the operator will operate in a good workmanlike manner to segregate and stockpile any topsoil that might be encountered. The stockpiled topsoil will be either saved for future reclamation or used for reclamation purposes in the near term. As the area contains only minimal topsoil, care will be taken to manage any that is available to maximize the effectiveness of the reclamation. Stockpile areas will be chosen based on their siting with respect to the location of the future disturbance. All long-term soil stockpiles will be stored safely away from traffic, with their surface graded and seeded with a reclamation grass mix to help preserve the physical characteristics of the material and to minimize any erosion.

(1)(c) As the operation is intended to be underground, there will be no overburden removal. The only material that will modify the surface will be excess waste rock generated as part of standard prospecting and mining processes. Waste rock will be added to the existing waste rock pile shown on Figure E.

(1)(d) The deposit is anticipated to be a vein or vein-like structure, meaning that it is tabular in shape with the orientation of its primary axis being near vertical. Assuming that thickness specified in Rule 6 of the Regulations, is defined as the vertical direction, it might be found to have a “thickness of several hundred feet, but have only a few inches to a couple of feet in width. Additional “Prospecting” will be necessary to better define the actual dimensions.

(1)(e) The mining plan has not yet been developed, as the site is still in “Prospecting” stage. Assuming mining will occur, then it would be anticipated that all activity would be conducted underground through the existing adit and shaft shown on the map. Ores and waste rock would be moved to the surface where waste rock would be deposited on the waste rock pile. Ore may or may not require some upgrading process and at this time it can only be speculated whether materials can be economically produced or upgraded. Movement of materials and personnel on the main adit level will be performed using rubber tired equipment including load-haul-dumps (LHDs), underground trucks, and various other conveyances. If other levels might ever be developed, material movement could be conducted using rubber tired equipment or rail haulage, depending on the results of exploration and development results. As has been the case historically, recently, and at the present time, future mining plans would include the use of the existing maintenance-shop structure, tunnel, vent shaft(s), portable petroleum-powered

compressors and generators. In the future, utilities might be added to the property, to either be used solely by the project, or to be shared by multiple mining and non-mining users. The use of a Cryderman on the property is not likely. The rocks found on the property to date, have been tested and found to be non-acid generating, so no special precautions are anticipated for handling materials either underground or above ground. Where possible, waste rock will be deposited in existing, or to be created, underground openings when safe to do so. At this time, no specific mining plan for removing ores can be developed since the delineation of any ore bodies has not been completed. It is possible that other incidental products could be produced at this property if they are discovered. .

Shaft Closure

An additional shaft (Shaft II) is shown on the updated map and will be needed in the near future to move men, materials safely. Upon cession of mining, the feature will be closed in the same manner as described for other features by closure and iinstallaton of a reclamation covering.

Previously Shaft 1 was driven directly into bedrock and required no structural support. The collar was fit with a metal pipe for ground support, to prevent spalling and to provide a base for security grating. Shaft II, as with Shaft I, is to be driven into solid bedrock within the previously disturbed area. The collar will be stabilized as needed using a combination of concrete steel, and wooden timbers that will be used to support ladders, and other equipment needed for access and use. The opening will have a safety guard to protect workers while work is occurring.

Per the DRMS publication "Best Practices in Abandoned Mine Reclamation" the specific recommendations contained in that publication are excerpted from page 38 as follows: *"Backfilled shafts and adits are permanent, completely eliminate the hazard, and are maintenance free. With proper equipment, construction workers' exposure to the mine hazard is low. If on-site material is used, waste piles may be eliminated. Although the techniques used are generally low-tech using commonly available equipment, care needs to be taken to ensure that the entire opening is filled with no void spaces remaining. Material placed in shafts must not be allowed to bridge and create temporary, unsupported plugs."* In supplement to DRMS procedures, upon completion of mining, both Shafts I and II will be specifically abandoned and closed by, removing any feature that projects above the reclaimed ground surface and by filling the opening with previously mined rock (see figure). The size of the rock to be used as backfill shall be no greater than 14 inches in diameter so that bridging of the backfill material will be minimized. Upon completion of the backfill, the earth will be mounded over the opening so as to shed precipitation water and the area will be planted with approved

grasses. Closure is to be performed using a bulldozer or front end loader, using nearby waste rock sourced from excavations.

(1)(f) The Exhibit Map E shows the area included within the permit boundary. The area contains many prospects, pits, shafts, and adits, including the shaft shown near the south corner of the Moose claim (MS 9572), and the tunnel portal shown near the north center of the permit area. The maps show these two features along with other mapped features in the area along with existing roads that are located within the permit boundaries. The current temporary shop and storage areas are also shown, all overlaid on a 5-foot topographic contour map. The area contained within the permit area is 9.3 acres. The temporary facilities that will be used include a reduction/doghouse area, office, shop area, and storage. Also included will be an area for storing blasting agents, an area used for fuel storage, and areas for equipment storage and parking. The fuel storage area will contain one or more above ground fuel tanks that are anticipated to be located to the west of the tunnel portal. The tanks will meet current environmental requirements for tank design and secondary containment. Equipment, parts storage, and vehicle parking are located on available areas of the mine dump. Surface equipment, if mining is found to be justified, additional equipment will include: compressors, generators, loaders and other various miscellaneous equipment including a layout area for timber and tools.

The roads and disturbed areas are shown, as well as is the tunnel portal. Additions include a future shaft (Shaft II), as shown on the map as being located about 75 feet southwest of the existing tunnel portal. Its final location will be modified slightly following collection of additional exploration geologic data. The updated map shows a rock crusher currently located just to the west of the tunnel portal. However, since the unit is portable, it might be moved to some other location within the disturbed area, or even underground nearer the mill room should conditions require.

(1)(g) All existing disturbances including roads, leveled areas, and the portal area improvements are shown on Exhibit Map E. No significant additional disturbances including: pit excavations; mine benches; impoundments; stockpiles; or waste rock disposal area shown will be constructed.

(1)(h) Water will be used in the operation for: dust control; for drilling; mill testing and milling; for reclamation; and for any other uses that the underlying property owner might want unrelated to mining. The site has required minimal dust control to date, but dust control typically consumes a few thousand gallons when dust suppression is necessary. Drilling

has typically required the use of a few thousand gallons for lubrication and cooling, and the test milling requires a small amount of makeup water to replace the small amount that remains in the tailings sand following dewatering. Once water is dried sufficiently, the material is transported via front end loader or truck for placement along with waste rock. Since the site is a zero discharge site, and there is no discharge of water, and any water that would be required is purchased from the town of Cripple Creek.

Water Usage

The facility remains a zero water discharge facility, so the level of water use is, and will continue to be small. The amount of water to be used cannot be precisely determined but to meet the regulatory requirement certain assumptions will be made. Based on these assumptions, and as a comparison, this total water consumption will be only slightly larger than the design requirement for a family of four living in the Town of Cripple Creek. The water will be purchased from the Town of Cripple Creek as needed, and it the town has sufficient capacity to provide water. Fresh water is currently stored on site in tanks, the largest tank being no larger than 10,000 gallons with a total backup fresh water storage capacity not exceeding 15,000 gallons, that capacity to be used for anticipated mine process and sanitary needs, and for potential fire mitigation. The assumptions for water consumption are as follows:

A Surface Dust Control – To date little water has been used on the site for dust control. However to meet the rule, the assumption will be made that in the future, 30 dust control events will occur per year over a road distance of 8,000 feet, each event requiring 2,000 gallons of water assuming an application rate of 0.04 inches of water. Fifteen events requires 60,000 gallons.

B Underground Dust Control – Underground dust control is necessary for the safety of the underground miners, and in normal conditions a round will require 100 gallons of water. Assuming that 50 advances will be made per year, the water annual water consumption would be 5,000 gallons.

C Underground Drilling - Water is required for dust control and safety of the miners. Average consumption of water is estimated to be 10 gallons per drill hole and a round of holes will total approximately 20. Thus a round will require an estimated 200 gallons, and if it is assumed that 100 rounds per year will be drilled, then the water consumption will total 20,000 gallons per year.

D. Milling – For the purposed of water consumption, we will assume that the mill might reduce 700 tons of rock per year, and the waste sand is to be dry stacked using trench barriers and have a maximum moisture content of 28 percent. Testing had determined that this content is well below saturation, thus no pore fluid will be lost to the surrounding rock. At this moisture content the sand material will contain 68 gallons per ton. Assuming that the mill processes700 tons in a year, the total water consumed by the process will total 50,000 gallons.

E. Drinking water and Porta-Johns - If it is assumed that two men will be on site for 200 days per year and will drink one gallon per day plus 0.25 gallons for coffee, the total water consumption is 250 gallons. The porta john will require about 30 gallons per pumping and rinsing, and if it is assumed that it will be pumped weekly for 50 weeks per

year, the water use will total 1,500 gallons, for rounded total of 2,000 gallons assuming sufficient guests and regulators visit the site.

D. Fire control – Assuming that one fire event occurs in the area over the next 10 years and air tankers are necessary to protect the mine property. Each tanker carries and 15,000 gallons, and trucks carry 4,000 gallons. In the event that three air tankers and eight trucks are required to save the mine from wild fire, the total water consumed would be 77,000 gallons. That would equate to an average water consumption of 8,000 gallons per year.

Estimated Water consumption per year

Use	Gallons of Water/ Year	Acre Feet of Water/ Year
Surface Dust Control	60,000	---
Underground Dust Control	5,000	---
Underground Drilling	20,000	---
Milling	50,000	---
Domestic	2,000	---
Fire Control	8,000	---
TOTAL	145,000	0.45

(1)(i-j) As the water land surface is located at an average elevation of just under 10,000 feet, the water table is estimated to be at an elevation of somewhere just over 6,900 feet, it not anticipated that the operation will encounter the water table. As discussed above, the site is located on a topographically high area and there are no perennial or ephemeral streams located within the permit area. Historically, the existing design of the roads and that of the mining-related disturbed areas has produced no significant increase in runoff that has led to the damage of surrounding vegetated areas. Thus, the design of these features are deemed to be satisfactory. To ensure that no fine-grained materials move off of the adit area/parking area, a shallow collection area is to be constructed on the waste rock pile to the northwest of the portal, as shown on Exhibit Map E-1. Since it is not anticipated that groundwater will be intercepted and no perennial surface waters are located nearer than one-quarter mile of the permit area, no potential can be seen for the possibility of producing any injury to any existing water right, either surface or to groundwater. Thus, the project can be considered to be a zero discharge facility. The only effect concerning water would be one that is financially beneficial, in that the project would purchase water from an entity (Town of Cripple Creek) that already has an existing right.

