Braun

Braun Environmental, Inc.

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October 27, 2021 SENT VIA EMAIL

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

RE: Response to October 22, 2021 Adequacy Review, Mineral Mountain Project, Permit M-2014-045

Dear Mr. Russell;

Attached, find responses to your comments, along with an updated chemical location map, an updated designated chemicals list, and updated emergency response plan, a design for installation of concrete floors, and updated Exhibit U and Exhibit E map, a mill equipment drawing, and an updated process flow sheet.

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
Responses to Elliot October 22, 2021 Deficiency Letter
October 26, 2021

General Application Procedures

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.

Comment 3A Division's Response: The response regarding the comment letter from History Colorado is adequate. Although not referenced in the original Adequacy Review letter, the Division provided the Operator with a comment letter from Colorado Parks and Wildlife on August 16, 2021, and requested it to be added to Item 3 and addressed. The Adequacy Review Response did not include a response to this additional comment letter. Please acknowledge and address any comments noted in the attached letter and make changes to the application as necessary.

Summary of CPW In summary, the letter from CPW states that there are risks that wildlife might drink concentrated chemicals, that the chemicals be stored within secondary containment, and that froth flotation circuits be enclosed so wildlife don't drink those chemicals either. They noted that xanthate might be present in the tailings that they wanted as little land used as possible, that the disturbed land be protected from erosion, upon completion of mining, that topsoil be replaced and vegetated using native vegetation and a noxious weed program be implemented.

Response: The letter from CPW seems somewhat boiler plate, and while the ideas are globally good, their review was not in sufficient detail to understand that the mill and chemical storage would not be at a location that wildlife would normally access nor could access. Each of their concerns have been already been specifically addressed in the documents submitted to DRMS, including the storage of chemicals, secondary containment, enclosure of froth flotation circuits, presence of xanthate in tailings, land use and reclamation. Past their generalities, their letter contains no specific guidance or instruction regarding State regulated wildlife, thus it is concluded that all of their issues have been fully addressed in the current documents.

Exhibit C Mining Plan (Rule 6.3.3)

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 5A Division's Response: Within the revised Exhibit C, the Operator states "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". During the July 2020 site inspection, the Division only observed four 1,250 gallon fresh water tanks in the northern portion of the mill. Please provide details regarding the location and size of each existing and proposed freshwater storage tanks located on-site. If tanks are located on the surface, please update Exhibit E-Mine Plan Map to depict their location; if tanks are located underground, please include them on the mill layout map discussed in item #10.

Response: The tank or aggregate tank storage will be 10,000 gallons. Surface located tanks will be either mobile or semi-mobile so they can be moved to wherever they are most needed. Since the dominant use for the larger volume of water on the surface is for fire safety and control during the summer months, the tank (tanks) their location will likely change during the year, with the main focus being to protect fuel and powder storage. If the DRMS reviewer has expertise in fire-fighting, and knows of a location within the permit area that will guaranteed the successful protection of the facility, his input is welcomed and the permanent location he has chosen and will be added to the Exhibit E map.

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 6A Division's Response: The Division recognizes the opinion of the source of the water based on the consulting engineer's inspection; however, the response fails to address the manner in which water from the tailings dewatering sump room is contained and is prevented from traveling down the adjacent 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: A 0.5 foot high berm has been added to the entrance to the sump room to ensure that all fluids entering up-gradient are captured into it. This room had 5 times the fluid holding capacity of the entire processing equipment, thus it is sufficiently large to retain any overflow of spill. Further, the operator commits at limiting it use to no more than 90 percent of its capacity, thus, making additionally sure that no overflows 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 8A Division's Response: The Operator has committed to storing the concentrates where they will not be affected by precipitation. Please define where the concentrates will be stored. Please note that any ore, or Potentially Acid Generating Material, stored on any surface location for longer than 180 days must be stored within a designed, constructed and certified Environmental Protection Facility. If the material is to be stored on the surface temporarily, please provide a written commitment that the Operator will not store any Potentially Acid Generating Material on the surface for longer than 180 days.

Response: The operator is committed to storing concentrates where they will not be affected by precipitation, and storage will be at the warehouse following removal from underground. Per (Rule 1.1(2) the operator will store no potentially acid generating material on the surface exposed to weather for more than 180 days.

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 10A Division's Response: Review of the revised Exhibit C 1(m) has determined the provided information to be insufficient. Please provide a more detailed description, accompanied by drawings, schematics and layout designs of the Milling Process. This information should include volumetric capacity of each component, depiction of when in the process water is added to create a slurry, where reagents will be added and an estimated dosing rate of each specific reagent. In addition to the discussion of the Mill Process, please address the secondary containment structures or devices in place and include the volumetric demonstration that the secondary containment structure possesses enough volume to contain 110% of all materials stored within that secondary containment area.

Response:

The September 16, 2021 response included a detailed flow sheet that was referenced in the updated Exhibit C 1(m). A table has been added to that process flow sheet showing the approximate fluid working volumes of the various components within the process and where water is added. To review for DRMS, water is added to the start of the grinding circuit at a rate of between 20 percent and 35 percent of the rock mass, with the rate being dependent on the nature of the rock being supplied to the circuit and the ultimate desired grind size. A more

precise ratio cannot be produced by means other than processes testing. Professionals typically refer to this material as a pulp instead of a slurry, and the dosing rates have already been provided to the reviewer and DRMS in the September 16, 2021 chemical list table. Typically, the pulp is inspected again when it reaches the flotation cells and an adjustment is made in pulp density at that time. Pulp densities are not all that much different than in the grinding circuit, and generally are a little less, which means that additional water is added with the flotation reagents. Following flotation, the water removed and returned to the storage tanks so that it can be used again.

An additional drawing has been added showing the mill room, the designated chemical storage room and the sump room. The figure shows the relative component locations, and the secondary containment areas.

