



COLORADO

Division of Reclamation, Mining and Safety

Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

October 23, 2019

**Re: Rationale for Recommendation for Approval of an 112c Application Amendment (AM-01)
with Objections, Black Mountain Sand Weld LLC, Lost Creek Mine, File No. M-2018-051**

Introduction

Herein, all references to the Act and Rules refer to the Colorado Land Reclamation Act for the Extraction of Construction Materials, 34-32.5-101 et seq., C.R.S. (the Act), and to the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (the Rules or Rule). Copy of the Act and Rules are available through the Division's web site at <http://mining.state.co.us>.

On October 23, 2019, the Division of Reclamation, Mining and Safety (Division/Office/ DRMS) issued its recommendation to approve the permit application amendment (AM-01) for the Lost Creek Mine, File No. M-2018-051, over public objections. This rationale document is intended to explain the process by which the Division arrived at its recommendation for approval over public objections and respond to the issues raised by the objecting parties. The Division reserves the right to further supplement, amend, modify, or clarify this document and recommendation with additional details as necessary.

Summary of the Review Process for the Amendment Application

Black Mountain Sand Weld LLC (Black Mountain or Applicant) submitted an 112c application and 112c application amendment (AM-01) on October 3, 2018 and June 6, 2019, respectively. The application and application amendment were deemed complete for the purposes of filing and review on March 25, 2019 and July 11, 2019, respectively. The Applicant submitted the application amendment to attempt to address the concerns of the objectors to the original application. The size of the proposed operation was reduced from 3,069 acres to 2,215.59 acres. The location of the proposed operation and processing facilities were relocated east of Weld County Road 91 and outside of the location of the Hay Gulch aquifer. Pursuant with Rule 1.8.1, any amendment to an application shall constitute a new filing for the sole purposes of determining the date for the consideration of the application by the Office, and for the deadline for a final decision on the application.

The permit application amendment proposes a 2,215.59 acre site on private land with 1,796 acres of affected land. The land containing the proposed mining operation is owned by Black Mountain Land Company, LP. The site is located approximately 10.5 miles northeast of Roggen, CO in Weld County. The Operator intends to mine industrial proppant sand for primary use in hydraulic fracturing. The site would consist of an open pit mining operation and on-site facilities. The on-site facilities would include



a wash processing plant, fueling station, office and maintenance and warehouse building and a loadout facility. The permit boundary would be offset by at least 200 feet from the affected lands boundary. The offset area would consist of undisturbed land covered in natural vegetation. The site would be reclaimed to the existing land use of rangeland.

The Applicant published the required public notice for the original application once a week for four consecutive weeks beginning on March 29, 2019 with the last date of publication on April 19, 2019 and for the application amendment on July 13, 2019 with the last date of publication on August 3, 2019. The public comment periods closed on May 9, 2019 and August 23, 2019, respectively. The public notices were published in The Greeley Tribune, a publication in general circulation in the vicinity of the mine. During the public comment periods, the Division received written comments and objections from the individuals and agencies listed below. All comments received during the two public comment periods have been included herein as interested person and/or Parties.

Timely Letters of Objection:

Person or Entity	Date Objection Received
Morgan County Quality Water District	March 25, 2019
Petros & White LLC for Equus Farms, Inc.	May 9, 2019
Bijou Irrigation District and Bijou Irrigation Company	May 9, 2019
Bijou Irrigation District and Bijou Irrigation Company	August 23, 2019

Timely Commenting Agency:

Agency	Date Comment Received
Colorado Division of Water Resources	April 16, 2019
Army Corps of Engineers	April 18, 2019
History Colorado	April 25, 2019
West Greeley Conservation District	May 8, 2019
History Colorado	July 31, 2019
Colorado Division of Water Resources	August 1, 2019
Army Corps of Engineers	August 20, 2019

Timely Letters of Objection (Non-Compliant with Rule 1.7.1(2)(a)):

The individual failed to provide the name, mailing address and telephone number of the interested party as required by Rule 1.7.1(2)(a).

Person or Entity	Date Comment Received
RLH – ruthielove2000@yahoo.com	August 23, 2019

The Division forwarded copies of all objections and comments to the Applicant and scheduled the application amendment for a hearing before the Colorado Mined Land Reclamation Board (Board) and a Pre-hearing Conference. The Division provided notice of the scheduled Board hearing and Pre-hearing Conference to all parties and interested persons. Due to the timely objections, on the decision date the Division cannot make a decision on the application amendment, but rather a recommendation to the Board.

During the review period the Division generated two (2) adequacy letters. The Applicant addressed all adequacy issues to the Division's satisfaction. Therefore, on October 23, 2019, the Division determined the application amendment satisfied the requirements of Section 34-32.5-115(4) C.R.S. and issued its recommendation to approve the application amendment over objections.

Issues Raised by the Objecting Parties

The timely objections and objection related comments received by the Division have been categorized as issues pertaining to hydrology, the mining and reclamation plans, wildlife, compliance with C.R.S. 34-32.5-112, permit application type and non-jurisdictional issues. These categories are listed below and titled with bold font. Under each category the specific issues are listed in bold and italic font with the objector/commenter in parenthesis.