(1)k-l) Per standard good workmanlike practice, and as has occurred previously on the site, refuse generated by the project will be disposed of properly. Based on historical experience and testing of samples located on the site, no acid generating rocks have been

discovered within the permit area, and no groundwater is anticipated to be intercepted, so no discharge of low pH water is possible at this site. This finding is typical of the district overall. As discussed above, there should be no significant affect of the hydrologic balance from this site.

The site is currently accessed from the town of Cripple Creek via McKinney Street, traveling up a gravel road along the west side of Mineral Hill and onto the property. A security gate is located along that road at the end of McKinney Street, a distance of 0.9 miles from the permit area. The roadbed is of sufficient width for vehicle travel and will not require any significant improvements. Access roads within the permit area will require inspection and possible minor modification to meet the safety requirements imposed by the Federal Mining Safety and Health Administration (MSHA). No new roads are anticipated. The existing roads have graded surfaces and are mostly guttered and drained, as applicable, per standard engineering practice. The roads are located high on hillsides and there are no perennial or ephemeral streams that cross the road, so no fills or diversions are necessary or appropriate. Thus, there are no instabilities, erosion rills or ditches, or land wasting issues existing on the site. As the disturbance is so small, the transition to future land use, assuming that it does not remain mining, will be quite easy.

(1)(m) As was the case prior to 2015 and approved in March of 2015, the property remains in prospecting and testing stage. In the original permit, the testing that was occurring at the time of the DRMS inspection in 2020 was anticipated by the operator and ignored by DRMS, the work being described in the permit as follows: *"The normal prospecting and future mining processes are anticipated to include, and require, reduction of material sizes from solid rock by initial blasting followed by additional mechanical size reduction to allow sorting, sampling, and production testing of materials. The mechanical reduction area might be located underground or possibly above-ground. If the size reduction takes place on the surface, the location will likely be either immediately west of the adit, or in the area labeled Reduction/Doghouse as shown on Exhibit Map E. Equipment required will be chosen once more is known about the properties of the materials that will require size reduction*." In 2015, at the time the permit was approved, the above description was deemed by DRMS to be sufficient, and correctly described the plan that was being followed by the operator during the summer of 2020. Per the orders of the 2020 CMLRB, the description of the test milling, and possible production milling that was occurring is expanded as follows:

Exploration of the subsurface continues and as material that is potentially valuable is encountered, it is first tested using laboratory sized equipment and then further tested using pilot sized milling equipment. The rock is reduced in size in a small crushing plant currently located on the waste rock pile as shown on the map. Since the equipment is portable, it might remain at that location, or might be moved elsewhere within the disturbed area to make room for other work. It is also possible that the equipment might be moved underground. The grinding and mineral recovery equipment is located in an underground room to keep it out of the weather and also to keep it away from freezing conditions, thus requiring less energy needs and putting less stress on our fragile ecosystem and environment. The equipment located in the milling room area is used to test the amount of target product contained in the mined rock and how much of that can be successfully collected. Any finished product produced will be stored in the mill room, or in the warehouse. The finished product is a solid and will be stored under cover and protected from precipitation.

In July 2020, the test equipment was locked out of operation per orders of the MLRB. Its layout is described as follows, and a typical example flow sheet is attached to assist those unfamiliar with this type of process. At this site, the rock from the mine is crushed and then returned back underground to the mill room where it is fed through a ball mill to make it finer. The output from the ball mill is sent to gravity collection equipment, and then reground and sent through a flotation process, where a small amount of other reagents are added to collect the gold, allowing it to be separated from the ground rock. As is commonly known and has been practiced in this industry in Colorado for over 100 years, flotation reagents work works by binding to the gold concentrate and both the gold and reagents are collected with the gold concentrate. If the process is performed correctly, only very low concentrations of flotation reagents remain in the product that exits the process (tailings sand). As has also been known for many years by professionals, what little organic reagent might remain in the tailings sand degrades rapidly, and the on-site testing that was performed in response to the CMLRB orders confirmed this already well known fact.

As the facility uses a minimum amount of water for processing, both the material that is to be retained and the material that is to be discarded is dewatered, and the water is recycled and reused. As was observed by the DRMS inspectors during their summer of 2020 inspection, the discarded sand had been placed using a loader bucket and had been dewatered to below saturation before placement. Chemically, the material has approximately the same composition as the waste rock and is simply finer-grained. The

original analysis that was performed on the material prior to obtaining the 2015 permit, and the recent DRMS ordered resampling found the concentrations of target metals remaining in the tailings sand to be approximately equal to the concentration naturally occurring in the soils in the area adjacent. Thus the tailings sand is to be recombined with the coarser grained material in the waste rock pile. Although the general processing flow sheet describes the process, a site specific processing flow sheet is also attached.

Since the Earth's rocks are not necessarily homogeneous, neither is the content and exact composition of the minerals in those rocks. Successful milling requires the maximization of all parameters that perfect efficient recovery and the fine tuning of a mill is dependent on the professional operating it. Therefore, the operation needs to operate with the best technology possible. The chemical xanthate, had been in use on the site since the original permit was issued and prior to the DRMS 2020 inspection. In the future, it might still turn out to be the best collector, or alternatively, it might still be necessary to use it along with other equally environmentally friendly reagents. Most of the chemicals used for this type of mineral processing are generally very similar chemically, thus consist of families of chemicals that have similar characteristics with varying compositions of the key ingredients. Some manufactures provide all of the information concerning their products and some label precise compositions as proprietary. Once again neither xanthate, nor any of these standard organic compounds generally used in flotation are listed as hazardous by EPA or CDPHE, and no negative environmental problems have occurred when these chemicals have been used according to the manufacture or distributor's recommendations. Safety Data Sheets (SDS) for the chemicals that will be used, or are currently anticipated to be used, are included in the Environmental Protection Plan. Since other proprietary reagents might have a different names, but are chemically similar, the SDS sheets contained in the amended plan will cover those other proprietary reagents that have similar ingredients. Should chemicals that are different from these families already listed be used, then the operator shall send copies of the SDS sheets to DRMS, so that they can be added to the DRMS designated chemical list for the site. The designation is nearly mindless to make and both the operator and DRMS personnel will only have to look at the SDS sheet to see if it has a 2 on its hazcom placard, even if it is benign enough to be used commonly in every kitchen in America.

In this discussion, it is important to refer back to when the original regulations were written, of which the author participated, that the 1995 revision **(Rule 1.1(2) referring to materials contributing to "acid mine drainage" specifically stated that "Mined and**

stockpiled material does not include ore or other mined product that is, or will be processed within one hundred eighty (180) days of being stockpiled and removed from the permit area". This sentence was specifically written into the regulations to allow the operator the ability to handle and process material, while still maintaining adequate standards and environmental safeguards. The authors of the rule understood basic chemistry and knew that the degradation of minerals from weathering does not occur instantaneously, and they chose a time period that would allow the operator sufficient time to manage his materials and business, while creating little chance of danger to the environment. The physical characteristics of the materials on this site are typical of the materials found at other waste rock piles found around the Cripple Creek district, the majority of which are also non-acid generating. This subject that has been recognized by the U.S. Environmental Protection Agency (EPA), has been thoroughly discussed in previous documents provided to DRMS, and the Environmental Protection Plan has been modified to reflect the reviewer's comments.

(1)(n) The current prospecting is for gold, as it is the dominant economic substance historically and currently mined in this district. At this time, there are no known secondary products, but testing in the future might find that other economic products do exist.

(1)(o) Explosives have been used historically on this site and have had no adverse effects on structures located within the permit area, nor have they had any effect on any adjacent areas. The large open pit mine located east of Cripple Creek and North of Victor, regularly sets off blasts consisting of several tons of explosives with no negative effects on these adjacent properties or towns. Victor is located approximately one-half mile away from regular blasts and Cripple Creek is located about a mile distant. As compared to the large mine, the typical underground mine uses only a few pounds of explosives at a time, a factor of a thousand less than used in an open pit.

Because this is a low-intensity (limited activity) mine, and with the nearest residence (constructed building) located approximately 2,500 feet from the site, the effects of blasting are expected to be insignificant to anyone located that distance away. First, underground blasting has fewer noise-related impacts than open pit blasting simply because it occurs underground. Secondly, there is typically no discernible noise present when blasting underground any distance away from the surface mine opening itself.

With respect to vibrations, blasts of this small magnitude are not capable of generating an acceleration threshold of even 0.5 inches per second per second at the permit boundary.

This number is a factor of four times below the established safe zone acceleration of 2.0 inches per second per second, established by the former U.S. Bureau of Mines as the level of vibration below which damage to a residential structure in a reasonable state of repair is unlikely to occur. Surface noise levels are suggested to be at 80 decibels or less, and to meet State and Federal requirements for industrial activities.

.

(2) When the permit was first written, it was anticipated that no tailings pond would be used at this site, and based on the testing that has been performed to date, this first assessment remains true.

