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September 10, 2024

To: Patrick Lennberg
Environmental Protection Specialist
Colorado Division of Reclamation Mining and Safety
Office of Mined Land Reclamation (OMLR)
1313 Sherman Street, Room 215
Denver, Colorado 80203

From: Garrett Varra
Raptor Materials LLC
8120 Gage Street
Frederick, Colorado 80516

Subject: Parcel 124 – Two Rivers Sand, Gravel, and Reservoir Project, File No. M-2022-013;
Technical Revision (TR-01), Materials Processing Area and Wash Pond Relocation and Conveyor
Removal; Adequacy Review No.2 RESPONSE

Dear Mr. Lennberg,

The Division of Reclamation, Mining and Safety (Division/DRMS), Office of Mined Land Reclamation (OMLR), reviewed the contents of the Technical Revision (TR-01) for the Materials Processing Area and Wash Pond Relocation and Conveyor Removal for the P124 – Resource Development Project (RDP), File No. M-2022-013. Raptor Materials received a Preliminary Adequacy Review (PAR) dated July 18, 2024. Following submittal of the Preliminary Adequacy Response on August 22, 2024, Raptor Materials received Adequacy Review No. 2 of the TR-01 on August 28, 2024.

Raptor's second adequacy responses below follow the comments from the adequacy review and are highlighted in blue font for clarity.

DRMS Comment no.1

Please provide a detailed summary of the proposed changes in Exhibit L compared to what was approved during the original application process (specifically Exhibit L provided during adequacy review response no. 4). At a minimum, it appears the Operator is proposing to reduce the reclamation liability by reducing the area proposed to be disturbed during the initial phase of

mining from 70.21 acres to 51.07 acres. While the relocation of the processing and plant area eliminates the need for a conveyor system.

See the executive summary on pages 2 – 3 of the updated Exhibit L text for a summary of the changes to Exhibit L associated with the Two Rivers Technical Revision 1 ("P124 TR01").

A marked-up version of Exhibit L that shows all changes from the original Two Rivers permit submittal was provided to Rob Zuber informally via email separate from the official online submittal, in order to facilitate review. A copy of that marked-up version will be forwarded.

DRMS Comment no.2

In Exhibit L, page 2, the area of the yellow hatched area needs to be provided. The area dimensions must be clearly shown on the Exhibit L map.

The 50.11-acre initial extraction area (yellow hatch on Exhibit L) is stated on page 4 of Exhibit L. The acreage has been added to the map Exhibit L and Exhibit C-2.

DRMS Comment no.3

In Exhibit L, page 4 second paragraph, it is stated that the initial excavation will be 51 acres resulting in 4,310 ft of external perimeter pit wall. In the original application the initial excavation was to 40 acres resulting in 6,200 ft of external pit wall. Please explain the difference.

The initial excavation area has been corrected to 50.11 acres. The external perimeter pit wall length has been corrected to 4,294 feet and the advancing highwall length has been corrected to 1,882 feet, for a total of 6,176 feet of pit wall. These lengths are reflected on the updated Map Exhibits C-2 and L. The reasons for these changes have been added to the executive summary of Exhibit L.

DRMS Comment no.4

In Exhibit L, page 4 third paragraph, there appears to be a discrepancy between the lengths provided in this paragraph compared to the preceding paragraph, please clarify.

The lengths have been corrected. The sum of the walls with different slopes (2,089 ft at 2H:1V and 4,087 ft at 1.25H:1V) is equal to the total excavation perimeter (6,176 ft).

DRMS Comment no.5

Please explain how the volume of water to be removed from the 51.1 acres was calculated in the dewatering task. The Division used the calculation method detailed in the approved exhibit and arrived at a different volume which in turn results in a different cost estimate.

The volume of water ponded within the revised 50.11-acre excavation, to be removed as part of the initial dewatering cost estimate line item was calculated using a surface volume calculation in a 3D CAD program. A statement to this effect has been added in the third

paragraph on page 6 of the Exhibit L text. The method in the originally-approved Exhibit L uses an average storage for the Central Field, multiplied by the initial excavation area.

DRMS Comment no.6

The 30-day dewatering volume calculation appears to have been calculated incorrectly, please verify and update as needed.