1. Hydrology

a. Concerns regarding the establishment of the pre-mining baseline aquifer water levels and hydrology in the proposed mining area (Bijou)

The Applicant used historic data and completed hydrology studies of the Lost Creek and Hay Gulch Aquifers to establish the baseline groundwater elevations. Two (2) drilling exploration programs were completed at the site which provided groundwater level data. The Applicant has committed to staying two (2) feet above the groundwater elevation as determined by on-site boring logs. Additionally, the Applicant developed a groundwater monitoring plan for the site. Black Mountain will install a total of nine (9) monitoring wells; five (5) wells will be installed within the 200-foot buffer between the affected area and the permit boundary on the eastern and western sides, one (1) well will be installed within the plant facility area once construction of the facilities is complete and three (3) wells will be installed in the Hay Gulch Aquifer. There are two (2) existing irrigation wells on-site which may be used to provide supplemental data. The wells will be monitored for water quantity and quality on a quarterly basis and the data will be provided by the Applicant to the Division in the annual report. The Applicant will conduct four (4) quarters of groundwater quality analysis to establish a groundwater quality baseline prior to initiating the mining operation. The Division finds the Applicant's plan will provide the information to establish the baseline groundwater characteristics at the site. Further, the Applicant has submitted the required information in accordance with Rules 6.4.4, 6.4.5 and 6.4.7.

b. Concerns regarding water quality impacts from infiltration of the process water and from the potential for hydrocarbon spills from equipment (Bijou)

The Applicant is proposing to use inert chemicals in the processing of the sand which will not degrade the water quality at the site. The Applicant will implement a Spill Prevention Control and Countermeasures Plan and Stormwater Pollution Prevention Plan. The plans will provide best management practices and protection measures to be employed against spills and provide cleanup/notification procedures and standards in the event of a spill. The designated parking area and access road will be paved and the fueling location was designed to direct flows towards a settling pond for treatment and recovery of any potential hydrocarbons or other contaminants. The maintenance bay, where equipment will be stored, was designed with a self-contained fluid capture system which will not discharge.

The Division finds the Applicant's plan shall minimize disturbances to the prevailing hydrologic balance of the affected land and surrounding area. Additionally, the Applicant shall implement a groundwater monitoring plan for the site as discussed above. This plan will adequately detect impacts to the hydrologic balance. Black Mountain shall be required to comply with the applicable federal and state water quality laws in accordance with Rule 3.1.6. The Division finds the Applicant has provided the information required to address potential groundwater quality impacts from spills at the site in accordance with Rules 3.1.13, 6.4.4 and 6.4.7.

c. Concerns regarding the exposure of groundwater (DWR)

The Operator will not expose groundwater during mining operations and there will be no evaporative loss of groundwater to the atmosphere. Additionally, the Division is not approving the Operator to expose groundwater. The Division finds the Applicant has provided the information required to address the exposure of groundwater at the site in accordance with Rule 6.4.7(1).

d. Concern regarding how the Applicant intends to minimize disturbances to the prevailing hydrologic balance in the application amendment as required by C.R.S. 35-32.5-116(3)(h) (Equus)

The Division finds Exhibit G – Water Information of the application amendment adequately addresses the Applicant's plan to minimize disturbances to the prevailing hydrologic balance of the affected land and surrounding area. Additionally, the Applicant shall implement a groundwater monitoring plan for the site as discussed above. In the event of impacts to the prevailing hydrologic balance, this plan will adequately detect impacts to the hydrologic balance and trigger the requirement to address and remediate the impact, if necessary. Black Mountain shall be required to comply with the applicable federal and state water quality laws in accordance with Rule 3.1.6. The Division finds the Applicant has provided the information required to address minimize disturbances to the prevailing hydrologic balance in the amendment application in accordance with Rule 6.4.7 and C.R.S. 35-32.5-116(4)(h).

e. Concern regarding impact of the mining operation on the underlying Hay Gulch alluvial aquifer (Morgan)

The objection from Morgan County Quality Water District was received during the public comment period for the original permit application. Black Mountain redesigned the mining plan in the

application amendment to move the mining operation outside of the Hay gulch aquifer boundary. The Division finds the Applicant's plan as described in the application amendment shall not impact the underlying Hay Gulch aquifer. Additionally, the Applicant shall implement a groundwater monitoring plan for the site as discussed above. This plan will adequately detect impacts to the hydrologic balance should any occur. Black Mountain shall be required to comply with the applicable federal and state water quality laws in accordance with Rule 3.1.6. The Division finds the Applicant has provided the information required to address the concern regarding potential impacts to the Hay Gulch aquifer in the amendment application in accordance with Rule 6.4.7 and C.R.S. 35-32.5-116(4)(h).