NW Cor. S12, 2,700 ft

Blacktail, Moose, Deer, Elk,"77"
MS9672
Minerex Corporation

Patent Boundary
(Typical)

Previously Disturbed
Area (approx 4.4 acres
within permit area)
(Hatched)

OH Electric Line

Permit Area
9.21 Acres

Falkner's Folly
MS9312
Minerex Corporation

9750
9775
9800
9825
9850
9875
9900
9925
9950
9975
10000
10025
10050
10075
10100
10125
10150

N41°51'W 663ft

S36°3'E 714ft

Trailer

Porta John

Warehouse

Shop
Storage

Reduction-
Dog House

Waste Rock Area

Crushing

Adit
(Tunnel)

Covered
Rock Storage

Shaft II

Raise

Little Hope
MS8731
Minerex Corporation

Mill Access Route

Mill
Room

Connex

Connex

S22°37'W 87ft

N67°43'W 330ft

BLM

Cor. 4
Elk (MS9572)

N41°27'W 97ft

N19°26'E 48ft

N67°43'W 78ft

Colburn
MS9287
Minerex Corporation

Processing Chemical
Storage Area

Reindeer
MS9265
Minerex Corporation

Cripple, Little Florence
MS10107
Minerex Corporation

Shaft

UG Water Line

N42°10'W 355ft

Access Road

S0°11'E 353ft

S81°60'E 25ft

N37°23'E 26ft

N90°W 158ft

BLM

Look Out
MS10495
Minerex Corporation

Reindeer
MS9265
Minerex Corporation

Look Out
MS10495
Minerex Corporation

Colburn
MS9287
Minerex

Exhibit Map E
Showing Existing Site with Improvements
Cripple Creek Project

Owner Address:	Owner Phone Number:
Mineral Mountain Gold, LLC P.O. Box 247 Cripple Creek, Colorado 80813	719-689-5965

Property Description:
Little Hope MS8731
Falkner's Folly MS9312
Blacktail, Moose, Deer, Elk,"77" MS9672
Cripple, Little Florence MS 10107
Reindeer MS 9265
Look Out MS 10495

EXPLANATION

- Permit Boundary(bearings & distances)
- Projection of Subsurface Feature
- 9900 Contour (interval 5 feet)
- Mapped Pits, Adits and Shafts
- Claim Ownership Detail
- Ella W. Mary A. MS8675 Minerex Corporation — Name of Patented Mining Claim / Mineral Survey Number / Claim Owner (surf. and min.)
- Historically disturbed areas shown by hatching
- Note: Permit corners marked with 5 1/2' steel "Tee" posts

True North
Magnetic North
9°

Feet
0 30 60
SCALE 1"=60'
Contour Interval = 5 feet

Additional Notes:
Permit boundary shown
Names of owners or record shown
All significant natural and cultural features shown
Direction of mineral extraction is unknown as project is currently in prospect stage
No permanent man-made structures on permit area or withing 200 feet
No redisturbance of previously reclaimed disturbed areas is anticipated
Working area equals all disturbed areas shown
Area located in N1/2 Sec12, T15S, R70W, 6th PM
Some BLM areas shown may actually be private

ENGINEER'S CERTIFICATION

This report was prepared by the Engineer who's signature appears below or under the engineer's direct supervision).

SIGNATURE: C.A. Braun

No. 22601

DATE: September 16, 2021

COLORADO REGISTERED PROFESSIONAL ENGINEER

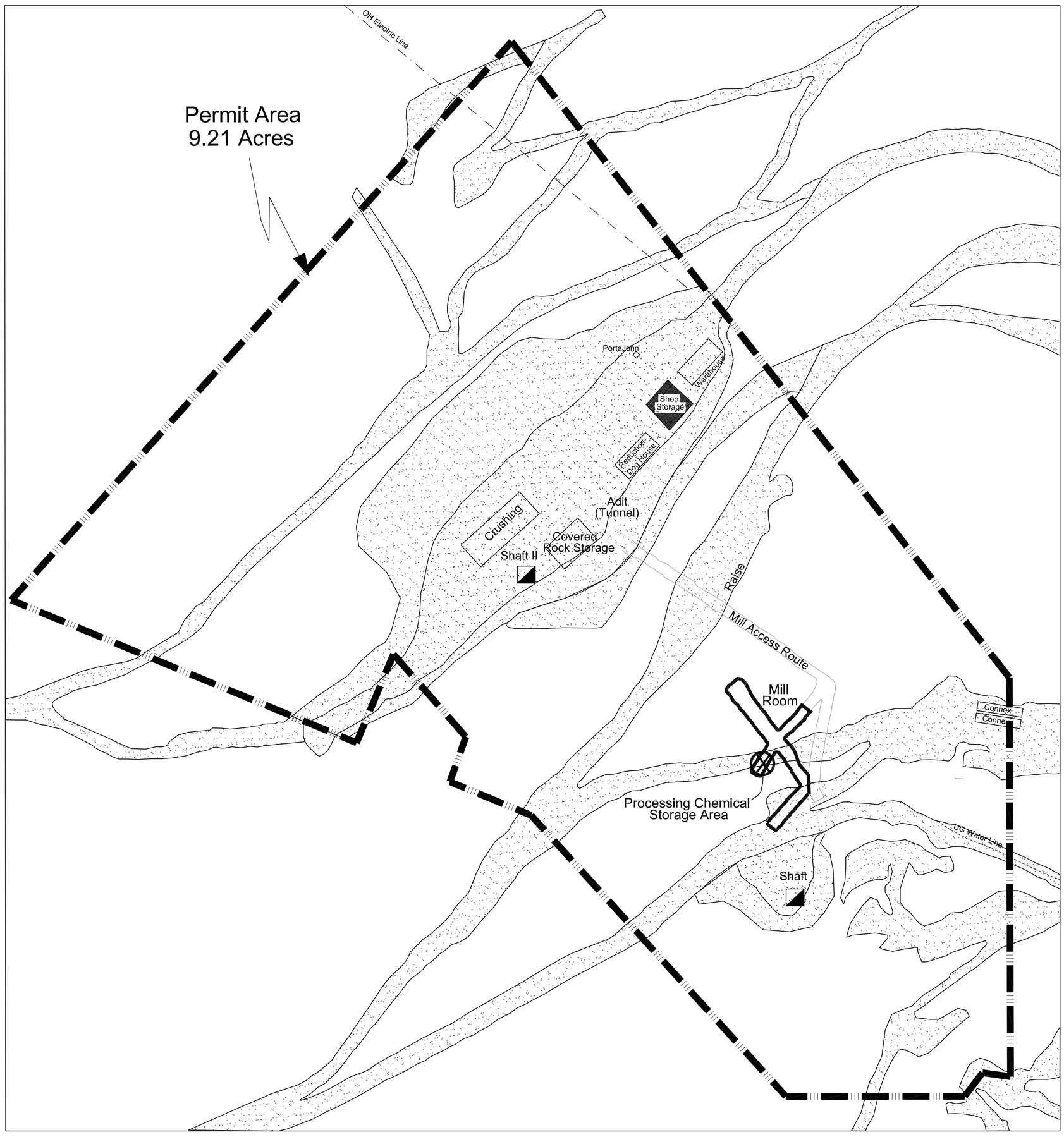
Exhibit Map E

braun

BRAUN ENVIRONMENTAL, INC.
355 South Teller Street Ste 200
Lakewood, COLORADO 80228
PHONE (303) 988-7697

Mineral Mountain Gold, LLC
Cripple Creek Project, Cripple Creek, CO

July 21, 2014	Drawn by: Staff
Date Rev: 9/14/21	Checked by: C.A. Braun



Explanation

Onsite Chemical Storage Areas

Location of Processing Chemicals

Surface Access Road

Permit Boundary

Note: Storage areas include secondary containment of sufficient size to contain the largest volume of the largest container

Onsite Chemical Storage Map

braun
BRAUN ENVIRONMENTAL, INC.
355 South Teller Street Ste 200
Lakewood, COLORADO 80228
PHONE (303) 988-7697

Mineral Mountain Gold
Cripple Creek, Colo.

Date: 9/14/21	Drawn by: Staff
Rev:	Checked by: C. A. Braun

True North
9°
Magnetic North

0 50 100
Scale: 1"=100'

ENGINEER'S CERTIFICATION

This report was prepared by the Engineer who's signature appears below or under the engineer's direct supervision).

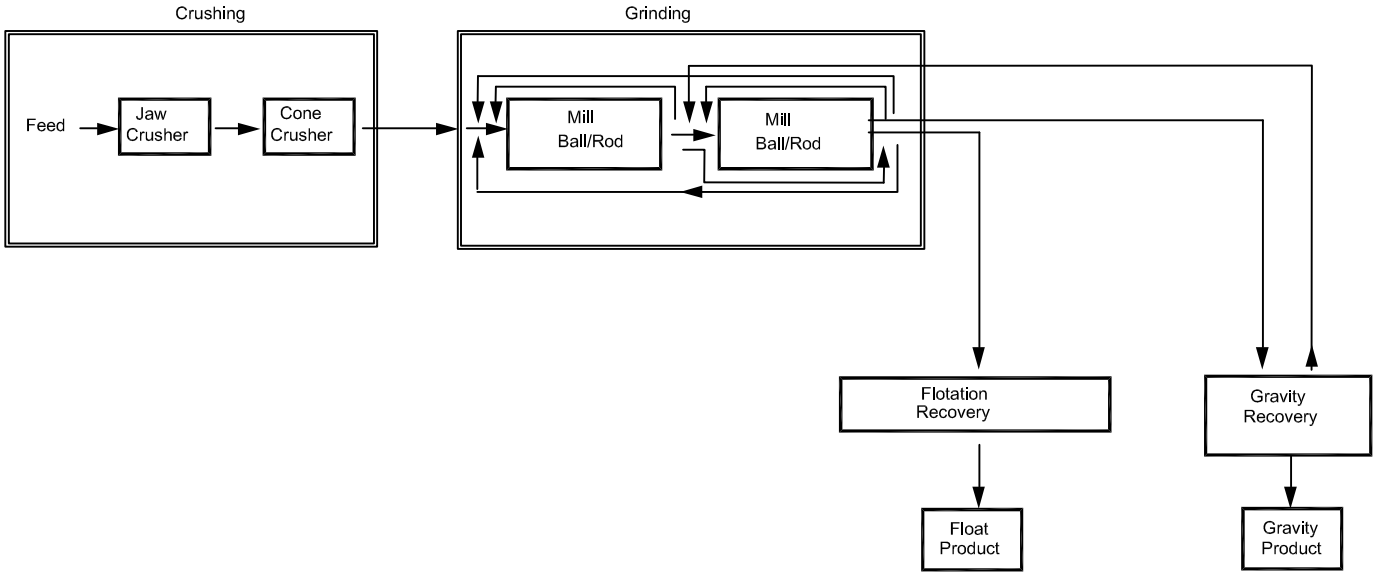
SIGNATURE:

No. 22601

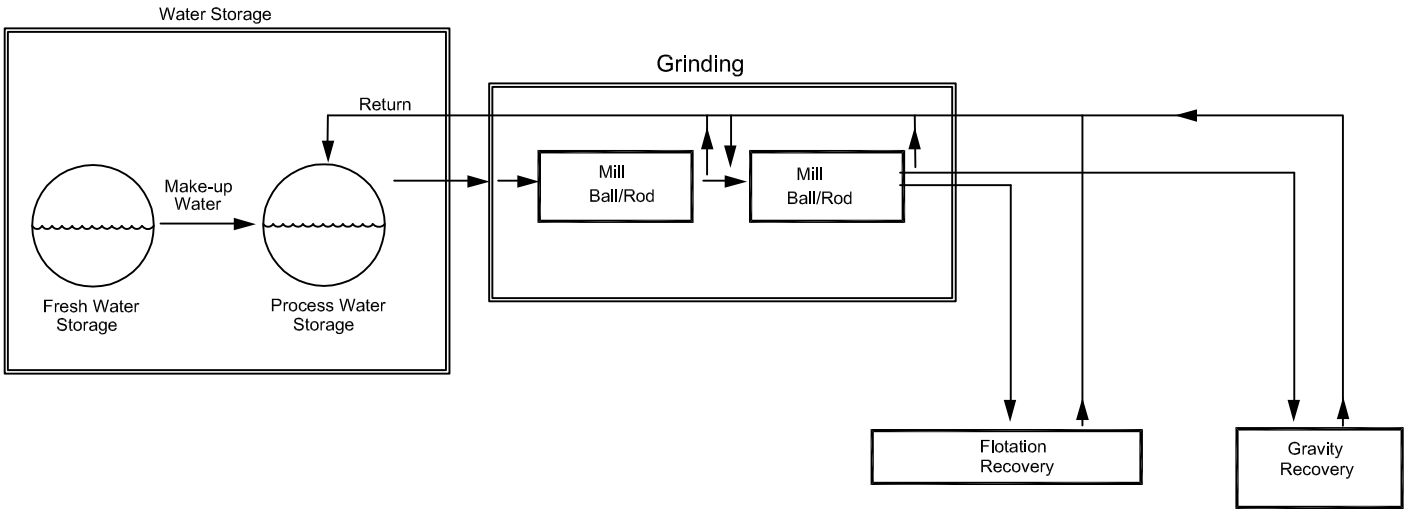
DATE: September 16, 2021

Process Flow Sheet

Material

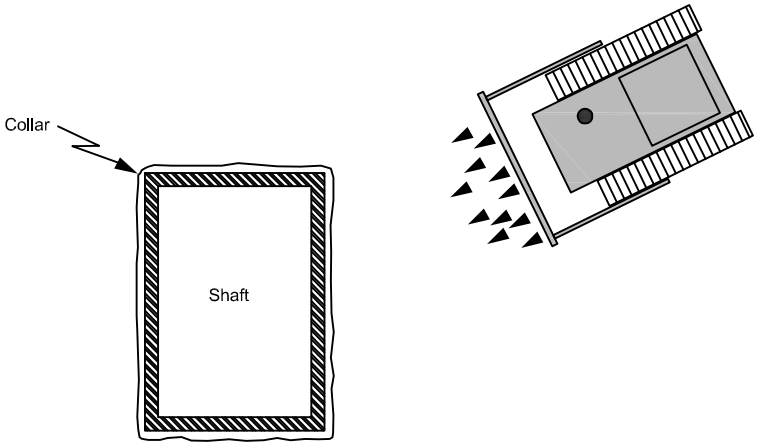


Process Water

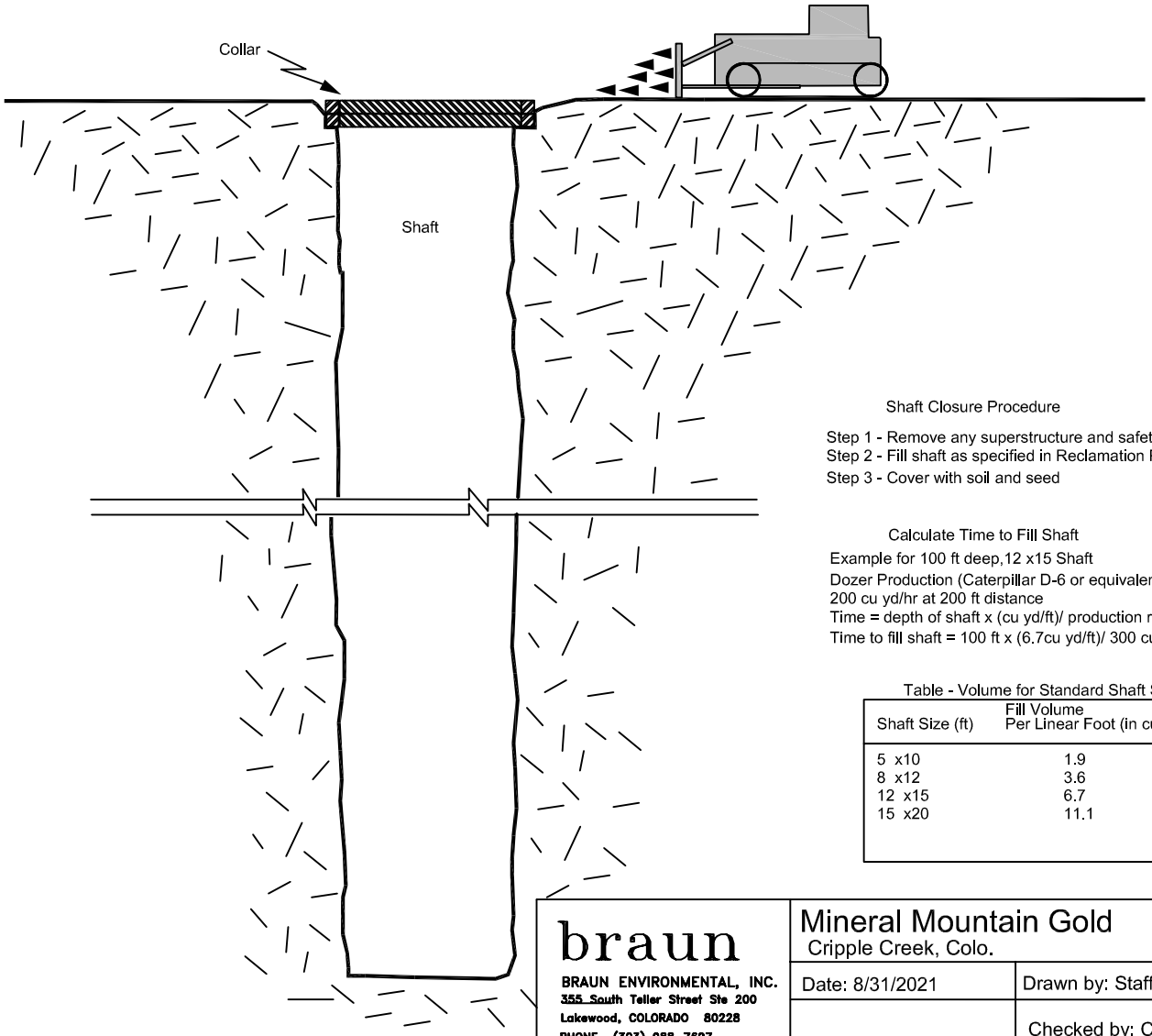


Mineral Mountain 2021

Plan View



Section



Shaft Closure Procedure

Step 1 - Remove any superstructure and safety fencing
Step 2 - Fill shaft as specified in Reclamation Plan
Step 3 - Cover with soil and seed

Calculate Time to Fill Shaft

Example for 100 ft deep,12 x15 Shaft
Dozer Production (Caterpillar D-6 or equivalent)
200 cu yd/hr at 200 ft distance
Time = depth of shaft x (cu yd/ft)/ production rate
Time to fill shaft = 100 ft x (6.7cu yd/ft)/ 300 cu yd/hr = 2.5 hours

Table - Volume for Standard Shaft Sizes

Shaft Size (ft)	Fill Volume Per Linear Foot (in cu yd)
5 x10	1.9
8 x12	3.6
12 x15	6.7
15 x20	11.1

braun
BRAUN ENVIRONMENTAL, INC.
355 South Teller Street Ste 200
Lakewood, COLORADO 80228
PHONE (303) 988-7697

Mineral Mountain Gold
Cripple Creek, Colo.

Date: 8/31/2021 | Drawn by: Staff

Rev: | Checked by: C. A. Braun

Mineral Mountain Mining - Shaft Closure Using Dozer

Exhibit U

Designated Mining Operation Environmental Protection Plan

Per Rule 6.4.21 Division of Reclamation and Public Safety (DRMS)

for

Mineral Mountain Project - Permit No M-2014-045

February 10, 2015
Rev. June 2, 2015
Rev. Sept. 16, 2021

Mineral Mountain Gold, LLC

By

C. A. Braun, P.E., CPG
Braun Environmental, Inc.
355 S. Teller St., Ste. 200
Lakewood, Colorado 80226

Table of Contents

Maps

1. INTRODUCTION (6.4.21(1)

In a letter dated January 12, 2015, the Division of Reclamation and Mining Safety (DRMS) notified the operator that the Mineral Mountain Gold Project (Permit M2014-045) was being redefined as a Designated Mining Operation under its interpretation of the Colorado Mined Land Reclamation Act, (CRS § 34-32-101), more specifically CRS §34-32-105 (3. 5) (a) (I -II). That order requires implementation of Rule 6.4.21. Neither the operator nor engineer concur with the determination and in fact believe it to be a faulty interpretation of Rule 1.1(14), Rule 6.4.21(1) (a), and Rule 7.2.2(1), but the operator has been forced to accept it. Per the order, the purpose of this plan is to meet the requirements of Rule 6.4.21 the template for the Environmental Protection Plan. The document describes how the operator will assure compliance with the provision of the Act and rules to protect all areas that have the "reasonable potential" to be affected by these designated chemicals, toxic or acid-forming materials by constructing an Environmental Protection Plan (EPP).

