



June 10, 2021

Mr. Ed Lyons
MVE
228 County Road 251
PO Box 875
Westcliffe, CO 81252

Re: Lyons Pit, Permit No. M-2021-018; Second Adequacy Review for 110c Limited Impact Operation Reclamation Permit Application

Dear Mr. Lyons:

The Division of Reclamation, Mining and Safety (DRMS) has completed its review of your responses to our preliminary adequacy review (PAR), received June 4, 2021 for the Lyons Pit, Permit No. M-2021-018. **The current decision date for this application is June 11, 2021.** 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 DRMS may deny this application.

The following comments are based on the DRMS's review of your responses to the PAR and must be addressed by the applicant in order to satisfy the requirements of C.R.S. 34-32.5-101 et seq. and the Mineral Rules and Regulations of the Mined Land Reclamation Board. The PAR adequacy questions numbering sequence has been retained for tracking purposes.

APPLICATION

1. Item 3, Page 1, Permitted Acreage: The response was adequate.
2. Item 10, Page 3, Location Information: The response was adequate.
3. Item 10, Page 3, General Description: The response was adequate.
4. Item 11, Page 3, Primary Mine Entrance Location: The response was adequate.
5. Items 12 and 13, Page 4, Land Uses: The response was adequate.
6. Public Notice: The response was adequate.



7. Notice to all Mineral and Surface Owners, and Owners of Structures within 200 feet: The response was adequate.

6.3 SPECIFIC EXHIBIT REQUIREMENTS – LIMITED IMPACT OPERATIONS

6.3.1 EXHIBIT A - Legal Description and Location Map

8. Exhibit A: The response was adequate.

6.3.2 EXHIBIT B – Site Description

9. Exhibit B: The response requires additional information with respect to the soils description. Pursuant to Rule 6.3.2(a), a description of the site soil characteristics is required. Your response described the “mined material”. The DRMS needs a description of the soils that currently support the vegetation community. This is needed to assess whether the proposed topsoil and overburden salvage is adequate for reclamation and to better understand the existing soils capacity for vegetation. Please provide the following:
 - a. A description of the site soils (the local Soil Conservation Service can assist with this information).
 - b. A list... The response was adequate. No additional information needed.

6.3.3 EXHIBIT C - Mining Plan

10. Estimated End date of Mining Operations: The response was adequate.
11. Estimated Depths of Materials: The response requires additional information with respect to the overburden thickness. As discussed in Comment 18 below, the DRMS is concerned with the potential success of the revegetation effort. DRMS reclamation experience in pinyon-juniper areas indicate a minimum of six inches of growth media is necessary for the re-establishment of grasses. With apparently only one to two inches of salvageable topsoil available onsite, another four to five inches of growth media will be needed. You have indicated “some” overburden will be salvaged for reclamation, but as no overburden thickness has been provided, the DRMS does not know whether the site has sufficient available growth media for reclamation. Please provide an estimated thickness of overburden as required by Rule 6.3.3(c).
12. Blasting: The response was adequate.
13. Mining verses Groundwater Depth: The response was adequate.
14. Water usage: The response requires additional information with respect to water usage. You indicated a 6,000 gallon truck would bring water from Westcliffe. Please provide an estimate of how often (daily, weekly, etc.) the 6,000 gallon water truck would need to bring more water to the site.
15. Water Rights: The response was adequate.

16. Hydrologic Impacts: The response requires additional information with respect to the “4-inch riprap sediment/catchment pond”. Please indicate if this pond will be removed for final reclamation, and if so, how. Will the riprap be removed or buried, will the pond be filled in, etc.?

17. Noxious Weed Plan: The response was adequate.

6.3.4 EXHIBIT D – Reclamation Plan

18. Reclamation Performance Standards: The response requires additional information with respect to topsoil. As discussed in Comments 9 and 11, the DRMS is concerned about there being adequate growth media for successful reclamation.

a. Based on Rule 3.1.9:

- i. If there is only 1 – inches of topsoil onsite, where will the necessary additional 4 – 5 inches of growth media come from?
- ii. What method(s)... The response was adequate.
- iii. Describe measures... The response was adequate.

b. Rule 3.1.10 requires the following:

- i. A seed mix (in pounds of pure live seed per acre). This is necessary to generate a reclamation cost estimate and assess the adequacy of the proposed seed mix (*an example is provided in Attachment A*);
- ii. Number (trees per acre)... The response was adequate.
- iii. Method(s)... The response was adequate.

c. Rule 3.1.12(2)... The response was adequate.

