braun

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November 14, 2018

SENT VIA EMAIL

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

RE: Responses to October 15, 2018 Adequacy Review Letter, Bad Boys Pit M-1996-081, Teller County, Colorado

Dear Mr. Russell:

I am attaching responses to your comments in the October 15, 2018 Adequacy Review Letter. Each comment is listed and followed by a specific response. I have included all the pages and documents requested.

Call me if you have any questions or need any additional information.

Sincerely, BRAUN ENVIRONMENTAL, INC.

C. A. Braun, P.E.

C.I.M.M

cc. C. Cross

enc.

CAB/rl

Response to Elliot Russell Adequacy Review Letter Dated October 15, 2018 Permit No. M-1996-081 By: C. A. Braun, November 14, 2018

This document is formatted to present the DRMS comment (in italics) followed by the response.

Comment 1: As required by Rule 1.6.2, please submit proof of publication in a newspaper of general circulation in the locality of the proposed mining operation. Proof of publication received on October 8, 2018 is adequate – no further response needed.

Response: No Comment required.

Comment 2: As required by Rule 1.6.2, please submit proof of the notice to all owners of record of surface and mineral rights of the affected land and the owners of record of all land surface within 200 feet of the boundary of the affected land. Proof of notice may be return receipts of a Certified Mailing or by proof of personal service. Proof of notification to City of Cripple Creek, Bad Boys of Cripple Creek Mining Co., Inc., Norma White, Edward Lainio, and North Star Turquoise received on October 15, 2018 is adequate – Please submit remaining proof of notification to Wallace Burtis.

Response: Certified Mail receipts for all listed parties were sent to DRMS on October 8, 2018, so the proof of notification requirement has been satisfied. As of this date, we do not yet have a return receipt from Mr. Burtis, but will pass it on when we receive it. It is also possible that he might not have accepted the letter or has not gone to the Post Office.

Comment 3: To date, the Division has received a comment from the Colorado Parks & Wildlife regarding the application. The letter is attached for your review. Please acknowledge and address any comments noted in the letter and make changes to the application as necessary.

Response: Frank's letter from over at Parks and Wildlife was thoughtful in making recommendations with respect to wildlife, and there is nothing in the letter that is not congruent with the current plan. No further action is required.

Comment 4: Within Exhibit A, on page 2, the Applicant states the area of the proposed permit is 0.9 acres. This statement is outdated as AM-01 proposed to expand the current 0.9 acre permit to a total of 7.0 acres. Please revise this statement and re-submit page 2 of Exhibit A.

Response: The modification has been made and the page is attached

Comment 5: Exhibit A contains two maps, Map One, Exhibit A- Permit Application – Location Map and an untitled parcel map. Neither map is signed in accordance with Rule 6.2.1(2)(b) nor specifies the coordinates of the main entrance to the mine site and the names of all immediately adjacent surface owners of record in accordance with Rules 6.3.1(2) and 6.3.1(3). Additionally, the

untitled parcel map does not meet the minimum requirements of Rule 6.2.1(2) and incorrectly shows the proposed expanded permit boundary. Please update these maps and re-submit them for further review.

Response: The Rule requires a legal description using the range and township system, and the original engineer decided to add the size of his proposed permit area, even though the rule did not specify. I have updated his number to reflect the current size of the area. It appears that the original preparer provided a second map in which I do not access to, nor is required per Rule 6.3.1. Per 6.3.1(3), I have updated Map One by adding the names of the adjacent land owners and added the mine entrance coordinates; the same coordinate that you gave me to use in the application. Let's dispose of whatever you have for a second map in your Exhibit A, since it does not appear to be allowed per the regulation.

Comment 6: Within Exhibit B, the Applicant included a USDA Soil Conservation Information Sheets report to discuss the vegetation and soil characteristics at the site, however, this report and associated soil map are illegible. Please either obtain a more clear copy of this report or submit new information to comply with Rule 6.3.2(a). The Division recommends you contact the local NRCS office for assistance with this item. Please note, a Soil Report can be obtained from <u>https://websoilsurvey.sc.egov.usda.gov/ for free. Please identify the proposed permit boundary on the</u> <u>new soil report map.</u>

Response: A new soils report has been produced and the permit boundary has been added. Thank you for the link to the website. It is interesting that the soils types listed in the area have little in common with the specific rock types that are the source of those soils.

