



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

March 23, 2017

Ben Langenfeld
Greg Lewicki and Associates
3375 W. Powers Circle
Littleton, CO 80123

RE: Detroit City Mine; DRMS File No. M-2017-003; Preliminary Adequacy Review

Dear Mr. Langenfeld,

The Division of Reclamation, Mining and Safety (Division) has completed its preliminary adequacy review of your Limited Impact (110(1)) Reclamation Permit Application. The application was received on February 10, 2017 and was called complete for review on February 23, 2017. The decision date for this application is March 24, 2017. **Please be advised that if you are unable to satisfactorily address any concerns identified in this review before the decision date, it will be your responsibility to request an extension of the review period. If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division will deny this application.**

The review consisted of comparing the application content with specific requirements of Rule 6.1, 6.2, 6.3, and 6.5 of the Minerals Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations. In general the application was substantially adequate, however, as with most applications there are a few items that will require the submittal of additional information or clarification of the existing information. Inadequacies are identified under the respective exhibit heading along with suggested corrective actions to correct them.

1. As required by Rule 1.6.2(d) and 1.6.5(2), please submit proof of publication in a newspaper of general circulation in the locality of the proposed mining operation.
2. As required by Rule 1.6.2 (e), 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 including all easement holders located on the affected land and 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.



3. The Division received comments from History Colorado, Colorado Division of Water Resources, Colorado Parks and Wildlife and Mr. Robert Perkins. The letters are attached for your review. Please address the comments noted in the letters and make any changes to the application as necessary.

Application

4. The Application Form identifies the owner to the surface of the affected land as 'Sweet Home Rhodo, Inc.'. However, the Introduction section identifies the landowner as 'Rhodo Fund, LLC'. Please clarify this discrepancy.

6.3.2 Exhibit B – Site Description

5. As required by Rule 6.3.2(c), provide any information available from publications or monitoring data on flow rates, water table elevations and water quality conditions of water resources in the area of the proposed operation.

6.3.3 Exhibit C – Mining Plan

6. Colorado Calumet Co, Inc. has a Notice of Intent to Conduct Prospecting (P-2016-002) for the Detroit City Mine. Please describe how the proposed activities associated with the 110(1) Hard Rock Reclamation Permit application are related.
7. Please confirm that the existing portal associated with File P-2016-002 will be the same underground access point for the mining operation. If the same portal will be used, then specify the existing length of the portal as well as the total length to which the portal will be extended.
8. The Applicant has stated waste rock will be generated from the development of stopes and drifts. Please provide cross section drawings of stopes and drifts which will be developed. This information is necessary to evaluate potential impacts to the hydrologic balance.
9. The Applicant has stated drilling and blasting will be utilized to develop the underground workings of the mine. Please specify if any surface blasting will be conducted. If so, provide the Division with a blasting plan as required by Rule 6.5(4).
10. Specify if there will be any additional surface disturbance associated with the underground mine such as secondary escape ways or ventilation shafts. If there will be additional surface disturbance associated with mine features, then provide a detailed description of these features and located them on the Mining and Reclamation Plan Maps.

11. There is an existing structure located immediately below the existing portal on County Road 8. Please identify the owner of this structure and clarify if it is or will be used in conjunction with the mining operation. If the building is used for processing, storage of equipment, parking areas or other related uses, then this area is considered to be affected land as defined by Rule 1.1(4) and must be included in the permit boundary.
12. Please indicate if the Detroit City Mine will be operated more than 180 days each year or if it will be operated intermittently (less than 180 days per year) as defined in C.R.S. 34-32-103(6)(II).
13. Please specify how the portal entrance will be safeguarded from unauthorized entry.
14. The Applicant has stated water needed for underground drilling will be pumped from Buckskin Creek. The Division received comments from the Colorado Division of Water Resources which indicates that Colorado Calumet Co, Inc. will no longer use Buckskin Creek as the source of water for the proposed mining operation. As required by Rule 6.3.3(1)(h), the source of water used for the mining operation must be identified. Please specify the source of water for the Detroit City Mine.
15. Please describe how the Applicant will ensure that stormwater which is captured in the sediment pond is released to the stream system within 72 hours of capture.
16. Specify if the Applicant will need to remove trees in order to construct the Waste Rock Landform. If so, describe how the existing vegetation would be put to a beneficial as required by Rule 3.1.9(2).
17. Please specify where crushing will occur within the proposed affected area. In addition, specify where stockpiles of crushed material will be located.
18. The Mining Plan calls for installing ditches along the access and haul road, but does not specify where the stormwater collected in the ditches will discharge to. Please include a discussion of where stormwater collected in the ditches will report to.
19. Table C-2 identifies a Usable Pad Area which is 0.4 acres in size. Please describe how this area will be utilized. The Division has reviewed an aerial image of the site and there does not appear to be a level pad area as is depicted on Map C-2. If the area will need to be stripped of topsoil and vegetation and graded in order to accommodate mining activities, then the Mining and Reclamation Plans must be revised accordingly.
20. Please describe how the collection and diversion ditches around the Waste Rock Landform (WRL) will be constructed. Will the ditches be cut into native ground? Will the ditches be lined with riprap or other material?