Specifically on secondary containment, the sill of the drift that leads from the mill room to the sump room has one-foot high raised area (see figure) to retain any spills in the mill room within that area. The calculated storage for the mill room area is 8,500 gallons. To the south beyond the sill, the mill room drift slopes to the west forming a trough that directs any water originating in this area into the sump room which has an additional storage capacity of 22,500 gallons of fluid. A low berm has been added to the sill in that area to direct any waters that might come from the north into the sump. Addition of the two areas produces a total secondary containment capacity of 31,000 gallons.

The as can be seen on the process flow sheet, the fluid total fluid capacity of the processing circuit is approximately 1,500 gallons and the recycle water storage tanks hold a maximum of 5,000 gallons, resulting in a total fluid volume within the contained area being 6,550 gallons. The secondary containment fluid capacity for the processing area results in a safety factor of 1.3 and after the tertiary capacity is added, the factor of safety reaches nearly 5, and clearly exceeds requirements.

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 12A Division's Response: Please provide a written commitment to provide periodic analysis of the tailings as the operation progresses to ensure consistency of materials being placed in the unlined facilities. In addition, please provide a written commitment that states, should the Operator encounter ore materials that a significantly different from the originally sampled material from a geochemistry perspective, written notification be provided to the Division, accompanied by geochemical analysis of the material, and verification that the new material will not alter the composition of the tailings.

Response: The operator commits to periodic analysis of the tailings sand material on an annual basis for metals that have been shown to be near, or above, current residential soil concentrations, as set by the Colorado Department of Public Health and Environment (CDPHE). Should the operator encounter ore materials that a significantly different from the originally sampled material from a geochemistry perspective, written notification will be provided to the Division, accompanied by geochemical analysis of the material, and verification that the new material will not significantly alter the composition of the tailings.

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 15A Division's Response: Please provide the dimensions, a description of materials, and foundation details, as applicable, for the Covered Material Storage, Containers, and Office Trailer.

The Division will utilize this information to calculate the reclamation cost estimate for the removal and disposal of these structures. Based on the responses to this adequacy review letter, the Division will also update the reclamation cost estimate for the site. Tasks associated with the shop-warehouse, portal, and shaft closure will utilize similar methods and information as the 2014 reclamation cost estimate. The Operator will be provided a copy of the estimate prior to the decision date for review.

Response: The covered storage shelter is 25 feet by 40 feet and was constructed of wood with a time roof. Per instructions to the operator from Tim Cazier of DRMS, the structure has no foundation and was set on Jersey Barriers. Mr. Cazier informed the operator that the reclamation cost would be set at zero if this design was used, thus the cost is $0. The containers are 8 by 40 feet and have a current worth of about $5,000 minus freight costs to be moved to a purchaser's site , The cost of moving these items produces a positive cash flow, that for reclamation purposes can be rounded down to zero. The office trailer is in good condition, is 10 feet by 40 feet, has an estimated value of $1,000, and has good wheels and axles. It set on temporary blocks for stability and can be coupled and hooked to a vehicle in a matter of minutes. It also has a positive worth that can be rounded down to zero for reclamation purposes. Cost estimates for the shop-warehouse, portal and shaft closure were made in 2014 and bond has been posted since that time to cover the cost of removal.

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 x 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 20A Division's Response: The Operator has failed to adequately address Item #20. Designs and drawings are required for the chemical storage area. Please note, all hazardous materials, designated chemicals or Potentially Acid Generating Materials must be stored within proper secondary containment structure that is designed and certified by the Division. Natural secondary containment structures will not be accepted by the Division and all containment structures must be designed to contain 110% of the total materials contained within it.

Response: The reference in the above comment referring to "natural" structure not being accepted by the Division seems uninformed, and it is uncertain what it even refers to. We use naturally occurring materials in mines and also in our daily lives, and by harnessing the ingenuity of the human mind we are able to shape these materials into useful purpose. There are many examples including in our own State of Colorado, our Subtitle D waste storage facilities, and the majority of the materials in our Subtitle C facilities, all approved by other Colorado agencies.

The chemical storage room and mill room is carved out of solid low permeability rock which provides a low permeability sill and low permeability ribs and backs. A low permeability concrete floor is to be poured over the low permeability rock, and that combination will easily retain the designated chemicals stored there. In addition, the operator commits to additionally use

commercially available spill containers designed specifically for the size of the containers containing designated chemicals which will be stored in the room.

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 21A Division's Response: The response to Item 21 remains inadequate. The Division identifies the Mill as an Environmental Protection Facility and must be addressed in accordance with Rule 6.4.21(7), Rule 7.2 and Rule 7.3. The Operator may wish to consider the mill and the adjacent chemical storage area as a single Environmental Protection Facility. As such, the Operator shall submit detailed descriptions and designs of the mill, including actual capacities, construction details, dimensions, drawings, materials, linings, and permeabilities. 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: The majority of this comment has been addressed in Comment 10A above. Engineering drawing are attached and the dimensions are shown on the drawings, the components are made of steel, and the windings in the motors are made of copper. Both steel and copper have very low permeabilities and are estimated to be in the range of 1×10^{-10} cm per second. The potential throughput of the equipment has been thoroughly addressed previously in both on paper and verbally. An engineering design is included describing how the concrete floor is to be installed in the mill room and in the chemical storage area.

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 26A Division's Response: The Operator has committed that the total volume of chemicals from the Chemical List that will be in the permit area at any one time will be less than 1,000 gallons; the Division has accepted this commitment for the liquid chemicals. The revised Chemical List contains seven solid chemicals with a maximum quantity of 6,600 pounds. Please specify the total weight of solid chemicals from the Chemical List that will be in the permit area at any one time and update the Chemical List note to reflect this additional commitment.

Response: As listed on the table, the total volume of chemicals on hand at any one time will be less than 1,000 gallons volume and the total weight of solid chemicals will not exceed 4,000 pounds.