Comment 7: Within Exhibit B, the Applicant identifies seven (7) permanent man-made structures within 200 feet of the permit boundary. It appears this section of the application is outdated as the structures 5-7 appear to not exist anymore. Please revise Exhibit B to identify all permanent man-made structures within 200 feet of the permit boundary as required by Rule 6.3.2(b).

Response: Page 9 of the application has been modified, items 5 through 9 have been crossed out with notation made that the items have been removed and no longer exist. Map 3 of Exhibit E has been superseded by the new Map E, which I prepared. TMIC

Comment 8: In accordance with Rule 6.3.3(b), please specify the estimated depth to which soil, suitable as a plant growth medium (also known as topsoil), will be salvaged for the use in the reclamation process. After a review of the permit file, it appears the top six (6) inches was previously determined to be salvaged and replaced for reclamation.

Response: My review of the site has found that the topsoil thickness has neither increased nor decreased since the original report was made, thus the original engineer's number of six inches still remains correct. The estimated topsoil thickness is six inches as of October 2018, and the soil has remained in a stockpile since it was encountered, and will be used for future reclamation.

Comment 9: In accordance with Rule 6.3.3(b), if plant growth medium is not reapplied on a graded area immediately after salvage, please specify how the topsoil will be stockpiled and

stabilized with a vegetative cover or other means until used in reclamation. The Division recommends the application commit to seeding the topsoil stockpiles with the approved reclamation seed mixture to help stabilize the stockpile from wind and water erosion plus help potentially build a beneficial seed bank for use during final reclamation.

Response: There is no Rule 6.3.3(b), so the assumption is that the reviewer was referring to 6.3.3(1)(b). Soil will be stockpiled at the current location and in the same manner as shown on the Exhibit E maps (Map E and E-1). Additional wording has been added to Map E-1 to address the stabilization and seeding comment.

Comment 10: In accordance with Rule 6.3.4(1)(c)(i), please state the thickness of plant growth medium to be replaced. As previously discussed, it appears the top six (6) inches was previously determined to be salvaged and replaced for reclamation.

If you review the map from the Soil Conservation Service in Exhibit B, you will **Response:** find that they have labeled soil types that are not reflected by the underlying geology, that you as a fellow environmental protection specialist can easily see. We find that in mountainous terrane, the soil thickness is generally what it is, and when reclamation is performed, we work with what we have. Our final goal is always to wind up with a vegetative cover that contains sufficient roots to bind the surface in place against movement by wind and rain. The objective of the permitee will be to return as much soil to reclaimed areas as was taken off. In areas that originally contained only an inch of soil, the goal will be to return one inch, or more, if possible. In areas that contain 6 inches, the goal will be to provide at least that much. You also know that sometimes in the right conditions, the removed and disturbed rock can produce a soil that is superior for plant growth than the original. In these cases, the final reclaimed surface might have both a thicker and superior soil cover than existed originally. As for existing soil quality, our analysis has shown that due to the underlying geology from which the soil is sourced, the geographical location and elevation of Cripple Creek, and the low average annual rainfall that occurs during the growing season, the natural soil quality is rather low. This can be easily observed and documented by the low total mass of vegetative material that it produces per year.

Comment 11: In accordance with Rule 6.3.4(1)(c)(v), please specify if mulch will be used during reclamation. Please specify the kind to be used, the crimping method, and rate of application of the mulch. The Division recommends the Applicant contact the local NRCS office to obtain a recommendation regarding a mulching rate.

Response: Mulch was not specified by the engineer in 1996, nor it is recommended now. No mulch is anticipated to be used for reclamation of this site. Or experience has been that people that actually live off of their agricultural land use very little mulching, while people that have access to other people's money tend to use it more. We might visit one of these days to see if you have had similar experiences.

Comment 12: The Division will calculate a cost estimate based on the responses to this adequacy letter. You will be provided copy of that reclamation cost estimate for review before the decision date. No further response needed.

Response: No Response

Comment 13: Exhibit E includes a map titled Map 2, Exhibit E – Surface owners of Record. This map is outdated as it shows the original permit boundary rather than the proposed AM-01 expanded boundary and also appears to identify incorrect surface owners of record. Additionally, this map is not signed in accordance with Rule 6.2.1(2)(b). Please update this map and re-submit it for further review.

Response: "Map 2, Exhibit E –Surface owners of Record", is outdated and has been replaced with the new Exhibit E map. The current boundary is shown, the surface owners have been updated, and the map is signed.