2. Mining and Reclamation Plans

a. Concerns regarding the management of wind erosion during mining and reclamation activities (Bijou)

The Applicant has designed the mining and reclamation plans to minimize wind erosion at the site. An on-site dust abatement plan will be submitted to Weld County as part of the Use by Special Review. The plan will include best management practices for reducing wind erosion from stockpiles, active mining areas and the processing facility. The Applicant committed to vegetating topsoil stockpiles for erosion protection. The Applicant has indicated routine watering will be used for dust control. The Division finds the Applicant has provided the information required to address concerns regarding wind erosion at the site in accordance with Rules 3.1.6(3), 6.4.4 and 6.4.5.

b. Concerns regarding the Applicant should file a hard rock mining application instead of a construction material application (Morgan)

The Division reviewed the objection from Morgan County regarding the type of application submitted for the Lost Creek Mine and determined industrial sand is a construction material as defined by C.R.S. 34-32.5-103(3). The Division finds the Applicant submitted the proper application type for the proposed mining operation and is in accordance with C.R.S. 34-32.5-112.

c. Concerns regarding the application does not adequately describe certain aspects of the proposed mining and processing plan to remove feldspathic sand from the product (Morgan)

The proposed Mining Plan states inert surfactants will be used in the material processing to assist in separating clay material and feldspar from the industrial sands. Clay and feldspar removed from the material will be dewatered using filtration equipment and returned to the site as backfill for the site reclamation. The Division finds the Applicant has provided the information required to address concerns regarding the Mining Plan in accordance with Rule 6.4.4.

3. Wildlife Issues

a. Concerns regarding the impacts to bald eagle habitat during mining and reclamation. (Bijou)

The Applicant conducted a wildlife survey included as Exhibit H – Wildlife Information in the application amendment to identify potential habitat on and near the site. Two (2) migratory bird species, bald eagle and lark bunting, were identified as having the potential to be present within the project area. No nests were observed during the survey, however suitable nesting and foraging habitat was observed throughout the survey areas, including near Empire Reservoir. The Applicant committed to comply with all federal regulatory rules of Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. This includes conducting surveys to identify active nests within the area of impact, developing buffers to mitigate impacts during the mining operation and scheduling vegetation removal, trimming and grading activities outside peak breeding and roosting seasons. The Division finds the Applicant has provided the information required to address concerns regarding wildlife impacts at the site in accordance with Rules 3.1.8 and 6.4.8.

4. C.R.S. 34-32.5-112 Compliance

a. Concerns regarding compliance with C.R.S. 34-32.5-112 and the Division's Mineral Rules and Regulations (Equus)

The complaint from Equus Farms, Inc. was received during the public comment period for the original permit application submittal. The Objector stated any application amendment submitted by the Applicant should provide the information necessary to fully evaluate the impact of the proposed operation as required by C.R.S. 35-32.5-112. During the review period the Division generated two (2) adequacy letters. The Applicant addressed all adequacy issues to the Division's satisfaction. The Division determined the application amendment satisfied the requirements of C.R.S. 34-32.5-112.

5. Non-Jurisdictional Items

In these proceedings, the Division's jurisdiction is limited to enforcement of the specific requirements of the Act and Rules. The Division considers all timely submitted objections and comments in its review, but can address only the issues directly related to the specific requirements of an application amendment as stated in the Act and Rules.

a. Concerns regarding air quality, noise levels, nighttime lighting and traffic impacts (Bijou)

The Act and Rules do not specifically address traffic, traffic safety and road impacts for roads located outside of a permitted mining operation. These issues are under the jurisdiction of Weld County and the Colorado Department of Transportation. These issues should be addressed through the permitting processes of Weld County and Colorado Department of Transportation.

The Act and Rules do not specifically address impacts air quality, noise levels and nighttime lighting. The issue of air quality is under the jurisdiction of Weld County and the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment (CDPHE). The Applicant has committed to obtain an Air Pollution Emissions Notice (APEN) and Construction Air Permit from the CDPHE. The issues of noise levels and nighttime lighting are typically addressed at the local government level and not at the State government level. These issues should be addressed through the Weld County permitting process.

The Act and Rules do not authorize the Division to regulate air quality issues. However, the protection and preservation of stockpiled topsoil is addressed under the performance standards of Rule 3.1.9. Pursuant to Rule 3.1.9(1), where it is necessary to remove overburden in order to expose the mineable materials, topsoil shall be removed and segregated from other spoil. If such topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, vegetative cover or other means shall be employed so that the topsoil is protected from erosion, remains free of any contamination by toxic or acid-forming material, and is in a usable condition for reclamation. The Division has determined one year to be an appropriate time frame for the establishment of a protective vegetative cover for stockpiled topsoil, and requires the same for all mining operations throughout Colorado. The Applicant has committed to establish vegetation on the topsoil stockpiles and committed to taking appropriate erosion control measures to stabilize topsoil stockpiles and berms. The Applicant has indicated routine watering will be used for dust control.

Conclusion

Therefore, on October 23, 2019, the Office determined the application amendment satisfied the requirements of C.R.S. § 34-32.5-115(4), and issued its recommendation to approve the Construction Materials 112 application amendment for the Lost Creek Mine (AM-01), File No. M-2018-051.