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 33A Division's Response: Several of the proposed chemicals contain Safety Data Sheets (SDS) which state the material may meet the criteria of a hazardous waste and that measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. Additionally, other chemicals state to dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Lastly, other SDS sheets say to consult local, reginal, and national hazardous waste regulations to ensure complete and accurate classification. Please commit to following all federal, state, and local regulations regarding the disposal of equipment that comes into contact with the chemicals in Table 1.

Response: The operator commits to following all applicable federal, state, and local regulations regarding the disposal of equipment that comes into contact with the chemicals in Table 1.

Comment 36 The revised Chemical List states each chemical will be stored in the "Mill/Warehouse". Within the Adequacy Review Responses, the Operator has removed the proposal of having the warehouse designated as an EPF. Please revise the table to indicate the storage location of all designated chemicals will be in the Mill.

Response: The table has been modified and updated.

Comment 37 Section 15 of Exhibit U will need to be updated to reflect AM1 activities and compliance with Rule 6.4.21(15).

Response: While it is debatable whether this processing equipment even actually meets the criteria intended for an Environmental Containment Facility. Additionally if the product were to be remixed with the original material it would become acid neutral, or if the product would happen to come in contact with the containment rock or the concrete, the result will be

neutralization of any acid generating ability of the product and thus no acid mine drainage can be possible. With this in mind, a paragraph has been added to address subsection (b) and is as follows: **"Construction of the secondary containment will commence within 10 days after approval is obtained from DRMS, and will be completed within 30 days following the start of construction."**

Comment 38 Section 16 of Exhibit U will need to be updated to reflect AM1 activities and compliance with Rule 6.4.21(16).

Response: The following will be added to Section 16 of Exhibit U. "A quality assurance and quality control program will be implemented for the construction of the secondary containment. The operator shall follow the design provided by the engineer. "**Since DRMS regulations require approval by DRMS, Elliot Russell of DRMS, or his designee shall inspect the installation to meet the acceptance criteria by DRMS."**

Comment 39 The Emergency Response Plan will need to be updated to reflect the requirements of Rule 8.3.2 and re-submitted for further review. Additionally, Emergency Notification requirements and procedures outlined in Rule 8.1 and 8.2 shall be incorporated into the Emergency Response Plan.

Response: Per the rule, a designated person, Lance Barker has been added to Section 2. He is the owner and only key person since he is the only person. If any qualified DRMS individuals might want to volunteer, their service would be appreciated by the community, since Mr. Barker has no additional names that he can add. All requirements of Rules 8.1 have been addressed, along with most of Rule 8.2. A section has been added to include the follow-up written report required by Rule 8.2.3.

Comment 40 In accordance with Rule 3.1.13(1), please revise Section 3(A)(1) of the Emergency Response Plan to remove the option of contacting the Division via facsimile. Additionally, as the Operator has specified the current Environmental Protection Specialist's email, please also specify the Division's phone number (303-866-3567).

Response: Facsimile has been removed and the Division phone number has been added.

Comment 41 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: The County Clerk will once again find a place on their shelf for the documents and you will be provide proof that they agreed to put them there.

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

N41°51'W 663ft

S38°3'E 714ft

Trailer

Porta John

Warehouse

Shop
Storage

Waste Rock Area

Reduction-
Dog House

Crushing

Adit
(Tunnel)

Covered
Rock Storage

Shaft II

Raise

Little Hope
MS8731
Minerex Corporation

Mill Access Route

Processing Chemical
Storage Area

Mill
Room

Connex

Connex

Colburn
MS9287
Minerex Corporation

S22°37'W 87ft

N67°43'W 330ft

BLM

BLM

Cor. 4
Elk (MS9572)

N41°27'W 97ft

N19°26'E 48ft

N67°43'W 78ft

Reindeer
MS9265
Minerex Corporation

Cripple, Little Florence
MS10107
Minerex Corporation

N42°10'W 355ft

Access Road

Shaft

UG Water Line

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

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

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

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: 10/24/21	Checked by: C.A. Braun

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: October 24, 2021

STATE OF COLORADO REGISTERED PROFESSIONAL ENGINEER

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
Rev. Oct. 25, 2021

Mineral Mountain Gold, LLC

By

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

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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.

Construction of the secondary containment will commence within 10 days after approval is obtained from DRMS, and will be completed within 30 days following the start of construction.

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.

Since DRMS regulations require approval by DRMS, Elliot Russell of DRMS, or his designee shall inspect the installation to meet the acceptance criteria by DRMS.

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.

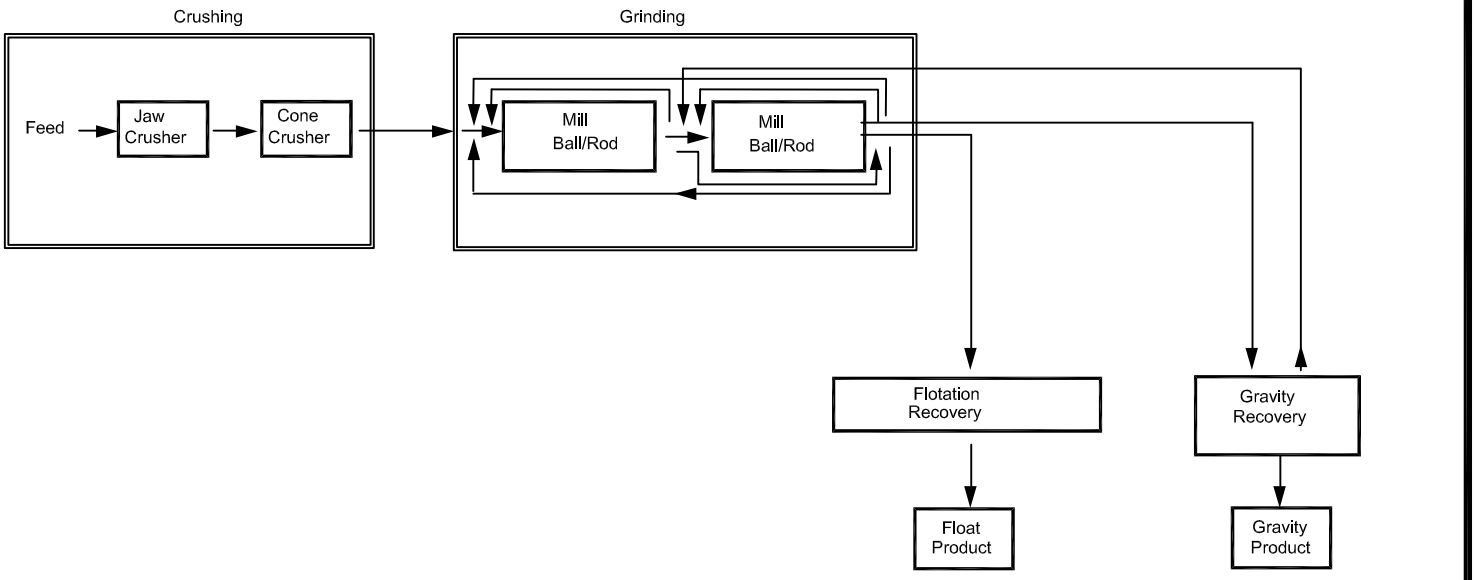
DESIGN AND CONSTRUCTION REQUIREMENTS FOR ENVIRONMENTAL PROTECTION FACILITIES (7.3.1(3), 7.2.3)