Comment 14: The following adequacy items are associated with the Exhibit Map E:

- **a.** The title block includes an outdated address and phone number for the permittee. Please revise the Owner Address and Owner Phone Number identified in the title block.
- **Response:** Items have been updated on both Exhibit E maps
 - *b.* The title block includes an incomplete property description. Please revise the Property Description in the title block to include the Found MS10007 and Florence MS20729.
- **Response:** Items have been updated
 - c. Within the Additional Notes section on the map, the Division believes there is a typo regarding the statement that the permit boundary "includes a 30 foot wide strip in the northern portion of the Found Claim". The Division believes this should be the Florence Claim.
- **Response:** The Division believes correctly. The error has been corrected
 - *d.* The map is not signed in accordance with Rule 6.2.1(2)(b).

Response: There was not much reason to sign a drawing that was certain to be crayoned up by DRMS. This version is signed.

- e. The map identifies the name and mineral survey number of the patented mining claims within and adjacent to the proposed permit boundary, but does not identify the names of owners(s) of record of the permit boundary (surface and subsurface) and of the land (surface) within 200 feet of the permit boundary as required by Rule 6.3.5(2)(b).
- **Response:** The property (surface and mineral) owner's names have been added.
 - *f.* The map identifies one structure as a building which is located to the southwest of the permit boundary, but does not identify the owner of this structure as

required by Rule 6.3.5(2)(b). Additionally, the fences, water supply pipeline, and telephone line identified in Exhibit B are not depicted nor are the owners of record of these structures are identified on the map as required by Rule 6.3.5(2)(b).

Response: The property (surface and mineral) owner's names have been added to the map. Unless otherwise noted, the owners of all improvements on the properties are the same as the owners of the land. This includes both surface and subsurface improvements.

Comment 15: The following adequacy items are associated with the Exhibit Map E-1:

a. The title block includes an outdated address and phone number for the permittee. Please revise the Owner Address and Owner Phone Number identified in the title block.

Response: Items have been updated on both Exhibit E maps

b. The title block includes an incomplete property description. Please revise the Property Description in the title block to include the Found MS10007 and Florence MS20729.

Response: Items have been updated

c. There are various portions of the Reclamation Notes section on the map which are inconsistent with the proposed mining and reclamation plans (e.g. underground access areas, remaining cut banks, seeding rate, no fertilizer application). Please revise the Reclamation Notes section accordingly.

Response: I see no inconsistencies with the notes on the Exhibit E-1 map as related to the original mining and reclamation plan, other than a typographical error on the seeding rate. The map notes have been modified to include 33.4 pounds of pure live seed per acre. The phrase "underground access area" refers to the access area to the pit which is below the ground surface. I know of no more appropriate mining term to use for this description. As for the term "cut bank", if you recall, the west side of the permit area laps up against a steep little ridge to the northeast of the City building, that likely was originally a rock outcrop and at least exposed prior to the current permit. In the event that the valley cannot be filled to produce an appropriate surface slope, this possibility has to be considered. If your expertise can come up with another approach, let me know and we can make a design change. While the technician might overlook this possibility, the specialist will recognize it. Neither or the original design engineer in 1995 recommending fertilizer, so both the original and update version are consistent.

d. Please remove the Current Excavation and Current Rock/Soil Storage polygons and labels as these feature (sic) will not remain after final reclamation.

Response: I want to make our drawings as concise and understandable to the future user as possible, thus I am leaving the area labeled. It seems intuitive that the stockpile would be used during reclamation, but your advice is good and the words "to be removed at the time of reclamation" have been added to make the intent even more clear. I believe it to be important to make or drawings as useful as possible to the people that will need to figure them out down the road.

e. The map is not signed in accordance with Rule 6.2.1(2)(b).

Response: There was not much reason to sign a drawing that was certain to be crayoned up by DRMS. This version is signed.

f. In accordance with Rule 6.3.5(3)(a), please show the gradient of all reclaimed slopes (horizontal:vertical) sufficient to describe the post mine topography. The Applicant may also show the post mining topography with contour lines. As the proposed mining and reclamation plans detail, the site will be backfilled to similar pre-mine topography so the Applicant may want to simply use the contour lines provides on Exhibit Map E.

Response: Topography has been added to the Exhibit E-1 map along with two labels showing surface down-gradient direction at appropriate locations.

g. In accordance with Rule 6.3.5(3)(d), please state the average thickness of replaced overburden/waste rock.