19. Overburden replacement: A revised Reclamation Plan - Exhibit D map and Land Owners – Exhibit E map are required based on the responses to Comments 9, 11 and 18a. The replacement of the combination of topsoil and overburden (i.e., growth media) will need to be a minimum of six inches.

20. Stream Diversion Reclamation: The response was adequate

21. Access Road: The response was adequate

22. Reclamation Costs: The response requires additional clarification

- a. For the purpose of generating a reclamation cost estimate, please explain what is meant by “mining towards reclamation” (second page of Exhibit D, second sentence in the fourth paragraph). Our reclamation cost estimate will need to account for any flattening of mined slopes to the 3H:1V and 2H:1V reclaimed slopes shown on Reclamation Plan - Exhibit D map and the “Working benches 30’/20” (discussed in the second sentence of the third paragraph on the second page of Exhibit C). A sketch

of a cross-section of the active mine slope vs. the 3H:1V and 2H:1V reclaimed slope would be very helpful in understanding active vs. reclaimed slopes.

- b. The volume of topsoil and overburden will need to be updated to reflect the minimum six inches of growth media. Our estimate is 8,010 cubic yards.

6.3.5 EXHIBIT E - Map

- 23. Exhibit Map Requirements: The response was adequate
- 24. Land Owners and Structures: The response was adequate.
- 25. Reclamation Features: As indicated in Comment 19, the Exhibit E map will need to be revised to show the average thickness of replaced overburden (and topsoil) is at least six inches.

6.3.7 EXHIBIT G - Source of Legal Right to Enter

- 26. Right to Enter: The DRMS has discussed the right to enter for both surface and mineral access for this site with Ms. Amber Sanderson and Ms. Stephanie Carter of the BLM. It is our understanding that the Lyons Quarry NEPA EA has been signed, thereby providing the right of entry to the surface, but that a BLM issued mineral material contract is required prior to any disturbance (including right to enter for mineral access). Furthermore, the BLM cannot issue the contract until after the DRMS approves the reclamation permit. As such, providing all other adequacy issues are satisfactorily addressed, the DRMS will issue a conditional approval of this reclamation permit, requiring the BLM issued contract be provided to the DRMS prior to initiating any disturbance on site.

6.3.8 EXHIBIT H - Municipalities Within Two Miles

- 27. Clarification: The response was adequate.

6.3.12 EXHIBIT L – Permanent Man-Made Structures

- 28. Eligible Structures: The response was adequate.

NOTICE TO MINERAL/SURFACE & OWNERS OF STRUCTURES WITHIN 200 FEET

- 29. Rule 1.6.2(1)(e) Notices: The response was adequate.

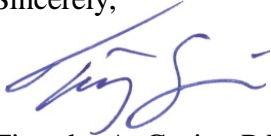
ADDITIONAL COMMENTS

- 30. Access Road Culvert Size: The original Exhibit C indicated the culvert proposed under the new access road would be 24 inches in diameter. The revised Exhibit C indicates this will be an 18-inch diameter culvert. Please explain why the size was reduced.

Please remember that the decision date for this application is June 11, 2021. 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 may be denied. If you have any questions, please contact me at (303) 328-5229.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tim Cazier', with a stylized flourish at the end.

Timothy A. Cazier, P.E.
Environmental Protection Specialist

ec: Michael Cunningham, DRMS
DRMS file
Vi Lyons, MVE
Amber Sanderson, BLM

ATTACHMENT A

Example Seed Mix with Pounds of Pure Live Seed per Acre

c. **Zone 3, Pinyon-Juniper (Sagebrush Steppe, Western Plateau)**

Site Description: The elevation of the foothills ranges from 6,000 to 7,500 feet. The general region is the transition zone between the plains and the montane. Annual precipitation average is around 9 inches per year. The average annual high temperature is 65°F with average annual low temperature of 40°F.

Seed Mix	Common Name	Scientific Name	Application Rate PLS (pounds of pure live seed per acre for Drill seeding. Double rate for broadcast seeding
Grasses	Indian Ricegrass	<i>Acnatherum hymenoides</i>	1.85
	Western Wheatgrass	<i>Pascopyrum smithii</i>	2.76
	Needle and thread	<i>Hilaria jamesii</i>	3.03
	Galleta	<i>Elymus elymoides</i>	2.19
	Basin wild rye	<i>Leymus cinereus</i>	3.03
Forbs	Scarlett globemallow	<i>Sphaeralcea coccinea</i>	0.25

A seed mix recommendation can be obtained from the local office of the Natural Resource Conservation Service, United States Forest Service, or the Bureau of Land Management.