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.

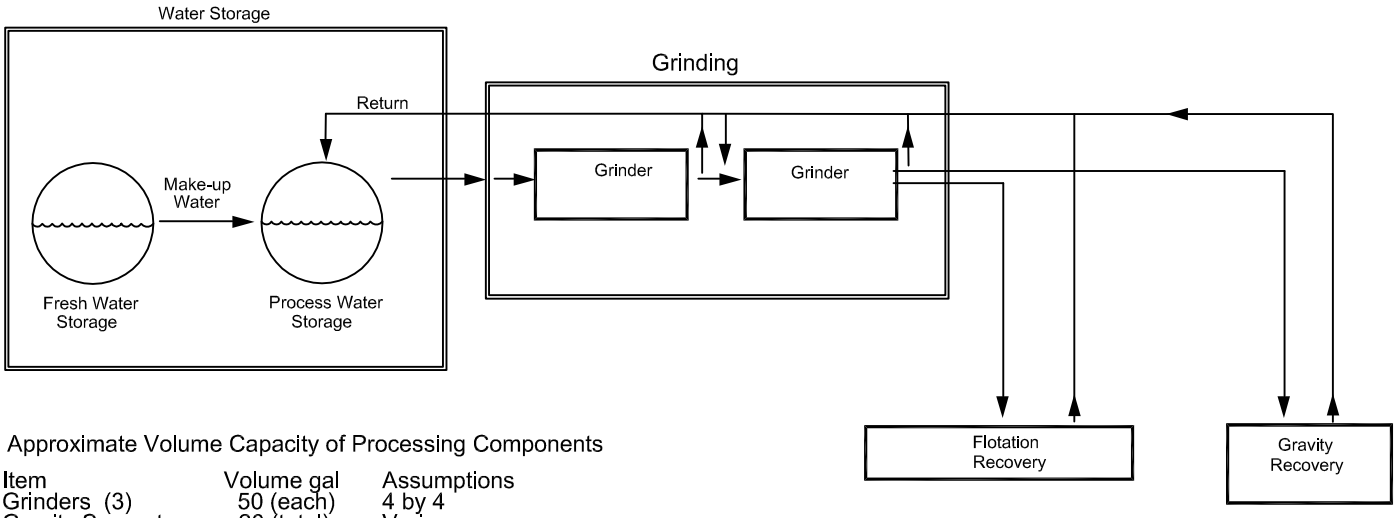
The site, per the DRMS recent decision to list chemicals with a hazcom designation of 2 or greater, now has designated chemicals, but acid-forming materials, or acid waters are not currently being used or exposed to the environment, nor is their exposure anticipated. Per DRMS requirements, and even though 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.