21. The Mining Plan calls for constructing the WRL in stages. Please provide a brief description of the various stages. Will the construction of the WRL proceed from the bottom to the top?
22. As required by Rule 3.1.12(2), the boundaries of the affected area are to be marked by monuments or other markers. Given the irregularity of the proposed permit boundary and difficulty in maintaining boundary markers in a talus field, describe how the Operator will ensure the boundary is clearly delineated at all times.
23. Colorado Parks and Wildlife (CPW) has provided comments on the proposed operation. Specifically, CPW has raised concerns about the bighorn sheep lambing season which occurs between late April to mid-June. Pursuant to Rule 3.1.8(1), all aspects of the mining and reclamation plan shall take into account the safety and protection of wildlife on the mine site, at processing sites, and along all access roads to the mine site with special attention given to critical periods in the life cycle of those species which require special consideration. Please describe how the Applicant will minimize impacts to bighorn sheep during the lambing season.
24. The Applicant has stated that groundwater will not be intercepted by mining activities and has provided a cross section which illustrates the veins and faults in the vicinity of the mine. Please provide any available geologic maps of the mine and surrounding area which show all geologic and lithologic structures which could possibly act as conduits or barriers to groundwater flow. Be advised that if the Operator's mining activities result in a permanent discharge of water, the Operator will be liable for impacts to the hydrologic balance and assumes responsibility for remediation or treatment to the discharge to bring the water quality into compliance with applicable water quality regulation for as long as necessary, in perpetuity if needed.
25. Please specify if any groundwater was encountered in the underground workings during prospecting activities associated with File P-2016-002.
26. The Applicant has stated no acid or toxic producing materials will be generated as part of the mining activity at the Detroit City Mine. Aside from this statement, the Applicant has not demonstrated the waste rock which will be placed on a slope above Buckskin Creek is not acid generating. The Division will require the Applicant to conduct geochemical characterization of the waste rock. Specifically, the Applicant shall perform an acid-base accounting and whole rock analysis of the waste rock. The samples which are collected for testing must be representative of lithology and mineralogy of the waste rock. The samples should consist of a mixture of underground wall rock and rock from pre-existing stockpiles. The Applicant is strongly encouraged to submit a sampling plan for Division approval prior to conducting geochemical testing.

6.3.4 Exhibit D – Reclamation Plan

27. The Applicant has stated the seeding method will either be drill seeding or broadcast. As required by Rule 6.3.4(1)(c)(iv), please specify the seed application method to be used. Given site accessibility and the final reclaimed grade, broadcast seeding is the more appropriate method.
28. The reclamation cost estimate contains accounts for mulching the reclaimed areas. As required by Rule 6.3.4(1)(c)(v), specify the type of mulch to be applied, the application rate, and the crimping method.
29. The Applicant is proposing to plant douglas fir and lodgepole pine on the reclaimed lands. Please confirm if the Applicant has positively identified the tree species which are currently growing at the site. The Division believes Engelmann spruce and subalpine fir may be more appropriate species to plant.
30. Please describe the measures the Applicant will take to protect the tublings from grazing by wildlife.
31. The Applicant has provided a letter from the landowner which requests the access/haul road to remain in place following reclamation. The access/haul road and the associated drainage ditches will require ongoing maintenance to ensure that erosion does not occur. Full reclamation of the access/haul road will provide a more stable site configuration and an opportunity for the Applicant to establish additional areas of rangeland. The Division encourages the Applicant and landowner to include reclamation of the access/haul road in the Reclamation Plan. Please respond.
32. The reclamation cost estimate indicates the dimensions of the portal are 8' x 10'. However, the approved portal dimensions under File P-2016-002 are 10' x 12'. Please revise the reclamation cost estimate accordingly.
33. The Reclamation Plan calls for disking areas where topsoil is replaced. However, the reclamation cost estimate does not include a cost for disking. Please revise the reclamation cost estimate accordingly.
34. The reclamation cost estimate includes a cost for seeding the reclaimed areas. Please specify if the cost is for broadcast or drill seeding.
35. The reclamation cost estimate includes a cost for removing sea cans. Please clarify if this cost is for removal by a company which would reuse/recycle the sea cans or a cost to haul and dispose of the sea cans at a certified landfill.

