June 26, 2017

Mr. Chris Yde
Reclamation Program Supervisor
Department of Environmental Quality
Permitting and Compliance Division
P.O. Box 200901
Helena, MT 59620-0901

Permit ID: C2011003F
Revision Type: NA
Permitting Action: Deficiency Response
Subject: Sixth Round Acceptability Deficiency Response

Dear Chris:

Included in this submittal are WECo’s response to the Department’s deficiency letter date June 5, 2017:

**ARM 17.24.303:** In the 5th round deficiency responses, Western Energy submitted a revised Table 303-2 indicating the estimated annual production and acres disturbed over the life of the permit amendment. Up until this revision, Table 303-2 was based on the estimated production and acres of disturbance relative to Area F, taking into consideration the effect that mining in previously approved mine areas would have on the estimated production and acres of disturbance in Area F. The revised Table 303-2, however, also took into account the effect that proposed mining in Area B AM5 may have on the annual production and acres disturbed relative to Area F. While an amendment application seeking approval to mine in Area B AM5 has been submitted to DEQ, DEQ has not approved the mining in Area B AM5. Therefore, any approval of Area F based on the revised Table 303-2 would be premised on DEQ’s future approval of Area B AM5 and would be predecisional. DEQ must retain complete discretion to approve or deny Area B AM5 based on the merits of that amendment application. Therefore, DEQ believes that Table 303-2 as it existed before the 5th round of deficiencies accurately reflects the estimated annual production and acres of disturbance relative to Area F at this point in the permitting process.

Please work with DEQ staff to verify the production numbers on table 303-2 and the years of mining on the mine life maps and are reclamation maps.

Response: Please see ARM 17.24.303(1)(a). Table 303-2 has been revised to reflect the estimated annual production.

**ARM 17.24.312(1)(d):** Appendix N-1 presented a conceptual approach to developing mitigation options for impacted wetlands at a future date, informed by the results of functional wetland assessments. Those assessments have now been completed and Appendix N-1 has been updated. Appendix N-1 does not have all wildlife data included in regards to species of concern in the
area. Specifically, bats identified in Area F (Hoary Bat Lasiurus cinereus and Little Brown Myotis Myotis lucifugus) have not been included. Please ensure this information is checked against the Rosebud wildlife monitoring and baseline information and is consistent with the monitoring results.

Response: Please see Appendix N-1. Appendix N-1 has been update to satisfy this deficiency.

**ARM 17.24.312(1)(d):** Appendix R provides baseline information regarding aquatic surveys conducted on 10 wetlands within and adjacent to the proposed Area F permit boundary. The cover page for Appendix S is the cover page for Appendix R. Please update Appendix S to have the correct cover page.

Response: Please see the cover page for Appendix S. The cover page has been corrected, but the information remains the same in the report.

**ARM 17.24.313(1)(c):** The following deficiencies must be addressed.

1. In accordance with the time curves for the 777D trucks, a 1.7 minute cycle time for a 2,965’ long, -3.2% grade is conservatively high for the haul and return times. Using a 0% rolling resistance (there are no negative rolling resistances depicted on the graph) it appears the haul time would be between 1.1 and 1.2 minutes. The empty return time with a 7.2% rolling resistance would take ~1.4 minutes.
2. The number of trucks required should drop if the above haul and return time assumptions are correct. If when rounding to the next whole number of trucks is three, then the truck hours must be 3 times the loader hours.
3. The hour column for Loader/Truck Fleet on page G-3 of the bond did not update and thus the costs are not correct.
4. Please update the date of revision on all pages of Exhibit G – 3.

Response: Please see Exhibit G. The requested parameters have been revised.

**ARM 17.24.313(1)(c):** The costs listed in Exhibit G, on page 10, for groundwater and surface water monitoring are inadequate. These costs should represent the cost, by a third party consultant, to conduct all of the monitoring listed in the proposed MQAP in Appendix P for a period of 12 years (2 years to complete reclamation plus 10-year responsibility period). Applying WECo’s current method for estimating vegetation and wildlife monitoring costs using a 3-year average of actual costs would be an appropriate method to also use for groundwater and surface water monitoring; however, the updated Exhibit G did not use this method for surface water and groundwater monitoring costs.