Process Flow Sheet

Material



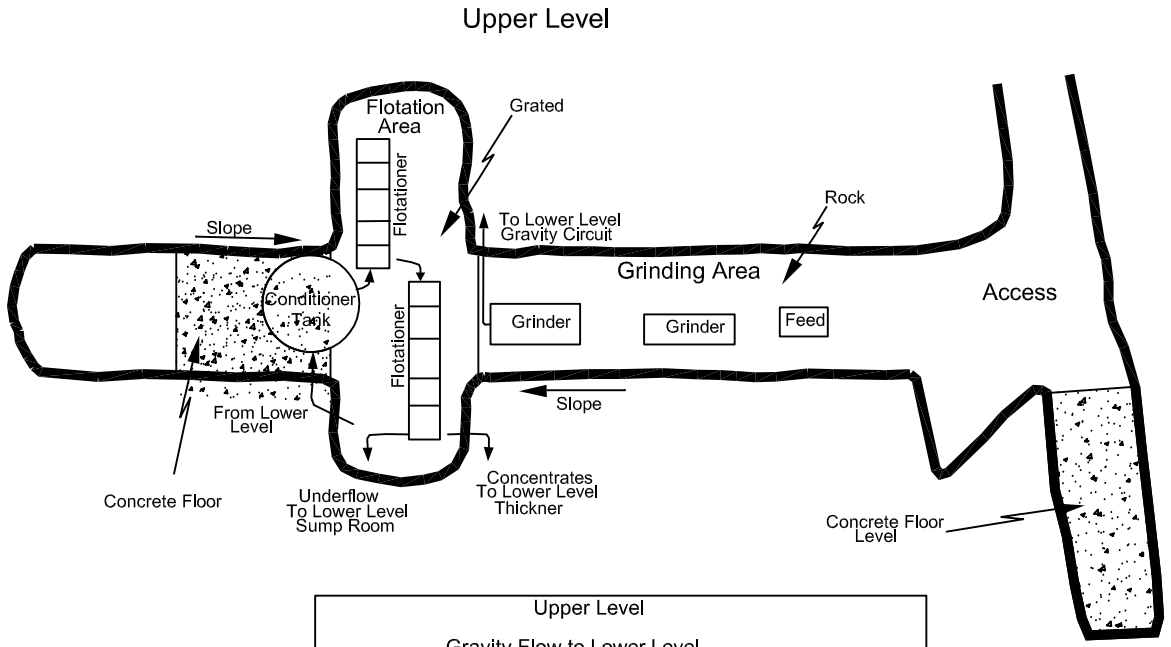
Process Water

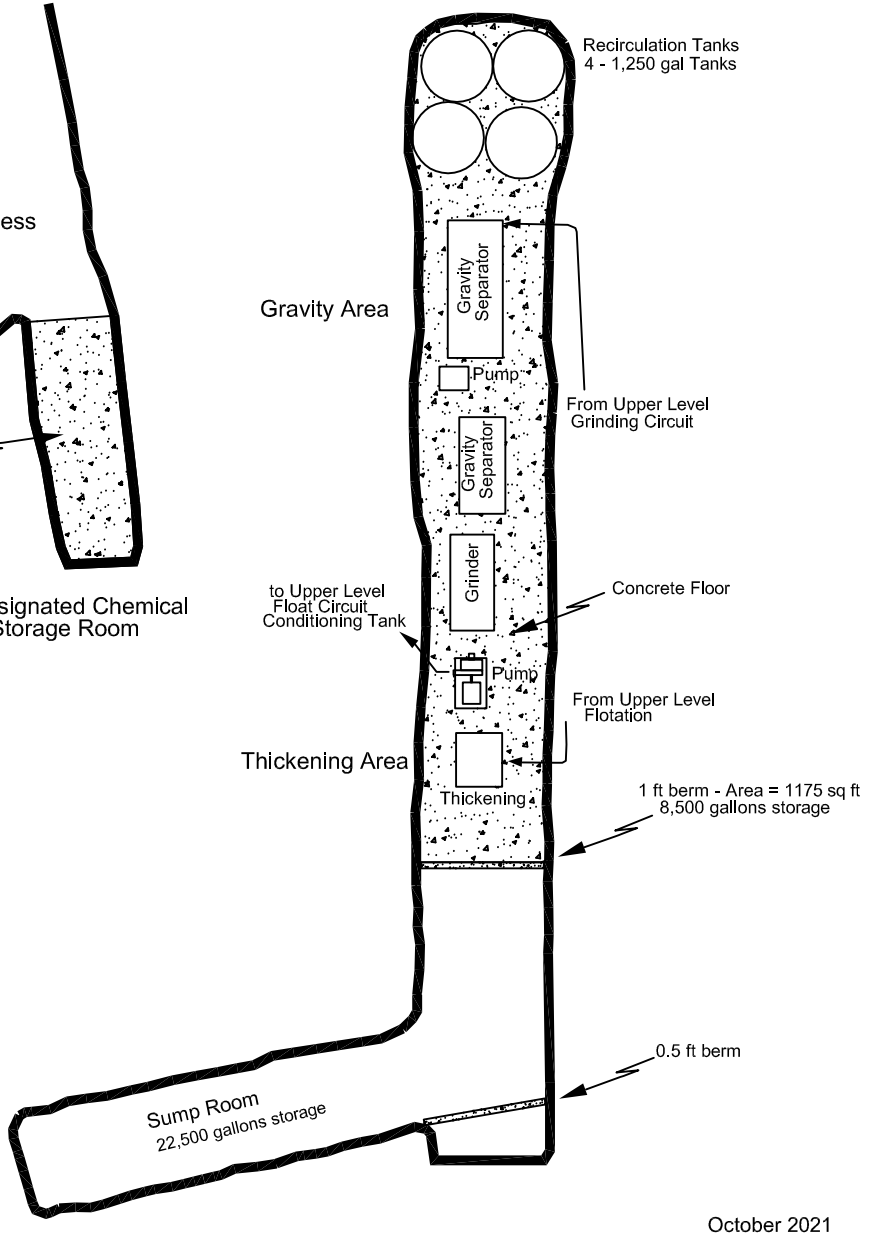


Approximate Volume Capacity of Processing Components

Item	Volume gal	Assumptions
Grinders (3)	50 (each)	4 by 4
Gravity Separators	20 (total)	Varies
Conditioner	1,000	Tank
Flotationer (2)	150 (each)	1.5 x 1.5 x 10
Con Thickener	100	Square tank
Recycle Tank (4)	1,250 (each)	Round Tank

Total Volume 6,500 gallons





Upper Level

Gravity Flow to Lower Level

Lower Level

Approximate Volumetric Capacity of Processing Components

Item	Volume gal	Assumptions
Grinders (4)	50 each	4 by 4
Conditioner	1,000	Tank
Flotationers (2)	100 each	1.5 x 1.5 x 10
Thickener	100	Square tank
Recycle Water (4)	1,250 each	Round Tanks
Total Volume	6,500 gallons	

Sump Room

22,500 gallons storage

Total Containment Storage

Containment Volume	
Process Area	8,500 gal
Tails Sand Storage Area	22,500 gal
Total Containment Volume	31,000 gal

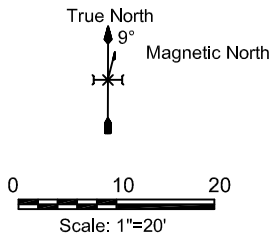


Diagram of Processing Area
Permit 2014-045

October 2021
Mineral Mountain 2021

Engineering design for Concrete floor in Mill Room and Chemical Storage Room.