36. Table D-1 lists Ferry's oatgrass as one of the species to be planted during reclamation. Please clarify if the Applicant intended to list Parry's oatgrass, rather than Ferry's oatgrass.
37. Table D-1 lists mountain brome and sheep fescue as species to be planted during reclamation. Both of these grasses are introduced species. Pursuant to Rule 3.1.10(1), the Division places an emphasis on the use of native species where revegetation is part of the Reclamation Plan. The Division requests the Applicant revise the seed mix on Table D-1 to include only native species.
38. The proposed seeding rate will result in 376 seeds/ft². Seeding rates are typically based on seeds per square foot and there is a wide range of acceptable seeding rates. However, the proposed seeding rate is too high for the intended post-mining land use. Please revise the seeding rate for the species on Table D-1. The Applicant may want to consult with the Natural Resources Conservation Service to determine the appropriate seeding rate.
39. The Reclamation Plan calls for leaving the diversion ditch above the WRL in place following reclamation in order to reduce erosion. In addition, the Reclamation Plan calls for removing the collection ditches when the WRL is reclaimed. If the collection ditches are removed, then any water diverted through the diversion ditch may lead to additional erosion in areas outside of the permit boundary. The Division will require the removal of all water conveyance structures during reclamation. The site will not be eligible for release until such time as the reclaimed areas are vegetated and stable.
40. As required by Rule 6.3.4(2), the reclamation cost estimate must provide haul and/or push distances when backfilling and grading are components of the Reclamation Plan. Please revise the reclamation cost estimate accordingly.

6.3.5 Exhibit E – Map

41. As required by Rule 6.3.5(e), please revise Map C-1 and Map C-2 to include a label for County Road 8.

6.3.6 Exhibit F – List of Other Permits and Licenses Required

42. Please indicate if the Water Quality Control Division was contacted to determine if a stormwater discharge permit is required for the proposed operation. The Division believes a stormwater discharge permit will be required.
43. Please indicate if a Park County Administrative Mining Permit will be required for this operation.
44. Please indicate if a watershed permit from the Town of Alma will be required for this operation.

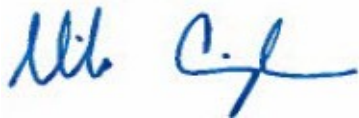
6.5 Geotechnical Stability Exhibit

45. The geotechnical stability exhibit describes the waste rock as poorly graded clean gravels. Please clarify if a gradation analysis was performed on the material or otherwise justify the classification of waste rock as poorly graded clean gravels.
46. The friction angle used in the geotechnical stability analysis was obtained from Table 3.1 Average Effective Shear Strength of Compacted Soils. The WRL will not be comprised of compacted soils, is there a more appropriate table from which internal friction angles can be obtained?
47. Describe how the waste rock will be placed on the slope to avoid settling and voids. Will it be end dumped? Will the material be placed in lifts? If so, how many lifts will be placed and to what depth? Will the material be compacted?

This concludes the Division's preliminary adequacy review of this application. Please remember that the decision date for this application is March 24, 2017. As previously mentioned, if you are unable to provide satisfactory responses to any inadequacies prior to this date, **it will be your responsibility to request an extension of time to allow for continued review of this application.** If there are still unresolved issues when the decision date arrives and no extension has been requested, the application will be denied.

If you have any questions, please contact me at (303)866-3567 x8116.

Sincerely,



Michael A. Cunningham
Environmental Protection Specialist

Enclosures (4)

CC: Wally Erickson, DRMS

March 10, 2017

Colorado Division of Reclamation Mining & Safety
1313 Sherman Street, #215
Denver, Co 80203

RECEIVED

MAR 10 2017

DIVISION OF RECLAMATION
MINING AND SAFETY

Re: Detroit City Mine, Park County, Colorado
Permit # M2017003

Dear Sirs,

This letter is in support of the proposed Detroit City Mine. The project will be an economic positive for the local community with added jobs and additional money pumped into the community. The operator, Calumet, Inc., has a history of operating in an environmentally responsible manner. It seems like a win-win for the State and local communities. I fully support this permit for the Detroit City Mine.

Sincerely,

Robert M. Perkins
3704 E. 134th Court
Thornton, CO 80241

MAE



RECEIVED

MAR 14 2017

DIVISION OF RECLAMATION
MINING & SAFETY

March 6, 2017

Michaela Cunningham
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, Colorado 80203

Re: Consideration of 110(1) Hard Rock Reclamation Permit Application, Detroit City Mine, Permit No. M-2017-003 (HC #71782)

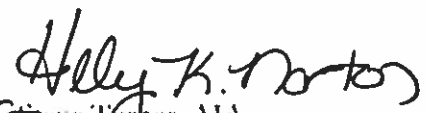
Dear Ms. Cunningham:

We received your correspondence dated February 24, 2017 on February 27, 2017 initiating consultation with our office under the State Register of Historic Places Act (CRS 24-80-1 et seq.) for the above referenced undertaking.