The potential for acid mine drainage (AMD) for the Mineral Mountain Project has been reviewed by Qualified Persons (QP) and it has been found that the project currently does not have the capability of producing acid mine drainage, as the static water level in the Cripple Creek District is well below any anticipated elevations that are reasonably anticipated to be reached on the project. Testing of the exposed rock forming units, and a review of physical site conditions, both locally and district-wide, show that there is no acid generating rock accessible at this time, and based on the information available, there is little to no chance of the production of acid-generating rock in the near future. The project is not using "designated chemicals", as defined in Rule 1.1(13) of the DRMS regulations, and does not anticipate using them, so no plan is currently necessary for managing such chemicals. A review of the site finds that there are no heap leach pads, land application sites, insitu operations, or uranium mining or processing associated with the permit. Thus, based on the Act and DRMS regulations, the reason for producing an Environmental Protection Plan does not exist and as a result, there are no specific areas that have potential to produce any environmental hazards.

On June 2, 2020, Division of Reclamation and Mining Safety (DRMS) personnel performed a site inspection, and conducted a follow-up on July 15, 2020. On August 19, 2020, the Colorado Mined Land Reclamation Board (CMLRB) found the Operation in violation of C.R.S. 34-32-124 for failure to comply with a permit. The CMLRB ordered that the Operator file a Technical Revision within fifteen days of mailing of the Order to propose a plan to appropriately dispose of xanthate and flotation concentrate currently stored on site, and to either excavate and haul uncharacterized mill tailings off-site to an appropriate disposal, or have a third party sample and characterize the mill tailings to determine if they can be left in place. Second, the Order required that Operator file an Amendment Application updating the Mine Plan and Environmental Protection Plan to describe current and proposed mining and milling activities at the site.

The operator immediately contacted professionals and began site investigations and testing of those materials that had been identified by DRMS personnel. The testing found that the

regulated metallic elements remaining in that material identified by DRMS met all normal U.S. Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) standards for all metals of concern, with exception of arsenic. Since arsenic concentrations in Colorado tend to normally be elevated above the EPA regulatory levels, while DRMS has no knowledge, CDPHE recognizes this and sets an elevated level that corresponds with the natural background levels. The testing found that the material contained either similar concentrations, or even reduced concentrations of arsenic as compared to the sampling that was conducted on nearby rock outcrops within the permit areas.

Investigations were also begun on residual xanthate. Xanthate is a simple organic compound, and since neither the EPA nor the CDPHE consider xanthate to be a hazardous substance or a hazard to the environment, no standardized or government approved standardized tests have ever been developed to test for it. In conjunction with CDPHE and private laboratories, the consultant developed a test specifically to satisfy the CMLRB order. The testing found no detectable concentrations of xanthate in the processed sand that had been placed on the waste rock pile, nor did it find any in the evaporated residue that remained from the original operating fluids that were identified within the mill circuit during the previous DRMS inspections. This result was predictable, since the xanthate concentrations used for processing were very low to start with, the compound would be expected to be retained with the product produced by the mill, and typical of many small organic molecules, it tends to naturally rapidly degrade. These results were reported to DRMS via a letter report produced by Braun Environmental, Inc., on October 30, 2020.

In an Adequacy review dated November 13, 2020, Elliot Russell of DRMS requested additional information on the following:

1 Xanthate storage;
2 Disposal of xanthate residue from evaporated process water;
3 Information concerning transport of flotation concentrates off-site;
4 Plan for handling mill tailings;
5 Collection of background samples for arsenic, and;
6 Additional testing acid based accounting of tailings materials.

In response to that review, additional sampling and testing was then performed to address these comments, and upon receipt of the results from the laboratory, Braun responded in a letter report to each point via email dated February 12, 2021. The length of time that went by between the adequacy review letter and the response to was the result of delays from the testing laboratory that was having problems related to equipment, along with the effects on their business by the Chinese virus. Braun's report concluded that the sand produced by the mill met environmental regulations, and that the most environmentally sound disposal method was to place it on site. That response also included the Tailings Handling Plan that had been ordered, which describes the methods to be used to place the tailings sand.

A second adequacy review was sent out via email by Elliot Russell on March 4, 2021, requesting that the manufacturer's recommendations for storage be provided. Braun Environmental responded on March 9, 2021, provided the Safety Data Sheet (SDS) for xanthate that included storage instruction, and reiterated that the Operator had been storing the material in conformance with the recommendations contained on the SDS.

As has been discussed previously, both EPA and CDPHE consider the chemical to be non-hazardous, and thus they do not regulate it. Should the operator want to dispose of it, it can be sent to any Colorado Subtitle D solid waste facility and handled as a simple solid waste. Further, since neither agency considers it to be hazardous, they have set no standards for concentrations in soils. As a result, even if detectable concentrations of xanthate should remain in the tailings sand, based on those regulations, it would pose no threat to human health or the environment. The only consideration would be if the concentrations remaining in the material would exceed the ecotoxicity standard for freshwater fish, and that the material would be in direct contact with aquatic habit. This site is located nearly 6 miles distant from the closest downgradient perennial stream, so even if residual xanthate might remain in the material, no mechanism exists for xanthate to reach aquatic habitat, and at the concentrations used, it is just barely higher than the toxicity threshold for fish even during use in the process.

In summary, the investigations found the milled sand material that had been placed on the waste rock pile meets environmental standards of CDPHE and EPA, and specifically the CDPHE standards, with respect to its location in the Cripple Creek area. Therefore, based on the investigations and the applicable environmental regulations, the optimal method and most environmentally friendly way of returning this material back to the environment is to place it in the on-site waste rock pile.

On August 4, Elliot Russell sent another adequacy review. Among the review items there was finally a listing of chemicals that DRMS deemed worthy to list as "designated chemicals". It is interesting that none of the chemicals on the list are deemed by EPA or CDPH to be hazardous to the environment. DRMS, it appears, has arbitrarily decided to step into the human safety business and use the OSHA Hazcom number ranking of 2, as a threshold to move the chemicals to designated status. This has resulted in their ability to list commonly used compounds that are relatively benign to the environment, but at certain concentrations, can represent a slight hazard to workers, thus requiring them to be stored in a Environmental Protection Facility, the definition being as follows: *"Environmental Protection Facility" means a structure which is identified in the "Environmental Protection Plan" as designed, constructed and operated for control or containment of designated chemicals, uranium, uranium by-products or other radionuclides, acid mine drainage, or toxic or acid-forming materials that will be exposed or disturbed as a result of mining or reclamation operations."* The author participated in the development of those regulations, and specifically remember that the definition was developed in the 1995 amendment to address the construction of repositories in response to the Summitville Mine issue. DRMS has managed to contort and bastardize the definition to cover what EPA simply considers to be simple secondary containment. Two of the compounds on the list presented in this last review are common household items used in the kitchens of many

homes. One is a food item and the second is a standard household cleaner that the reviewer suggested to the operator in 2020, could be used to be used since it was not a designated chemical. Now it is. This Exhibit has been reproduced to include all of the original text, with additions made to address the latest comments per Mr. Russell.

2. MAPS (6.4.21(1)

The Environmental Protection Plan includes a map identifying the site and including various improvements and cultural features, and surface water drainage. Per regulation, it identifies "the locations where designated chemicals, toxic or acid-forming materials, which will be used, stored, handled, exposed, disturbed or disposed of within the permit area, and existing or potential sources of acid mine drainage." As DRMS has now has decided to use the Hazcom designation of 2 for identifying designated chemicals, the site now has designated chemicals. The chemical storage area is shown on a map.

3 OTHER AGENCY'S ENVIRONMENTAL PROTECTION MEASURES AND MONITORING

Air and water standards are set by the Environmental Protection Agency (EPA) and administered by the Colorado Department of Public Health and Environment (CDPHE). Exceedances of these standards, or any releases are reported to those agencies. In addition to these requirements is the required reporting of an emergency condition to DRMS per Rule 8.2.

The regulation requires the operator to notify the DRMS office, as soon as reasonably practicable, but no later than twenty-four (24) hours, after the operator has knowledge of a failure or of imminent failure of: any impoundment, embankment, stockpile or slope that poses a reasonable potential for danger to human health, property or the environment; for a designated mining operation, any Environmental Protection Facility designed to contain or control designated chemicals or process solutions as identified in the permit. Telephone notice shall be given to the Office staff as follows: (a) during regular business hours (8:00 am to 5:00 pm, on working days), the notice shall be given to the Office. (b) Outside regular business hours, or if the Office cannot be contacted, notice shall be given to the Colorado Department of Local Affairs, Office of Emergency Management. Regulations call for specifying to this agency, that the emergency authority is coordinated through the Division of Reclamation, Mining and Safety, and to activate that division's response network.

4 OTHER PERMITS AND LICENSES

Potential typical features that might require permitting include: air quality and emissions; surface water quality; storm-water runoff; and solid and hazardous wastes. At this time there are none of these features associated with the site including the potential migration of hazardous materials to surface waters or ground waters, nor are there any exceedances of air quality standards or specific circumstances that would require permits. No CPDHE storm-water permit is required for this operation as the new area of disturbance is less than the area

required for permitting. There are currently no reagents or chemicals used on the site that would be anticipated to be consumed or reacted leaving any hazardous concentrations of any designated chemicals. In the event that any hazardous materials might be imported or generated in the future, they will be handled according to applicable regulatory standards including those set by the EPA, CDPHE, and Department of Transportation (DOT) as related to transport of solid waste. No other licenses are known to be necessary for the current operation.

5 DESIGNATED CHEMICAL EVALUATION

According to the DRMS Hard Rock/Metal Mining Rule 1 "Designated Chemicals" are defined as: toxic or acidic chemicals used within the permit area in extractive metallurgical processing, the use of which at certain concentrations, represents a potential threat to human health, property or the environment. As this definition was written in fairly nebulous terms, nearly any existing chemical compound, including tap-water, could meet that criteria. While xanthate was not considered a designated chemical in 2015 when the original Environmental Protection Plan (EPP) was approved, it has since been added. A thorough review of its use at the site, and consultation with the US Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) found that they both consider the compound to be non-hazardous with respect to the environment. Further the on-site testing that was performed found that it degrades rapidly and has a very short life. Thus the regulatory agencies that are considered to be experts on hazardous-non-hazardous substances, and the engineers, relying on their testing and experience, agree that its proper use on this site would cause no adverse effect to the environment. Since the operator is currently performing exploration and testing, and site has a 110(d) permit, the use of a designated chemical is permitted, the use of xanthate will pose no harm to the environment. The possibility exists that the use of this chemical will be necessary to make the operation economic, thus it is included in Table 1, listing "designated chemicals", along with their use, concentrations, quantity, location, and fate.