Mineral Mountain Gold LLC
Braun Environmental, Inc. - C. A. Braun, P.E
October 22, 2021

Discussion

The mill room for the project has been blasted out of solid volcanic rock. Detailed mapping has found that the in-place rock within the mill room and chemical storage room contains no open fractures thus not capable of fluid flow. The rock permeability is approximately 1 x 10^{-8} centimeters per second, and the calc-alkaline nature of the volcanic in which the rooms have been carved out of have an acid neutralization potential of greater than 10 tons $CaCO_3$ per kiloton. The clay alteration product of the rock tends to further plug and retard any fluid flow on the rock surface or in fractures. To promote housekeeping and cleanup of any spills or losses easier, a concrete floor is to be installed on the lower mill level. The current floor on the upper level where comminution occurs need not be covered in concrete as no reagents are used in that process, and any spills of water will travel via gravity to the lower milling area. The west end below the process tank will be concrete. The ribs for one foot above the concrete floor in the mill room will be concrete covered with the cover applied via troweling.

Concrete Specifications of Concrete Floor

1. Concrete and shall have a compressive strength of 2,500 psi or greater,
2. The pour of the floor is to have no greater than a 6-inch slump,
3. The concrete used for troweling shall have a slump no greater than 4 inches,
4. The concrete is to either be mixed on site, or can be pre-mixed and pumped from the portal to the locations,
5. The floors may be level or gently sloped toward a sump area. The floor must be sufficiently level so that milling components may be easily set and leveled,
6. The floor is to be a minimum of 4 inches in thickness (standard milled 2 x 4 board).

Installation Instructions

1. Bar down ribs and back,
2. Move or raise equipment and clean floor thoroughly so that concrete will bond to rock,
3. Smooth and level any high spots in sill,
4. Thoroughly clean sills and ribs where concrete is to be applied,
5. For equipment on existing concrete foundations, the existing foundation shall be thoroughly cleared prior to pouring of the concrete so that good adhesion between the existing foundation and the floor will occur,
6. The concrete surface is to be screed and floated with a broom finish put on the surface to produce a safe walking for personnel,
7. Personnel shall not walk on the concrete surface for two days,

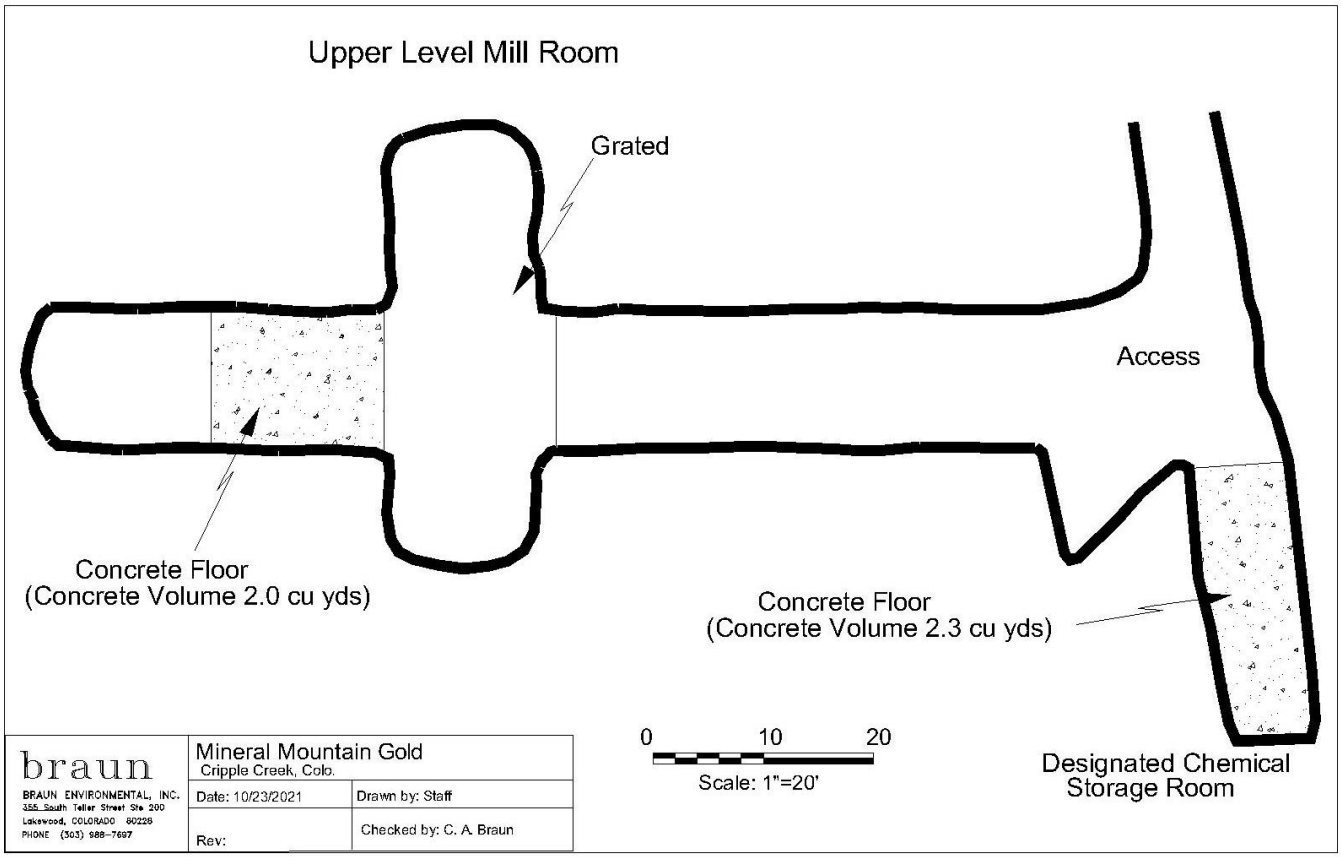
8 No equipment shall be placed on the surface until after seven days following the pour.