A search of our database indicates that no cultural resource inventory has been conducted within the proposed permit area and no properties of historical significance have been recorded therein. As most of Colorado has not been inventoried for cultural resources, our files contain incomplete information. Consequently there is the possibility that as yet unidentified cultural resources exist within the proposed permit area. The requirements under CRS 24-80 part 13 apply and must be followed if human remains are discovered during ground disturbing activities.

We thank you for the opportunity to comment. If we may be of further assistance, please contact Bob Cronk, Section 106 Compliance Manager, at (303) 866-4608 or robert.cronk@state.co.us.

Sincerely,


fr Steve Turner, AIA
State Historic Preservation Officer
ST/rc

**STATE OF
COLORADO**

Cunningham - DNR, Michael <michaela.cunningham@state.co.us>

CPW's Comments on the Detroit City Mine

1 message

Marette - DNR, Brandon <brandon.marette@state.co.us>

Wed, Mar 15, 2017 at 4:59 PM

To: Michael Cunningham - DNR <michaela.cunningham@state.co.us>

Good afternoon Michael,

Thank you for calling me back earlier today.

As mentioned, this proposed mine site (T8S, R78W, Sec. 33 or 3 miles NW of Alma), is located on the west side of Mount Bross at roughly 11,450 feet in elevation.

CPW's main concern for this development is mining activity during the bighorn sheep lambing season (late April to mid-June). As we discussed, site access may be limited due to inaccessible roads during the first part of this season. To the extent practicable, CPW would recommend activity occur after June 15.

Thank you for the opportunity to comment on this proposed development, as we strive for responsible development while protecting species during their most sensitive times of the year.

Should you or the operator have any questions about this recommendation, please feel free to contact me.

Best regards,

Brandon B. Marette

Northeast Region Energy Liaison

**COLORADO****Parks and Wildlife**

Department of Natural Resources

Direct (303) 291-7327

6060 Broadway, Denver, CO 80216

brandon.marette@state.co.us | cpw.state.co.us

THINK SAFETY FIRST!



COLORADO

Division of Water Resources

Department of Natural Resources

1313 Sherman Street, Room 821
Denver, CO 80203

Response to Reclamation Permit Application Consideration

DATE: March 8, 2017
TO: Michael A. Cunningham, Environmental Protection Specialist, Michaela.cunningham@state.co.us
CC: Division 1 Office, District 23 Water Commissioner
FROM: Sarah Brucker, P.E. *SB*
RE: Detroit City Mine, File No. M-2017-003
Applicant/Operator: Colorado Calumet Co., Inc.
Contact: Bryan Lees, (303) 918-1879
NW ¼ Section 33, Twp 8 South, Rng 78 West, 6th P.M., Park County

CONDITIONS FOR APPROVAL

- ☒ Exposure of ground water must not occur during or after mining operations.
 - ☒ The applicant will need to document that any water used at the site was obtained from a legal source, or was diverted in priority under a water right decreed for such mining/industrial use.
 - ☒ If stormwater runoff is intercepted by this operation and is not diverted or captured in priority, it must be released to the stream system within 72 hours; otherwise the operator will need to make replacements for evaporation.
-

COMMENTS: The subject application is for an underground mining operation on 4.99 permitted acres located along the west side of Mt. Bross near Alma, Colorado. The primary commodity to be mined at the site is mineral specimens. The site is proposed to be reclaimed to its current use as rangeland upon completion of this mining operation.

Ground water is not expected to be encountered during the proposed mining operation. There is not anticipated to be any drainage or discharge from the mining operation.

Approximately 1.0 acre-foot of water per year will be required for underground drilling and dust control on the surface. The March 2016 application prepared by Greg Lewicki and Associates indicated that water for this purpose would be pumped from Buckskin Creek using a water right available to the operator. In an email dated March 1, 2017, Ben Langenfeld of Lewicki and Associates indicated that this plan has been abandoned and no water will come from the creek. The new source of water for mining operations was not identified.

Runoff from the waste rock landform (WRL) is proposed to be conveyed by collection ditches to a sediment pond onsite. All stormwater runoff intercepted by this operation must be released to the stream system within 72 hours; otherwise the operator will need to make replacements for evaporation. The sediment pond is proposed to be removed during reclamation.

The Division of Water Resources asks that the reclamation permit not be approved until the source of water required for the proposed mining plan has been identified and our office has had the opportunity to evaluate its suitability. You or applicant may contact the State Engineer's Office with any questions.