Table 2 includes chemicals that may be used in the processing, along with relevant information, concerning use, concentrations, quantity, location, and fate. Compounds that might be on site in quantities considered to be de-minimus per Federal Regulations are not included. Safety Data Sheets (SDS) are included as Attachment 1. Note that different manufacturers market the same chemicals under different names, some with minor proprietary differences. In these cases, even though the names might be different, the SDS sheet still remains accurate for the compounds contained in these other products.

Even though the site has a "Designate Mining Permit", it currently remains in the prospecting and testing stage. The list of chemicals shown in the Table include the chemicals that are considered most likely candidates to produce a successful mineral separation, and if the operator is successful in his work, only a few of the chemicals listed will be used once production is achieved. Therefore, the table shows the typical sized shipping container, and the summation of the volumes for all of the containers shown does not reflect the total volume of

chemicals that might be on site. The total volume of chemicals is anticipated to be less than 1,000 gallons (Tables 1 and 2).

6 DESIGNATED CHEMICAL HANDLING

Designated Chemicals

(a and b) The following describes the procedures for the handling and disposal of chemicals and toxic materials within the permit area as well as measures to prevent unauthorized release of pollutants into the environment. Per the newly and apparently hastily concocted DRMS definition, various designated chemicals are to be used on the site in processing. Reclamation of the mine will be carried out as described in the reclamation plan already submitted with the original approved permit with amendments here-in contained.

As more specifically described in Section 7 of this EPP there is one Environmental Protection Facility (EPF), per the bastardized regulations, in place to prevent unauthorized release of any designated chemicals used in the processing operation (Onsite Chemical Storage Map). The safe handling of designated chemicals (and non-designated chemicals) is accomplished via operator training, secure storage, and routine maintenance of equipment. Materials and equipment are kept on site for emergencies in order to contain and clean up any spills that might occur. Spill cleanup kits are located in the shop-storage building and in the underground mill room. Fifty-five gallon drums, liners, and plastic sheeting are kept on site for storing and removing any designated chemical spillage and contaminated soil in the event a spill might occur. Based on the maximum sized reagent container transported to or kept on site, the largest quantity of designated chemical spilled would be 300 gallons.

The designated chemicals used in the extractive metallurgical process and used during the active mining process is stored on site within the EPF and within secondary confinement appropriate for the substance. The amount of designated chemicals stored on site will not exceed the amounts listed in the Table 1. Operators will use and store chemicals according to training and information contained with the SDS, and no designated chemicals will be disposed of onsite during active operations.

During periods of temporary cessation designated chemicals will either be securely stored within the EPFs and secondary containment, or removed from the site for the duration of the cessation. No designated chemicals will be disposed of onsite during any temporary cessation.

When the site enters the reclamation phase, all unused designated chemicals remaining will be removed from the site and returned to the manufacturer or disposed of offsite according to the manufacturer's recommendations and Federal, State, and local regulations. Reclamation will then be completed according to the approved reclamation plan. No designated chemicals will be disposed of onsite when the permit area is reclaimed.

The mill facility does not discharge any additionally generated waters from the permitted site, and storm water is not anticipated to ever contact designated chemicals. As has been thoroughly investigated and documented in previous reports, flotation chemicals are considered non-hazardous by EPA and CDPHE, and also as has been discussed previously the chemicals listed will also be used in low concentrations. Thus future testing for any flotation chemicals is not considered necessary unless some unplanned or unauthorized release occurs, or if used in a manner inconsistent with the use recommended by the manufacturer, and/or distributor.

Acid Generating Materials

(c) A review of the acid based accounting testing found that the country rock has been found to be moderately acid neutralizing, the material within the mineralized structure is acid-base neutral, and the processes material that is to be the product of the operation is acid generating. The non-acid generating material produces no negative environmental conditions and can be moved and transported with no issues to the environment. The mineralized rock has been tested and found to be acid and base neutral, so while not acid neutralizing, it is also not acid generating. As a result, moving this material out of the mine, and placing it on, or mixing it, with acid neutralizing material will result in all of the neutralizing potential of the neutralizing rock still remaining, thus no acid conditions. Processing of mineralized rock removes the valuable components, along with potentially acid generating minerals. Once those potentially acid generating minerals have been removed, the remaining material will become less acid generating and more acid neutralizing. This material has been described as the sand product.

The potentially valuable product that has been produced by the process will have collected the potentially acid generating minerals, removing them from the original rock. That product is to be stored away from precipitation to both protect the environment from it, and also to protect it from the environment. The product will be stored inside the mine and moved to the warehouse to be kept under cover.

Since the milling process used at the site does not create or destroy acids, the potentially acid producing minerals are the only potential source of acid, and even if these materials would be returned to the original mineralized rock, the net result would be that the re-blended material would still be acid neutral, just as it was before it was processed. Thus, even if the worst case were considered, the recombined product, as was proven by analytical testing, would not produce free acid. Previous testing by the engineer, and by many others, has found that generally the characteristics of the general waste rock material on this site are typical of the other waste rock found around the Cripple Creek district. Inspection of the material on the old waste rocks piles that are composed dominantly of Cripple Creek breccia are generally non-acid generating, a subject that has been recognized by the U.S. Environmental Protection Agency (EPA), and thoroughly discussed in previous documents provided to DRMS.

For the handling of material to be processed, it is important to refer back to when the original regulations were written, of which the author participated. The 1995 revision **(Rule 1.1(2)**

specifically excluded "Mined and stockpiled material does not include ore or other mined product that is or will be processed within one hundred eighty (180) days of being stockpiled and removed from the permit area" from materials considered to be associated with acid mine drainage. The sentence was specifically written into the regulations to allow the operator to have the ability to handle and process material, while still maintaining adequate environmental safeguards. The authors of the rule understood basic chemistry and knew that the degradation of minerals from weathering does not occur instantaneously, and they chose a time period that would allow the operator sufficient time manage his materials and business, while creating little chance of danger to the environment.

In summary, laboratory testing has found the rock that has been identified as "mineralized rock" is neutral and not acid generating. Thus placing it outside of the mine on "non-mineralized rock" that has been tested and determined to be acid neutralizing, will not result in the generation of free acid, thus will have no negative affect on the environment. Per Rule, and per Rule 1(2), not only can the material be taken out of the mine if processed within180 days, and given the nature of the rock, even if it would remain outside, it would cause no negative environmental issues. The product produced by the process is potentially acid generating and is to be stored inside and away from precipitation.

Although not a designated chemical per Rule DRMS 1.1(13), but important from an environmental stewardship perspective, an above ground fuel storage tank will be located within the permit area. The tank(s) will have secondary containment as defined in, but not required by 40CRF Part 112. Quantities of any other lubricants or additives that might be used as part of the operation are anticipated to be in quantities below the volume threshold dictated by the regulations. Spills and drips from compounds sourced from these fixed storage containers that reach the ground surface are to be cleaned up and removed as rapidly as possible after they are discovered.

7 FACILITIES EVALUATION (Environmental Protection Facility, EPF)

Note that this term is being used to address something was not intended by the authors of the 1995 regulations. However, stewardship of the environment is important and it is good practice to minimize any spills and to quickly remove them if they should occur.

Chemical Storage - Mill Room

All chemicals that are to be used for processing of ore are stored within this room. Since the room had been excavated out of solid rock having solid rock sills, ribs and back with low permeability, any spills will be retained until cleanup can be conducted. All chemicals are to be stored in their original containers, or in labeled reagent containers, in designated areas on the floor, on pallets off of the floor level, and with spill trays underneath the containers as applicable. Spill trays would contain any spillage created during normal daily drawings. Any spills will be cleaned up as soon as possible, for both safety of workers and for protection of the

environment. As xanthate and many other reagents are solids, cleanup of any solids spills is done with a shovel, dustpan and broom. Liquids should receive additional attention to ensure that any release is retained within the mill room. Containment can be achieved using either secondary containment pans, or low berms that will retain the volume of fluid of the largest container. The sills are intact, and are in good condition to retain any fluid spills. In the event spillage does occur, spill kits are immediately available within the mill room.

8 GROUNDWATER INFORMATION

The project site is located near the top of the north side of Mineral Hill, within a volcanic vent structure that forms the general Cripple Creek District. The district, through the use of drainage tunnels, has resulted in a depressed groundwater surface within and adjacent to the vent. The district is currently being drained by the Carlton Tunnel which discharges at Marigold, at an approximate elevation of 6,900 feet. This discharge elevation is approximately 2,900 feet below the surface of the permit area, and based on available site-specific information, the groundwater surface within the permit area is no less than 300 feet below the surface. The permit area and area adjacent to it contains no perennial streams, no surface water, or retention ponds. A review of the Well and Watercourse Map shows that there are no perennial streams located within two miles of the permit area, and no closer than 6 stream miles.

The ground surface on the north side of Mineral Hill drains northward towards Spring Creek, a west-flowing intermittent stream that runs in the spring and during storm events. The permit area is located wholly with a Tertiary lithic tuff unit of phonolitic composition that fills the ancient volcanic vent. This unit is surrounded by various Precambrian units varying from intrusives to metasediments which are dominantly composed of gneisses and schists. No mining is anticipated in any other rock unit except the lithic tuff.

Veining and intrusive dikes within the tuff unit tend to follow preferred structural directions that are prominent in the district, and rock-forming dykes and the flow directions of ancient fluids tend to mimic these features. The dykes can take the form of vertical tabular features or can exhibit themselves as tabular and concordant features. Prior to mining in the district, these features tended to control and direct groundwater flows. Following installation of the drainage tunnels, the groundwater surface has dropped in elevation and groundwater no longer occupies these structures at the elevations where mining is anticipated to occur. The subsurface water will still be controlled by whatever geological structures might be found a few hundreds or thousands of feet below the current exploration area and any subsurface flows generated within the permit area will be to the south, against local topography, to move toward the center of the vent structure. Based on the data collected, and on the current exploration and eventual mining plans, the operation is not anticipated to intercept groundwater.