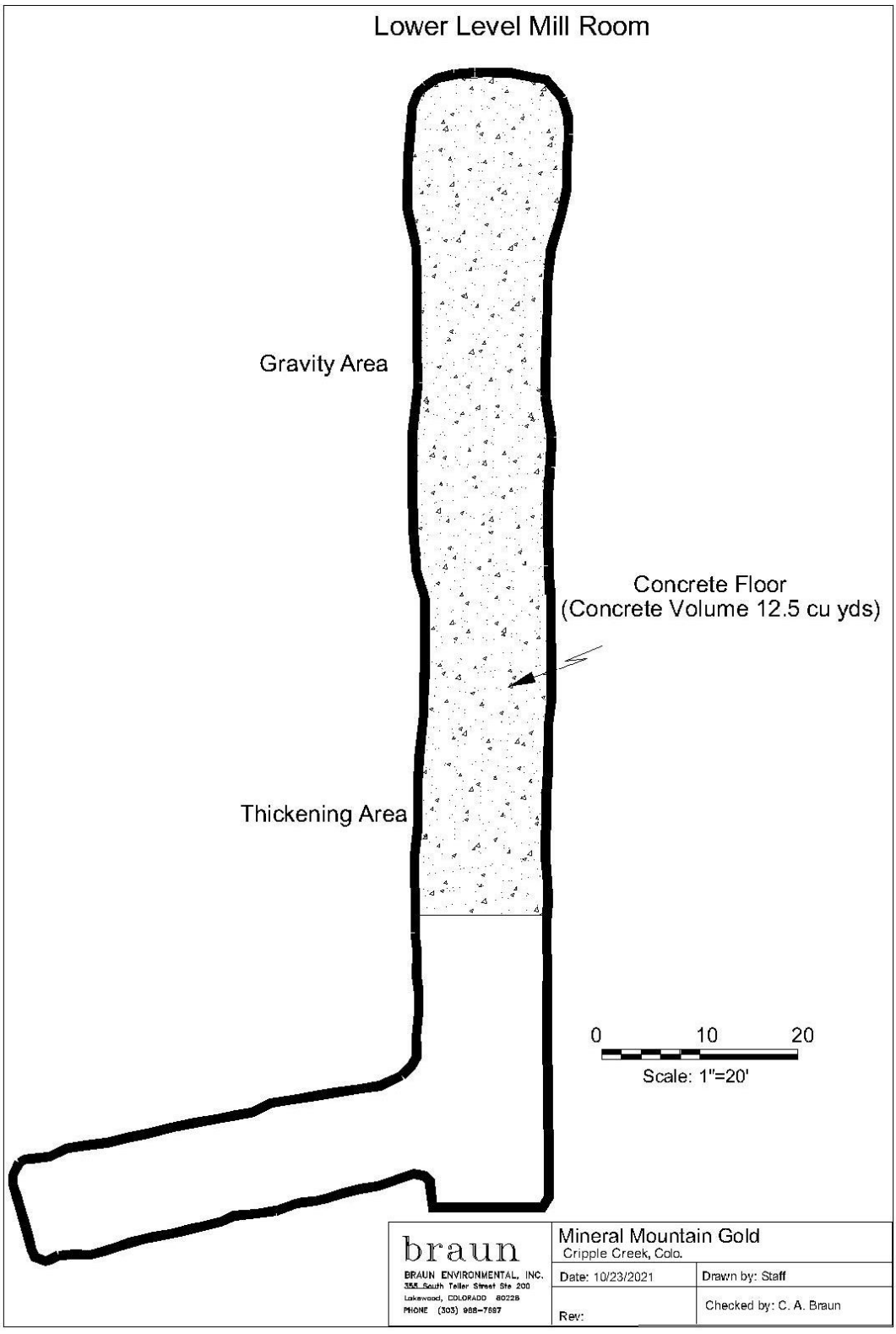
Concrete Volumes

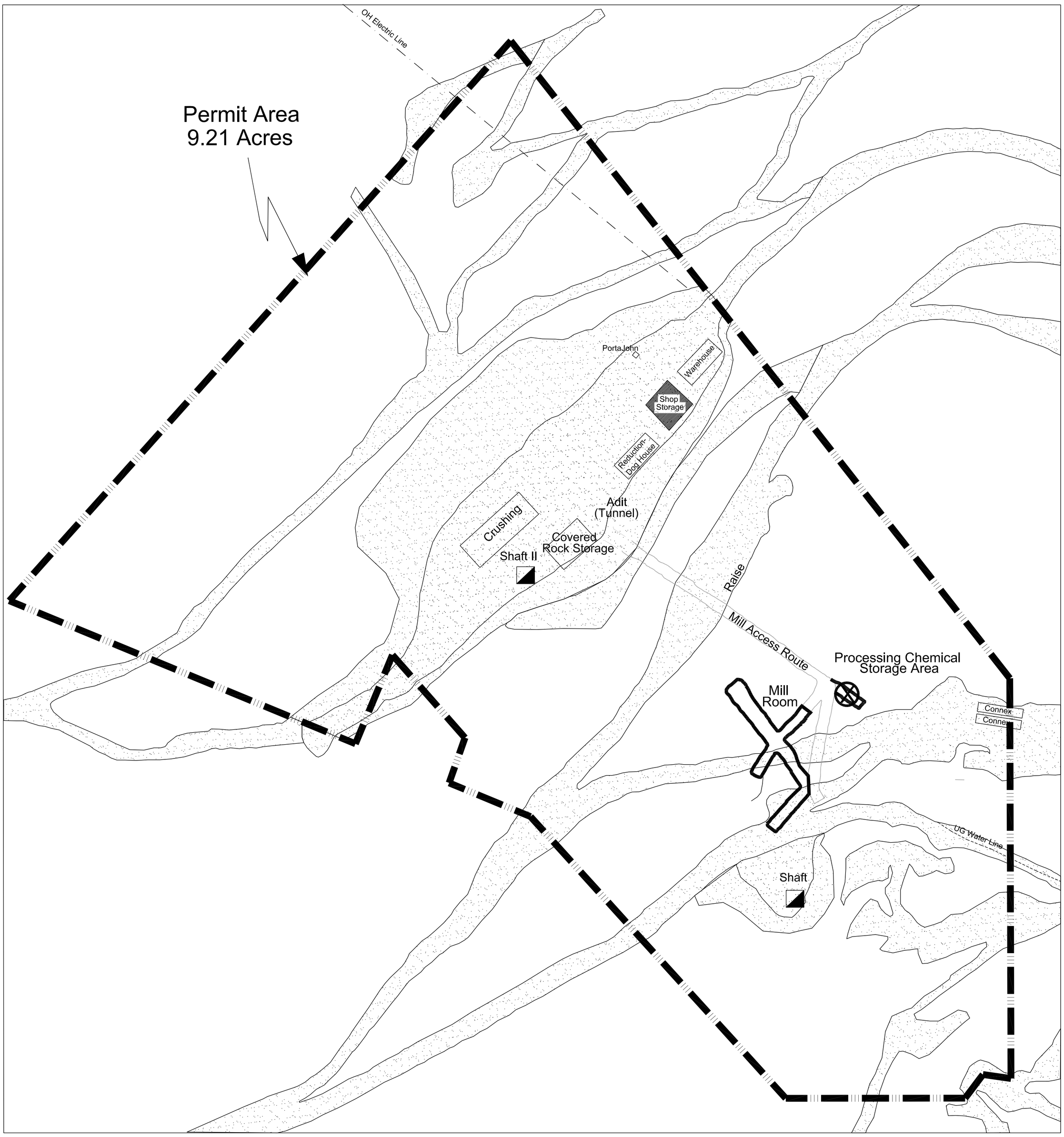
Lower Mill Room
Area: 1,175 square feet
Thickness of Floor: 4 inches (standard milled 2 x 4 board)
Volume of Concrete: 12.5 cubic yards