Response: Since this is a small mine, and since it is actually mostly in exploration stage, the future for the mining phase is difficult to predict. As for overburden removed, I would estimate it to be about one foot, since the mineral of interest was originally found at the grass roots, or even on the soil surface. You have added the term waste rock to the basic rule, so as for waste rock, since the main excavation is currently down to a maximum depth of about 70, if we average 1 foot and 70 feet, we get 35 feet for the average thickness. I recall that when we put together the original regulations quite a few years ago, this idea was focused more on a coal seam or other bedded deposit, than for this type of deposit. As a result, to the reclamation specialist, the answer to the rule in this case does not make all that much sense.

h. In accordance with Rule 6.3.5(3)(e), please state the average thickness of replaced topsoil.

Response: Since the topsoil in the area ranges from zero inches to 8 inches, the average would be three inches. A weighted average would most likely be about 6 inches.

Comment 16: AM-01 materials include a signed statement by Wallace Burtis stating that Bad Boys of Cripple Creek Mining Co., Inc. has the legal right to enter the Florence MS20729 however, this statement was not acknowledged by a notary public in accordance with Rule 6.3.7. Please submit a signed and notarized statement from Wallace Burtis. Signed and notarized statement from Wallace Burtis received October 3, 2018 is adequate – no further response needed.

Response: No response required

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

Response: The public copy has been updated, and a receipt is attached.

Comment 18: Within Exhibit B, the Applicant has identified fences, the City of Cripple Creek water treatment building, a water supply pipeline, and a telephone line as structures within 200 feet of the permit boundary however within Exhibit L the Applicant states there are no structures to protect from the operation. In accordance with Rule 6.3.12, please submit either: (a) a notarized agreement between the applicant and the person(s) having an interest in the structure, that the applicant is to provide compensation for any damage to the structure (the Division as attached a sample structure agreement for the applicant); or (b) where such an agreement cannot be reached, the applicant shall provide an appropriate engineering evaluation that demonstrates that such structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility.

Response: Modification of the permit to allow expansion to the east, does not affect the western part of the original permit area with respect to its proximity to the City building. The building and improvements are no closer now than before, and as a result, their property will see not increase or decrease in exposure to the modification in the permit. Any stability issues were addressed by the previous engineer. There is also an additional problem, as I understand it, that the City of Cripple Creek constructed a building and utilities that did not conform to regulations at the time they were built and the building was constructed after mining began on the property. As a result of litigation, it appears that they the City of Cripple Creek has little right to ask for damages. At this point, the City of Cripple Creek has been in contact with Mr. Cross, and as they had no issues with the permit, they found no reason to contact DRMS. I suggest that you give them a call them and teach them a good lesson of the power of DRMS.

6.3.1 EXHIBIT A - LEGAL DESCRIPTION AND LOCATION MAP

- (1) The proposed operation will be located on a tract located in the NW 1/4; NE 1/4; Sec 13, T 15 S, R 70 W, 6 th PM, Teller County CO (See Map 1) The area of the proposed permit is 0.9 Acres.
 7.0 Acres.
- (2) Map 1, Exhibit A, Location Map is on next page.



<u>6.3.2 EXHIBIT B - SITE DESCRIPTION</u> (Continued)

- (b) All of the man made structures within 200 feet of the proposed permit area are located to the west or southwest, with an exception of a fence along the south boundary of the permit. (See Map 3 Exhibit E) Included are:
 - 1. Other fences,
 - 2. Metal building, approx. 30 ft by 70 ft which houses the City of Cripple Creek's water treatment plant.
 - 3. Water supply pipeline.
 - 4. Telephone line
 - _ Removed and no longer -5. House trailer, approx. 13 ft. by 56 ft. exist -6 Storage shed 8 ft by 10 ft ----

- (c) No water resources were discovered in the vicinity of the proposed operation (other than the City of Cripple Creek's water supply). No water is proposed to be used in the mining operations. Runoff waters will be contained in the operation, with the exception of that which falls on the waste pile slopes. Based on the observation of historic activities in the area sedimentation from the mined material has never been a problem.
- (d) This section is not applicable. This operation would not be a Designated Mining Operation.

It will not use any chemicals on site.

There will be no toxic or acid forming materials exposed or disturbed as a result of mining operations.