The calculation has been updated with the corrected quantities. See comment in Exhibit L text P124 TR01 Executive Summary regarding rounding errors and significant digits.

DRMS Comment no.7

In the grading task, page 5, the highwall lengths need to be consistent with the lengths provided in the preceding sections.

Lengths have been corrected and updated in this section and throughout the report.

DRMS Comment no.8

The highwall length to be excavated at 2H:1V length of 2,121 feet could not be verified on Map C-2. The length closest to this value is the 2,150 feet along the southern portion of yellow hatched area. Should these two lengths be the same or what accounts for the difference? Exhibit L map needs to be updated with a consistent length to be used.

The 2H:1V highwall length has been corrected to 2,089 feet. The Exhibit L text, financial warranty estimate, and Exhibit Maps C-2 and L have been updated accordingly.

DRMS Comment no.9

The highwall length to be excavated at 1.25H:1V length of 4,069 feet could not be verified on Map C-2. The combined lengths of the three remaining highwall faces of the yellow hatched area combine to a lower value of 3,937 feet. Please clarify the discrepancy. Exhibit L map needs to be updated with the lengths clearly depicted that sum to the value to be used.

Map Exhibit L has been updated to reflect the correct highwall lengths (2,089 ft at 2H:1V and 4,087 ft at 1.25H:1V).

DRMS Comment no.10

Please provide a figure or describe where the 1,880 foot of advancing wall is located. The Division assumes this is the eastern wall of the yellow hatched area.

The 1,882-foot advancing wall is the eastern wall of the yellow hatched area. A call-out has been added to Map Exhibits C-2 and L. Additionally, the wall is described in the second paragraph on page 4 of the Exhibit L text; an additional description has been added to the fourth paragraph on page 5.

DRMS Comment no.11

Please provide a figure or describe where and how the 4,320 foot extraction limit wall was calculated.

The length of the pit extraction wall limit has been corrected to 4,294 feet. This length is the sum of the north (1,290 ft), west (915 ft), and south (2,089 ft) pit walls of the initial excavation area that coincide with the final pit excavation limits.

DRMS Comment no.12

A cost estimate calculation for the keyway at the base of the liner was not provided, please provide this calculation or if it is not required provide an explanation as to why.

The methods for calculation of the financial warranty elements were redone as part of the P124 TR01 to better align with the DRMS's approach (using the CIRCES software). The keyway quantities are integrated into overall liner cost calculations.

DRMS Comment no.13

In the currently approved Exhibit L there is a cost for a perimeter liner at 3H:1V. Why was a similar liner cost estimate not provided in the exhibit currently under review?

The methods for calculation of the financial warranty elements were redone as part of the P124 TR01 to better align with the DRMS's approach (using the CIRCES software). The perimeter liner quantities are integrated into overall liner cost calculations. Additionally, the 3H:1V perimeter liner itemized in the originally-approved Exhibit L was associated with the internal core wall, which has been removed from the updated mining plan.

DRMS Comment no.14

Please review the volume calculation for soil replacement on 4.8 acres on the Center of the Central Field, the Division calculated a lower volume of material needed.

See comment in Exhibit L text P124 TR01 Summary regarding rounding errors and significant digits. This acreage has been refined in the Exhibit L text to 4.83 acres so that hand calculations based on the text quantities will more closely reflect the calculated volume.

DRMS Comment no.15

Costs for the establishment and reseeding are not correctly calculated as shown on page 12. Please verify the calculations and update the costs accordingly.

The re-seeding calculations submitted in P124 TR01 were completed using the same unit cost and failure rate as in the DRMS's March 2023 Reclamation Cost Estimate. The text on page 13 of Exhibit L has been modified to better reflect this. All calculations in this section have been updated with corrected quantities, and costs updated accordingly.

Please find attached the following documents as our response:

- Updated Report Exhibit E – Reclamation Plan
- Updated Report Exhibit L – Reclamation Costs
- Updated Map Exhibit C-2 – Extraction Plan Map
- Updated Map Exhibit L – Financial Warranty Map

The current decision date is September 19, 2024.

Regards



Garrett Varra