9 GROUNDWATER QUALITY

Future Water Uses

The groundwater from the Cripple Creek District is currently used for irrigation down-stream from its outflow point at the Carlton Tunnel, and the quality has been found to be suitable. Since groundwater is at such a great depth within the Cripple Creek District itself, there are no anticipated or obvious future local uses for it. In the event the Carlton Tunnel were to be ordered plugged based from some poor regulatory decision, the water table would be anticipated to rise again, but not as high as pre-late 1800's levels due to the presence of other workings and disturbances. Thus, it is not likely that groundwater will ever see any beneficial use within the permit area.

Surface and groundwater collection program

There are no perennial surface waters within 2 miles of the permit area nor are there any perennial streams within 6 stream miles within the basin that drains the area. No groundwater has been found within, or adjacent to, the permit area in the form of surface springs or wells, nor has any groundwater ever been detected in the underground workings or in any exploration drill holes within, or adjacent to, the permit area. Since there are no acid generating materials currently known to be associated with the permit area and there are no designated chemicals currently in use, there is no source for contamination, and thus no potential connection between surface and subsurface waters by chemicals of concern. In the event that conditions change sometime in the future, an evaluation will be made and appropriate plans to protect these waters will be developed. However at this time no sampling programs are necessary or appropriate.

10 SURFACE WATER CONTROL AND CONTAINMENT FACILITIES

The permit area is located on a north-facing slope near the top of Mineral Hill. The slope is generally timbered except in areas that remain open. As no potential acid generating materials, acid water, or designated chemicals are present, no special surface water control, or containment facilities are necessary for this site.

Since, per Section 7, any potential acid generating materials (none known to exist) would be retained in the mine and away from the weather and precipitation, no outside facilities are required or necessary to contain them.

The map (Stormwater Runoff Map with flow directions) is included showing the surface flow directions within and adjacent to the permitted area. As no potential acid generating rock has been found within the permit area, nor is any anticipated to be found, removed materials can be placed on the surface with no special diversions or containment described in the Rule. In the event any rock having a demonstrated acid generating potential should be discovered sometime in the future, it will be stored inside the mine, or out of the weather, to avoid

precipitation contact. Alternatively in the future, if materials are found that by standard laboratory testing are shown to be potentially acid generating, then additional testing would be performed to allow better prediction of acid generating potential and the timeframes in which acid generation might occur. This information would then be used to design and implement any containment systems which might be necessary.

Although not related to DRMS regulation, fuel storage tanks will likely be located within the permit area. They will have secondary containment to protect surface waters that will be equal to their total volume plus additional storage for precipitation events; generally calculated at one hundred and ten percent of tank volume. As the quantity of fuel stored on site is anticipated to be so small, this containment is not required by regulation, but will be installed and implemented by the operator as part of good workmanlike practice.

11 SURFACE WATER QUALITY STANDARDS

The site, as described previously, is located high on the north slope of Mineral Hill, and there are no perennial streams. The closest stream that can be considered perennial would be the lower reaches of Barnard Gulch, a distance of nearly 6 stream-miles away. Any testing of the waters at that point would amount to trespass on someone else's private property, and no reasonable scenario could be developed that would produce any measurable impacts to waters located that far downstream of the permit area. The standards for that stream are those standards set by the Colorado Department of Public Health and Environment (CDPHE) under the laws and regulations developed for and by the Environmental Protection Agency (USEPA).

12 WATER QUALITY MONITORING PLAN

No water quality monitoring plan is currently appropriate for this permit area as no surface or groundwater is present, no acid producing materials are currently found to be present, nor are designated chemicals in use. If the situation changes in the future where any of these features are found, then that data will be evaluated and appropriate plans will be developed.

13 CLIMATE

The permit area is located at 9,800 feet elevation. Natural Resources Conservation Service (NRCS) Technical Release No 55 is a tool for estimating peak runoff and volumes for watersheds and drainage basins. It is an improvement of some of the original work that was done in the 1960's and 1970's that culminated in the Colorado Water Conservation Board Technical Manual No. 1, published in 1976, at that time, being the bible for estimating storm water runoff and flows for this area. The release provides a technical improvement in ease of manipulating data, but produces no improvement in accuracy for flows, especially over small areas. Per National Oceanic and Atmospheric Administration (NOAA) Atlas 14, the 24-hour precipitation for the 10-year event is 2.5 inches and 4.2 for the 100-year event.

(b)(ii)

The predominant wind direction is westerly and the open areas are typically breezy. During the summer months, gross southwesterly winds tend to bring in warmer temperatures and northwesterly winds tend to bring cooler temperatures. During winter, fronts can come from any direction with precipitation occurring dependent on temperature variations and air moisture on the edge of the front. The period of mid-July to mid-September is dominated by the Bermuda high that typically sets up that time of year. Whether moisture is brought into this mid-continent area depends on the location of the low and its strength.

(b)(iii)

The monthly mean monthly temperatures are shown in the Table below:

Average Temperatures for Cripple Creek, Colorado -
(source NWS)

°F	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Average high	33	36	42	49	59	70	75	72	65	55	42	33
Average low	13	15	21	26	35	44	49	48	40	31	21	12

(b)(iv)

A review of the average relative humidity for the area shows it to be generally less than 20 percent. As would be expected, evaporation rates were reviewed in the general Cripple Creek District and vicinity and were found to be quite high. The average evaporation rate for the Front Range area is on the order of 36 to 40 inches. This amount of evaporation greatly exceeds the annual rainfall indicating that, if the assumption were made that the entire precipitation captured in any detention areas were not recycled nor allowed to infiltrate, the evaporation would greatly exceed the total precipitation by at least a factor of three.

14 GEOCHEMICAL DATA AND ANALYSIS

Geochemical Data is provided in a report produced by Braun in September 2014. The report found that, based on the sampling performed and laboratory testing, the ability of rock at the site to produce free sulfur is nearly non-existent. This is a result of low concentrations of potentially acid producing minerals on the permit area and the associated gangue and country rock minerals having the ability to neutralize acid which might be produced. The conclusion is supported by data, for many years of operation of this mine, and of other mines in the district including the Cripple Creek and Victor Mine. This conclusion was negated by DRMS personnel with no supporting data. So, in the future, the following items will be followed to insure environmental protection.

(a) As no minable acid generating materials have been found, no specific testing is necessary until such time that they are found. If the time comes that rock is discovered which has the ability to cause acid mine drainage or to release designated chemicals, or toxic or acid-forming materials, an evaluation will be made. That evaluation will be specific and appropriate for the types of materials discovered.
(b) Whatever necessary evaluations are performed, they will be performed on rock that is deemed representative of the rock requiring testing.
(c) Such evaluations shall be appropriate for the intended use or fate of the material exposed or to be exposed during the proposed life of the mining operations, and on a case-by-case basis shall be appropriate for the intended use or fate of the material exposed or to be exposed during the proposed life of the mining operations, including weathering effects, and conditions under which the material will be used, stockpiled or disposed of.
(d) Evaluations will be performed on both ore and overburden, and will include the most likely acid producing sources, probable fate, and transport mechanisms that might result in being mobilized by weathering reactions. Those tests are to be determined by a QP, and may include only those tests that are necessary to satisfy the conditions of Subsection 6.4.21(14)(c) above and such evaluations may be prioritized, in descending order of importance, as follows: (i) mineralogical analyses; (ii) trace element analyses; (iii) major element analyses; (iv) microprobe or other comparable analyses.

In the event that acid producing materials are found and if net neutralizing, metal adsorption or metal ion exchange potential over the long-term cannot be demonstrated, then operator will perform further testing and analysis to increase certainty in order to protect the environment.

15 CONSTRUCTION SCHEDULE INFORMATION FOR URANIUM AND ACID MINE DRAINAGE

No uranium is to be mined, and the minerals found within the permit area are not acid generating. Therefore, no facilities are necessary to contain them. If acid generating rock, having ability to negatively affect the environment is discovered in the future, the circumstances will be investigated and a solution derived. The most likely solutions include storing acid generating rock inside the mine, storing it under cover, and/or storing material inside secondary containment to minimize chances of it moving into surface waters in a storm event.

16 Quality Assurance and Quality Control Programs for Uranium and Acid Mine Drainage

No uranium is to be mined, and the minerals found within the permit area are not acid generating. Therefore, no programs are currently necessary for handling them. In the event that uranium is mined or acid generating materials are found in the future, quality assurance and quality control programs will be developed as necessary.

17 PLANT GROWTH MEDIUM

See Mining Reclamation Plan

18 WILDLIFE PROTECTION

See Mining Reclamation Plan

19 DISPOSAL OF SLUDGE AND TAILINGS IN MINE WORKINGS

The disposal of sludges into mine workings is not anticipated. However, if this might occur in the future, the operator would comply with the provisions contained in Subsection 3.1.7.

DESIGN AND CONSTRUCTION REQUIREMENTS FOR ENVIRONMENTAL PROTECTION FACILITIES (7.3.1(3), 7.2.3)

It is important to note here that, per the DRMS regulations, the “EPF” designation was originally intended for repositories for waste rock and large quantities of hazardous or potentially hazardous materials, and not intended for storing a drum or two of some non-hazardous reagent. The author remembers this well, and was part of the development of those changes that were made to the regulations in 1995. Somehow the original intent has been bastardized to include what the EPA would consider simply as secondary containment as addressed in Title 40 Code of Federal Regulations (CFR) Part 264, with more specific requirements for liquid products and secondary containment defined in the Clean Water Act (CWA, 33 U.S.C. ' 1251, Pub. L. No. 95-217, 91 Stat. 1567 (1977), and specifically in 40 CFR Part 112.