Upper Mill Room
Area: 200 square feet
Thickness of Floor: 4 inches (standard milled 2 x 4 board)
Volume of Concrete: 2.0 cubic yards

Designated Chemical Storage Room
Area: 300 square feet
Thickness of Floor: 4 inches (standard milled 2 x 4 board)
Volume of Concrete: 12.5 cubic yards




Lower Level Mill Room
Gravity Area
Concrete Floor
(Concrete Volume 12.5 cu yds)
Thickening Area
0
10
20
Scale: 1"=20'
braun
BRAUN ENVIRONMENTAL, INC.
355 South Teller Street Ste 200
Lakewood, COLORADO 80226
PHONE (303) 988-7697
Mineral Mountain Gold
Cripple Creek, Colo.
Date: 10/23/2021
Drawn by: Staff
Rev:
Checked by: C. A. Braun



Explanation

Onsite Designated Chemical Storage Area

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 Designated Chemical Storage Map

True North
9°
Magnetic North

0 50 100
Scale in Feet

braun
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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: 10/24/21	Checked by: C. A. Braun

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: October 24, 2021

COLORADO REGISTERED PROFESSIONAL ENGINEER

Mineral Mountain Project

Chemical List

October 22, 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, and the total weight of solids will not exceed 4,000 pounds.*

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 Room	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 Room	0.04 gal/ton	.05% v/v	Concentrate
Kemtec 2044	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Orfom CO210 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC2 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC8 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC17 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC37 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC100 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Orfom MC9747 Collector	Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Polyfroth H57	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Polyfroth W31	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Potassium Amyl Xanthate	Flotation Collector	Solid	800 pounds	55 gal drum	Mill Room	0.001 gal/ton	.01% w/v	Concentrate
Trimethylxanthine	Flotation Collector	Solid	800 pounds	55 gal drum	Mill Room	0.001 gal/ton	.01% w/v	Concentrate
MIBC	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Copper sulfate	Conditioning	Solid	1000 pounds	50lb paper bags	Mill Room	2lb/ton	100%	Neutralized
Pine Oil	Flotation Collector	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	100%	Concentrate
Soda Ash	Conditioning	Solid	1,000 pounds	50lb paper bags	Mill Room	0.5 lb/ton	100%	Neutralized
Aluminum Sulfate	Flocculant	Solid	1000 pounds	55 gal drum/275 gal Tote	Mill Room	2.5lb/ton	40% w/v	Tailings
D-Limonene/Orange Oil	Flotation Collector	Liquid	220 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	100%	Concentrate
Methyl Isobutyl Carbinol	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.3gal/ton	20% v/v	Cons/Tails
Sodium Silicate	Flotation Depressant	Solid	1000 pounds	55 gal drum/275 gal Tote	Mill Room	1.8gal/ton	100%	Tailings
Tennafroth 250	Flotation Frother	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	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 Room	As needed	100%	Neutralized
Aero 5688 Promoter	Flotation Promoter	Liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	0.04 gal/ton	.05% v/v	Concentrate
Hydrated Lime	pH Control	Solid	1000 pounds	50lb paper bags	Mill Room	2lb/ton	100%	Neutralized
MGXHP 681-Mine Add Blend	Additive Con Slurry	liquid	300 gallons	55 gal drum/275 gal Tote	Mill Room	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.

October 24, 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

Designated Personnel: Lance Barker (owner) - (There are no other key response personnel)

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 lead 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 f the container reaches 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

Colorado Department of Reclamation, and Mining Safety - Phone (303-866-3567), or Email (elliott.russell@state.co.us);

Per Rule 3.1.13 and Rule 8, the operator shall:

(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 (303-866-3567), 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)

Per Rule 8.2.3, the operator shall also:
As soon as practicable, but within five days after an emergency situation or condition is reported, the operator shall provide a written report to DRMS providing written descriptions of the following:

(1) actions taken to respond to and correct the emergency situation or condition;
(2) any known or anticipated adverse impacts to human health, property or the environment;
(3) name(s), address(s), telephone numbers and e-mail address of the Operator's contact person for additional information and follow-up by the Office;
(4)) monitoring and analyses that are necessary to evaluate the situation and corrective actions, copies of all pertinent data; and,
(5) results of the Operator's investigation to assess the conditions or circumstances that created the emergency situation, and what corrective or protective measures will be taken to prevent a similar event from occurring in the future.

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.