Response: Please see the monitoring cost section in Exhibit G. After review of the third party contractor contract, it appears that the surface water, ground water and MPDES monitoring is included in the contract pricing. Thus, the costs have been broken down into surface water and ground water monitoring together and separated MPDES into a stand alone monitoring item.

MPDES monitoring cost were recalculated using the 3-year average method; however, the old method of calculation for MPDES monitoring was not removed from Exhibit G. Please remove the old MPDES monitoring calculation (Subtotal $26,590). Using the timeframe of 12 years for MPDES monitoring may overestimate MPDES monitoring costs. WECo may make a reasonable assumption that MPDES monitoring will cease when outfalls achieve western alkaline status.
Response: This portion of the calculation of monitoring costs have been removed.

The costs for monitoring well plugging should be based on the cost per linear foot for the total linear feet of the monitoring wells listed in Appendix P (including inactive wells which have not been plugged) and the costs to remove equipment at surface water stations should include all of the stations listed in Appendix P (including any inactive stations where equipment has not been removed). These cost estimates were not modified in response to the last deficiency.

Response: After discussion with DEQ personnel, the well plugging costs per well are adequate. Pricing out the cost of Bentonite and the labor associated with plugging each well is below the $750 per well.

The calculations for cost estimates for vegetation monitoring, wildlife monitoring, noxious weed management, and MPDES monitoring include a breakout of “permitted acreage” for Area G. The acreage listed is not permitted, and is proposed as an amendment to Area B, not a separate mine area. The Area G acreage should not be included in these calculations.

Response: Area G acreage has been removed from the monitoring cost.

**ARM 17.24.314(2)(a):** Exhibit D does not indicate how drainage will be controlled on the portion of the F4 ramp road which crosses the eastern tributary of Donley Creek (DCT-1). Please clarify how drainage in this area will be controlled by indicating on Exhibit D the direction of water routing and ditches along this ramp crossing.

Response: Exhibit D and Pond F-10 have been updated to include the portion of DCT-1.

**ARM 17.24.314(2)(d):** In Appendix P, Table P-1, footnote (a) states: "The official stream classification is C-3, however the streams can be classified as ephemeral." The ephemeral condition of the streams in the area is not a classification. Please change this note to read: "The official stream classification is C-3; however, the typical flow condition at most of the stations is ephemeral."

Response: The footnote was revised as requested.

**ARM 17.24.314(2)(d):** Appendix P, Appendix P-8, Section 1.4.1 on page 4 states that Spring 5 is located in the Robbie Creek drainage. Please correct this to the Donley Creek drainage.

Response: The Appendix P-B narrative was corrected as specified.

**ARM 17.24.314(2)(d):** In Appendix P, Table P-4, please change the frequency of laboratory water quality sampling and field parameter sampling for well WM-208 to annual.

Response: The laboratory sampling frequency was revised as specified.

**ARM 17.24.314(3):** In Appendix O, Section 3.3.2 on page 24, the second bullet from the bottom of the page refers to the A/D coal. Please revise this bullet to be relevant to the geologic units present in Area F.

Response: The narrative was revised per the comment.

**ARM 17.24.314(3):** In Appendix O, Section 3.2.2 page 16 states sediment modeling results are in Appendix V. Please change this to the correct reference, Appendix U.

Response: The narrative was revised per the comment.
**ARM 17.24.314(3):** In Appendix O, Section 3.4.3 does not discuss the potential for impacts to Wetland F061. This wetland is located in the area identified in Figure 0-6 where reduced flow to the alluvium from bounding strata is most likely. Please include a description of the potential impacts to wetland F061, or the rationale why no impacts are anticipated. Appendix N-1 also discusses wetland F061. Please ensure that permit material is consistent between the PHC and Appendix N-1.

Response: Narrative was added to Section 3.4.3 and 2.5.3 to clarify why no impacts to Wetland F061 are expected.

**ARM 17.24.314(3):** Appendix O, Section 6.3 on page 64 refers to measurements of water depth in wetlands using units of feet. The ERM 2015 report cited by this section uses units of meters. Please correct this discussion to use the correct units.

Response: This comment was interpreted to refer to Section 6.3 of permit Appendix B. In this appendix, the water measurements were converted to feet to be consistent with the units used in the rest of the report.

**ARM 17.24.314(3):** In Appendix O, Table O-3, several comments under Rationale refer to Table O-6 for spring impacts. Please correct these references to point to Table O-7, Springs – Impact Assessment.

Response: Table O-3 was revised as specified.

**ARM 17.24.314(3):** In Appendix O, Figure 0-3, the permitted mine cuts are not accurate. These mine cuts should be updated to include changes to the mine plan approved for Area A (MR84), Area B (MR76), and Area C (MR129).

Response: Figure 0-3 was revised per the comment.

**ARM 17.24.314(3):** Appendix O, Figure O-4 does not match Exhibit A. Please correct this figure to match the currently proposed mine plan. Please also update the mining footprint in Figure O-5, and the mine passes and disturbance boundary in Figure O-7 and Figure O-8.

Response: Figures O-4, O-5, O-7, and O-8 were revised per the comment.

**ARM 17.24.315(1)(a):** In Appendix T, several pond designs do not reflect changes made to drainage control structures in response to comments on Exhibit D. The previous disturbance boundary is shown on the designs for ponds F-2, F-3, F-4, F-5, F-6, F-9, F-13, F-21, F-24, F-29, and F-30. Trap TA-F1 was eliminated but still appears on the designs for ponds F-2 and F-3. Trap TA-F11 was eliminated but still appears on the designs for ponds F-5 and F-6. Trap TA-F37 was eliminated, but still appears on the designs for ponds F-29 and F-30. The previous location of trap TC-F27 and culvert C&L-14 are shown on the design for ponds F-17, F-25, and F-27. The previous location of trap TA-F8 is shown on the design for Pond F-3. The previous locations of traps TA-F9 and TA-F10 are shown on the design for Pond F-4. The designs for ponds F-2 and F-6 still show the previous orientation of culvert F-HR-2. The design for Pond F-7 shows the previous orientation of culvert F-HR-4. The pond F-4 and F-6 designs show the previous PMT. Please update these pond designs to be consistent with Exhibit D.

Response: Designs for Ponds F-2 through F-30 and Appendix J Table 9 have been updated to reflect the current information depicted on Exhibit D.
ARM 17.24.321(1)(a): Exhibit O and Exhibit P2 show the previous disturbance boundary. Please correct these exhibits.

Response: Exhibits O and Exhibit P2 have been updated with the proposed disturbance boundary.

Appendix G

Selenium was suspect in the original test results for the soil baseline study. This has been determined to be due to laboratory error. With the reduced selenium hazard a lengthy discussion in the baseline survey is confusing and not necessary.

Please update the selenium section of the baseline study to match the more current data. Reduce the discussion of the laboratory error to simply note the process occurred.

Response: Please see Appendix G. The discussion on selenium has been revised.

WECO is working diligently to produce a quality product, if you have any questions or you find something amiss, please contact me at (406) 748-5124.

Sincerely,

Dicki Peterson
Permit Coordinator
Western Energy Company
Rosebud Mine – Area F
Phone: (406) 748-5124
Fax: (406) 748-5202
dpeterson@westmoreland.com

Enclosures: C2011003F Deficiency Response #6 2017-06

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From: File Transfer Service <TransferService@MT.gov>
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<td>MESSAGE:</td>
<td>Fold 2 of 5 Dicki Peterson Permit Coordinator WESTERN ENERGY COMPANY - Rosebud Mine A Subsidiary of WESTMORELAND COAL COMPANY PO Box 99 Colstrip, MT 59323 <a href="mailto:dpeterson@westmoreland.com">dpeterson@westmoreland.com</a> Phone: (406)748-5124</td>
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<td>Here is the last one. Dicki Peterson Permit Coordinator WESTERN ENERGY COMPANY - Rosebud Mine A Subsidiary of WESTMORELAND COAL COMPANY PO Box 99 Colstrip, MT 59323 <a href="mailto:dpeterson@westmoreland.com">dpeterson@westmoreland.com</a> Phone: (406)748-5124</td>
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