The site, per the DRMS recent decision to list chemicals with a hazcom designation of 2 or greater, now has designated chemicals, but acid-forming materials, or acid waters are not currently being used or exposed to the environment, nor is their exposure anticipated. Per DRMS requirements, and even though it does not fall in the original 1995 intention for designation as an environment protection facility, a chemical storage area is located near the underground mill room, which is not exposed to weather. Neither the chemical storage room nor the remainder of the project currently has any regulatory required diversions, or collection channels or ditches, but should any of these items appear, they would be designed to convey the 100-year 24-hour peak flows. The site currently does have a temporary stormwater catch-basin located on the work surface near the portal (see map). However, this basin (impoundment-pond) is not required from a regulatory perspective and is only in place at the preference of the operator. Its design allows it to contain 100 percent of the 10-year 24-hour storm event. Although not required for the facility, the design has been reviewed and approved by the engineer. The product produced by the process has the potential to be acid generating, but is stored inside and not subject to any precipitation.

Mineral Mountain Project

Chemical List

September 14, 2021

** Note: Column 4 of the Table shows maximum amount of any one chemical that might ever be on hand. As very few chemicals listed will be used past testing stage, the total volume of chemicals on hand at any one time will be less than 1,000 gallons*

Table 1
Designated Chemicals

Name	Use	Type	* Max Quantity	Packaging Type and Container Size	Storage Location	Estimated Usage	Concentration	Fate
Danafloat 233	Flotation Promoter	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Clariant EF NA-77 or 78	Flotation Agent	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Kemtec 2044	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Orfom CO210 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC2 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC8 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC17 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC37 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC100 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC9747 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Polyfroth H57	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Polyfroth W31	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Potassium Amyl Xanthate	Flotation Collector	Solid	800 pounds	55 gal drum	Mill/Warehouse	0.001 gal/ton	.01% w/v	Concentrate
Trimethylxanthine	Flotation Collector	Solid	800 pounds	55 gal drum	Mill/Warehouse	0.001 gal/ton	.01% w/v	Concentrate
MIBC	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Copper sulfate	Conditioning	Solid	1000 pounds	50lb paper bags	Mill/Warehouse	2lb/ton	100%	Neutralized
Pine Oil	Flotation Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	100%	Concentrate
Soda Ash	Conditioning	Solid	1,000 pounds	50lb paper bags	Mill/Warehouse	0.5 lb/ton	100%	Neutralized
Aluminum Sulfate	Flocculant	Solid	1000 pounds	55 gal drum/275 gal Tote	Mill/Warehouse	2.5lb/ton	40% w/v	Tailings
D-Limonene/Orange Oil	Flotation Collector	Liquid	220 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	100%	Concentrate
Methyl Isobutyl Carbinol	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.3gal/ton	20% v/v	Cons/Tails
Sodium Silicate	Flotation Depressant	Solid	1000 pounds	55 gal drum/275 gal Tote	Mill/Warehouse	1.8gal/ton	100%	Tailings
Tennafroth 250	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.15gal/ton	.01% v/v	Cons/Tails

Table 2
General Chemicals

Name	Use	Type	* Max Quantity	Packaging Type and Container Size	Storage Location	Estimated Usage	Concentration	Fate
Equaderma (or equivilant)	Fly Spray	Liquid	5 gallons	1 gal	Mill/Warehouse	As needed	100%	Neutralized
Aero 5688 Promoter	Flotation Promoter	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate
Hydrated Lime	pH Control	Solid	1000 pounds	50lb paper bags	Mill/Warehouse	2lb/ton	100%	Neutralized
MGXHP 681-Mine Add Blend	Additive Con Slurry	liquid	300 gallons	55 gal drum/275 gal Tote	Mill/Warehouse	0.04 gal/ton	.05% v/v	Concentrate

Note: Chemicals listed as designated byDRMS are not necessarily considered to be regulated or even hazardous by other governmental agencies

braun

Braun Environmental, Inc.

EMERGENCY RESPONSE PLAN

FOR

Mineral Mountain Gold LLC
P.O. Box 247
Cripple Creek, Colorado 80813
Teller County
970-497-9057

PREPARED BY

Braun Environmental, Inc.
355 S Teller St, Ste. 200
Lakewood, Colorado 80226

Charles A. Braun, P.E.

September 16, 2021

1. Introduction and Purpose

This plan outlines the procedures, methods, and equipment used at the Mineral Mountain Gold Site in Cripple Creek Colorado. This plan is designed to comply with Rule 8.3 of the Colorado Division of Reclamation, and Mine Safety (DRMS), based on the interpretations of the regulations by Braun and the Mineral Mountain Gold Company. In the event of a spill, all reasonable resources will be used to prevent contamination of the site and contamination of the waters of the State of Colorado. All manpower, equipment and materials and the necessary resources available at the site will be used to expeditiously control and remove harmful quantities of chemicals as part of this plan.

THIS PLAN REPLACES ANY PREVIOUS PLANS

2. General Facility Description

Name: **Operator** - Mineral Mountain Gold, LLC
Address: P.O. Box 247, Cripple Creek, Colorado 80813
Office: 970-497-9057

3 Detailed Facility Description

General

The site is a designated mining operation located 1 mile north of Cripple Creek in Teller, County, Colorado. Mining of rock and processing of that rock occurs at the site. The operator brings in process chemicals as needed and stores them in the chemical storage room located adjacent to the subsurface mill room. Chemicals deemed by DRMS to be "designated are stored within secondary containment to protect the environment.

Per DRMS personnel's determination, the project uses and stores "designated chemicals", and per Rule 8, stating ". In compliance with Subsection 6.4.21, describing the purpose of an Environmental Protection Plan, Operators/Applicants of Designated Mining Operations shall be required to have on file with the Office an up-to-date Emergency Response Plan for designated chemicals." The designated chemicals are listed in Table 1.

3. Spill Response and Procedures

If a leak should be found in a vessel, site personnel should immediately, and if possible, temporarily plug the hole to stop the leak and empty the vessel, as long as the task can be performed safely so as not to endanger any personnel. In the mill and storage area, any spills can be cleaned up and placed in a drum that is to be labeled showing the contents. In the event the spill occurs,

during transport and away from secondary containment areas, and if the contents from the container reach soils, the contents along with any impacted soils are to be placed in a recovery drum, or into a roll-off type dumpster and labeled as to the contents.

Absorbent materials, hand tools are available for cleanup of small and medium size spills which might occur are shown in in Table 1. Any product that reaches the ground surface should be excavated as promptly as possible. Once the fluids and/or soils are contained, they can either be consumed in the mineral process, or if not usable, can be characterized for disposal. The rapid response and cleanup of any spilled fuels reaching soils will result in decreased costs for any future investigations and cleanups of soils and/or groundwater. No offsite disposal of any substances considered to be hazardous by either the Environmental Protection Agency (EPA) or the Colorado Department Public Health and Environment (CDPHE). shall be done without direct and specific direction and approval from government authorities.

Oil sorbent materials and shovels are stored at the following locations:

Item	Locations
Pads, booms, and granular absorbent	Chemical storage room and workshop
Recovery drums	Workshop
ABC Fire Extinguishers	In mill room and on equipment

Spill Reporting (Rule 3.1.13)

The Mine Operator shall Notify the Office of a spill of any toxic or hazardous substance, including spills of petroleum products, that occurs within the mined land permit area or area encompassed by a Notice of Intent and which would be required to be reported to any Division of the Colorado Department of Public Health and the Environment, the National Response Center, the Colorado Emergency Planning Commission, any local Emergency Planning Commission, local Emergency Planning Committee, or the State Oil Inspector.

A **Notification.** Whenever there is an imminent or actual spill, notify the site emergency coordinator immediately. Notify appropriate state or local agencies with designated response roles if their help is needed.

Colorado Department of Health and Environment within 24 hours of a release of greater than 25 gallons at 303-692-3300

If spill of any size impacts surface waters, or is a direct threat to surface waters (streams, rivers, lakes) then notify the National Emergency Response Center at 1-800-424-8802.

Braun Environmental, Inc. to assist with any stabilization, cleanup, and reporting at 303-988-7697

Per Rule 3.1.13, the operator shall also:

(1) Within 24 hours of the time the spill is reported to any other agency(ies) with jurisdiction over the spill, notify any DRMS Minerals Program Field Office or the Minerals Program Denver Office, Division of Reclamation, Mining and Safety, via phone, facsimile, or email (elliott.russell@state.co.us);

(2) Include in the notice any relevant information known at the time contact is made with the Office that would assist the Office in assessing spill seriousness, such as:
(a) Operation name, DRMS permit number and name of person reporting the spill,
(b) Telephone number of a responsible company official for the Office staff to use as a contact,
(c) Date and time of spill,
(d) Type of material spilled (CAS number if applicable, from the material safety data sheet (MSDS) form),
(e) Estimate of the amount spilled, whether any material has left the permit area, and where the spilled material went, and (f) initial measures taken to contain and clean up spill.

(3) Copy the Office on any correspondence and/or written reports provided to other agencies. Supplement those reports if necessary to include the information outlined in Rule 3.1.13(2).

(4) For permits approved prior to the effective date of these rules, the requirements of Rule 3.13 shall supersede stipulations to permits regarding spill reporting. (NOT APPLICABLE)

Spill Notification Report

Name and address and phone number of site:

Mineral Mountain Gold, LLC
P.O. Box 247, Cripple Creek, Colorado 80813
Phone: 970-497-9057

Operation Name and Permit: M-2014-045

Person Reporting Spill:

_____

Telephone number of company contact:

_____

Date and time of spill: _____

Type of material (CAS No and MSDS) as applicable)

_____

_____

Spill amount, whether any remains on site, and where spilled material went:

_____

_____

Measures taken to contain and clean up the spill

_____

_____

_____

_____

Note: Any petroleum spills of regulated petroleum storage tanks of greater than 25 gallons must be reported to the Colorado Department of Labor, Division of Oil and Public Safety (DOPS) at 303-318-8547 and other spills to the Colorado Department of Health and Environment at 303-692-3300. The National Emergency Response Center at 1-800-424-8802 must be notified if a spill impacts or threatens to impact any surface waters.

Proof of Filing with County Clerk

I, Jessica Wildeman Deputy the County Clerk for Teller County; have received the amended application package for a 110d Reclamation Permit under provisions of the Co Land Reclamation Act and have made the materials available for public review. The proposed mine is kno (Name of the Mine) Mineral Mountain Gold, LLC , and is located at or near Section 12 Township 15S , Range 70W , 6th Principal Meridian.

Signature Deputy Clerk

9.17.21
Date

RECEIVED
SEP 17 2021
TELLER COUNTY