There will be no acid mine drainage.

⁻⁷ Two small LP gas tanks adjacent to the buildings.

RECEIVED

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TELLER COUNTY CLERK & RECORDER

- Memorandum
- To: Teller County Clerk and Recorders Office 101 W. Bennett Avenue Cripple Creek, Colorado 80813
- From: Harriet Graham Bad Boys of Cripple Creek Mining Company, Inc. 1429 Locust Drive Canon City, Colorado 80212

Date:

November 14, 2018

RE: Colorado Division of Reclamation, Mining and Safety (DORMS) - Designated Mining Operation (110(d)) Application for Public Review

Bad Boys of Cripple Creek Mining Company, Inc., has filed an amended mining and reclamation permit application with the Colorado Division of Reclamation, Mining and Safety (DORMS). Pursuant to the requirements of the Colorado Mined Land Reclamation Act, please place the attached copy of the application somewhere in your office and available for public review if so requested. The document is **NOT TO BE FILED** or recorded and may be disposed of after December 31, 2018. Please call me at (719) $\frac{689-2982}{276-0065}$ if you have any questions regarding this

Sincerely, BAD BOYS OF CRIPPLE CREEK MINING COMPANY, INC.

Harriet Graham by A. Braun



USDA Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey



Soil Map—Teller-Park Area, Colorado, Parts of Park and Teller Counties



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
20	Cathedral very gravelly sandy loam, cool, 10 to 40 percent slopes	45.8	19.2%
82	Quander-Bushpark very gravelly loams, 5 to 40 percent slopes complex	192.5	80.8%
Totals for Area of Interest		238.3	100.0%





RECLAMATION NOTES:

Special Note: All areas anticipated to require reclamation within permit boundary are shown on map

Historical Aspects - Reclamation of the disturbed areas will occur following completion of the mining operation. The area is currently zoned as A-1 (agricultural), is part of the historic Cripple Creek Mining District, with the Cripple Creek Mining Overlay District (CCMOD) located nearby to the south and east. Thus the historical flavor of the permit area must be retained. The closure of the site must consider both of its historical uses for mining and agriculture.

eclamation Objectives - At time of closure both old and new disturbances will be evaluted for future need by the land owner, and will be reclaimed or put back in their approximate state prior to modification for prospecting and mining. Roads that are necessary for property access, including maintenance, movement of livestock, fire control, and safety will remain, as will the main access road that traverses the property from south to north. The modifications to the roads that are to remain will include: removing any MSHA mandated berms along their outsides, and installing drain bars in areas which might have steeper grades, and reduction of width to pre-mining specifications, or that desired by landowner. Roads and leveled areas that are not needed or desired for roadways will be stabilized, and vegetated withe emphasis being to maximize vegetative growth. Any excess materials generated by the work will be beneficially wasted on site with the goal of placing soils over rock to maximize flora growth and feed for the fauna.

Underground/Below Ground Access Area - At the time of final closure of the pit area, all mining equipment and structures that are not wanted by the property owner will be removed from the site. Any and all refuse generated in conjunction with the operation will be hauled away and properly disposed of. If any cut banks remain at the end of mining, they will be evaluted for stability and will be sloped accordingly so that no hazards to persons or livestock exist.

Vegetative Details - Areas to be reclaimed will be graded and top soil or growth media added where available and appropriate. Areas outside of the travelways that are to remain will receive seed bed preparation, which may include ripping, disking, and/or harrowing, and will be seeded with a suitable rangeland seed mixture chosen by engineer and approved by DRMS. The seed will be either drilled or hand broadcasted as appropriate. If broadcast, it will be covered by hand raking or by harrow methods. The seed mix will be sowed at a rate of no less than 33.4 pounds of pure live seed per acre, or per supplier's recommendations. In areas with steep hillsides, reclamation mats or netting might also be used to assist vegetation if necessary. Seed will be applied in early spring or late fall to maximize the germination rate and to increase the chances of a successful revegetation. Use of fertilizers is not anticipated to be necessary to obtain reclamation objectives. Monitoring of the site will occur until reclamation objectives have been met. The average thickness of soil within the permit area is estimated to average 6 inches. Any soil stockpiles will be placed in such a manner to minimize erosion, and will be seeded using the standard seed mix as appropriate for conditions and as specified by engineer.

Permit Boundary

Contour (interval 10 feet)

9900

Contour Interval = 10 feet

27

Notes:

