



February 24, 2020

*Sent via ePermit system*

Dicki Peterson  
Western Energy Company  
Rosebud Mine Area B  
PO Box 99  
Colstrip, MT 59323

Permit ID: C1984003B  
Revision Type: Permit  
Permitting Action: Deficiency  
Subject: C1984003B; Round 5 Acceptability Deficiency

Dear Dicki:

The Department of Environmental Quality (DEQ) has completed its acceptability review regarding Western Energy Company's application for SMP C1984003B. The following deficiencies must be adequately addressed before DEQ can determine the application acceptable:

**ARM 17.24.303(1)(o):** The previous deficiency inadvertently listed the incorrect legal description, please either identify where the Surface Lease information for Section 36, T1N, R40E is located or upload the information under Status of Private Mineral/Surface Estate.

**ARM 17.24.303(1)(s):** Pursuant to ARM 17.24.302(1), please reorder mine cuts BXS 70, 71, and 69 in Table 303-3 to BXS 69, 70, and 71.

**ARM 17.24.304(1)(j):** Please provide methods and results of any greater sage grouse survey. If no survey was conducted, please explain.

**ARM 17.24.308(1)(a):** Following discussion with DEQ and pursuant to ARM 17.24.308, please update the descriptions in Table 308-1 for stockpiles 14, 15, 16 and 17. Stockpiles 14 and 15 should incorporate boxcut material from mine cut 89 and describe the final destination of that spoil. Stockpiles 16 and 17 should incorporate boxcut material from mine cut 89-1 and describe final destination of that spoil.

Stockpile SS-9 footprint overlaps with the Rich-1 pond design cut area. This appears to remove nearly 4 acres of the stockpile footprint. Please review SS-9 footprint, Rich-1 pond design, and the topsoil stockpile located near the Rich-1 pond and adjust accordingly to accommodate adequate area for SS-9 materials.

February 24, 2020

Page 2 of 9

**ARM 17.24.312(1)(d)**: Stated measures to minimize impacts to wildlife resources are insufficient. Please include measures outlined in the USFWS Nationwide Standard Conservation Measures (for migratory birds). Including seasonality of disturbance and construction methods. In addition, prior to disturbance (including construction of haul roads) surveys should be conducted to determine presence of migratory bird nests, grouse leks, active snake hibernacula, and active mammalian predator dens.

<https://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

**ARM 17.24.312(1)(d)(ii)**: Consultation with MT DNRC is needed to determine potential impacts to greater sage grouse and associated habitats. List any conservation measures that will be used to avoid, minimize and restore habitats and if any compensatory mitigation is warranted. Please provide the letter of compliance and DNRC recommended actions into the permit.

**ARM 17.24.313(1)(c)**: DEQ acknowledges Western Energy's commitment to submit a revised bond after the PMT plan is acceptable.

**ARM 17.24.313(1)(d)(iv)**: On "Area B AM5 Exhibit B PMT Drainage Basins 2019-09 SP.pdf" there is an extraneous "branch" of the 3,550-contour line at the headwaters of drainage Rich 49. Please correct this apparent drafting error.

**ARM 17.24.313(1)(f)(i)**: The detailed designs in "Exhibit V1-V14 Westmoreland BXS Stream Analysis 20190729.pdf" are adequate for permitting, but more detail will be necessary prior to construction of the major reclaimed drainages. Please include a commitment to submit and receive approval for drainage designs based on a maximum of 2-foot contours for the Richard Coulee mainstem throughout the disturbed area and for the Lee Coulee mainstem in Section 23 and 24 in "17.24.313(1)(f) Drainage Basin Reclamation Plan.pdf".

**ARM 17.24.313(1)(f)(ii)**: The nick point identified during the previous round in the PMT where the Richard Coulee North Fork crosses the pit boundary (E 2,664,341; N 585,943) remains. Contrary to the deficiency response letter (p. 4) no changes to the PMT were made in this area. Please adjust the 3,560 and 3,570 contour lines to accommodate a more even transition in the channel profile.

**ARM 17.24.313(1)(g)(i)**: ARM 17.24.313 (1)(g)(i and ii) Indicate the baseline soil survey to contain soil salvage depths and handling information. This plan is also included in ARM 17.24.701(2).

Please incorporate ARM 17.24.701(2) as an additional reference to soil salvage and handling in ARM 17.24.313(1)(g)(i and ii).

**ARM 17.24.313(1)(g)(ii)**: ARM 17.24.313 (1)(g)(i and ii) Indicate the baseline soil survey to contain soil salvage depths and handling information. This plan is also included in ARM

February 24, 2020

Page 3 of 9

17.24.701(2).

Please incorporate ARM 17.24.701(2) as an additional reference to soil salvage and handling in ARM 17.24.313(1)(g)(i and ii).

**ARM 17.24.313(1)(h)(iv)**: Common reed (*Phragmites australis* ssp. *australis*) is listed as a Priority 1A Noxious weed in Montana. Please remove from your lowland seed mix and any other seed mixes.

Phalaris should not be included in seed mixes. Include native species found premine. When Reed canary grass (*Phalaris arundinacea*) becomes established it creates a monoculture causing abundance and biodiversity of native species to decline.

**ARM 17.24.314(2)(a)**: DEQ cannot complete its review of drainage control for the Richard Haulroad in Section 28 until the design is updated for the premine topography.

**ARM 17.24.314(3)**: The following deficiencies were identified in "Appendix O B AM5 PHC R4.pdf":

Section 1.5 on pages 8 and 9 must be revised to reflect the approval of Area F. The discussion of Area F currently in Section 1.5.3 should be updated and included in Section 1.5.1.

In Section 3.2 on page 11, the third paragraph refers to Figures 8 and 10. This reference should be to Figures 8 and 9.

Section 3.3.2.3, on p. 84 states: "As the sediment ponds are designed to retain up to the volume of runoff produced by the theoretical 10-year 24-hour storm event, runoff from larger events will discharge to the main channels and be available to downstream users." However, Permit Section 17.24.315 (17-24-315 Plans for Ponds and Embankments.pdf) states "...ponds designed to be constructed in the Rosebud Creek tributaries are designed to contain the runoff from the 100-year 24-hour design storm to ensure that discharges can be avoided..." These statements are in conflict with each other, please change this section of the PHC to analyze the impacts of the ponds as designed.

In Section 3.3.4.2 on p. 89 there are references to "potential" impacts from mining. According to ARM 17.24.314 the application must include a determination of "probable" hydrologic consequences. Please determine what, if any, "potential" impacts are "probable" and state these conclusions in the PHC.

Section 3.3.4.5 on p. 92 states Wetland G012 "could potentially be impacted by mining." Please determine if impacts to this wetland are probable, and so state in this section.

Section 3.3.4.6 refers to Permit Appendix R for the results of the aquatic life surveys. DEQ could not locate an Appendix R in the ePermit system. Aquatic life survey reports are contained under Baseline -> Wildlife Survey ("02 Appendix F - Area B-Extension South

February 24, 2020

Page 4 of 9

Benthic Macro Report 2015\_ERM.pdf" and "04 Appendix F - Area BXS Macro Survey\_2016\_10-13.pdf"). Please correct this cross-reference.

Section 3.3.5 on p. 95 states "Similarly, the quality of the groundwater sourcing these impoundments does not show observed impacts from prior mining and the water quality in those impoundments should remain similar to current with the proposed AM5 mining." It is unclear which impoundments this paragraph is referring to, as only one impoundment (B3 Reservoir) is discussed in the preceding paragraph. Please clarify this statement.

Section 3.3.8 should briefly describe how the probable hydrologic consequences affect the AVF.

Table 10, footnote (d), regarding SP-46A states "WECO mapping shows that it is located outside the mined-out area." According to WECO's annual report mapping (see 2018 Annual Mine Report map "C-04 Coal Recovery 2018.pdf" spring SP-46A is located in an area mined out in 1989. DEQ suspects this footnote is intended to apply to SP-112A, which is located just outside the mined-out area.

In Table 23, the top of the text in many rows is cut off in the "Source Name" and "User" columns. Please correct this formatting issue.

In Table 36, page 1 of 4, the Rationale column for 42A 181544 00 states "dam located upstream from BSM mining, drainage upstream from dam not impacted by mining." This water right is located in Richard Coulee downstream from Area B AM5 and has no relationship to BSM which is in Lee Coulee.

In Table 36, page 3 of 4, the Rationale column for 42A 27341 00 states: "pond no longer exists, could not be located during field visit." This pond is visible on aerial photos just upstream from PW-168, and has been observed by DEQ in the field. The two-track crosses the unnamed tributary of Lee Coulee on the pond embankment.

In Table 36, page 4 of 4, the Rationale column for 42A 8207 00 states: "pond is located within AM5 disturbance area around a topsoil stockpile, pond will be disturbed by mining related activities." DEQ could not locate a land use agreement for T1N, R40E, Section 36, which would allow disturbance in the section where this water right is located. ARM 17.24.314(1)(b) requires protection of the rights of present users of surface water. Disturbance to this spring does not appear to be necessary to conduct the planning mining operation. A minor change to the stockpile footprint and disturbance boundary would provide protection of this water right.

In Table 50 there are two columns labeled "Water Quality Impact Comments / Rationale / Assumptions" with the first column generally containing more detailed information than the second column. Please consolidate these two columns and eliminate redundancy.

In Table 51 there are two columns labeled "Water Quality Impact Rationale / Assumptions" with the first column generally containing more detailed information than the second

February 24, 2020

Page 5 of 9

column. Please consolidate these two columns and eliminate redundancy.

In Table 51, page 1 of 5, "42A 181541 00" is assigned to alluvium based on location. It is equally probable that a well at this location could also be completed in bedrock, including the Rosebud Coal. Please include this uncertainty in the analysis of impacts... e.g. "If this well is completed in the Rosebud Coal...."

In Table 51, page 1 of 5, "42A 27343 00" is assigned to alluvium based on location. It is equally probable that a well at this location could also be completed in bedrock. Please include this uncertainty in the analysis of impacts.

Because Area F is now permitted, the Area F permit boundary should be included on all figures showing permit boundaries. This includes Figures 1, 10, 12, 16, 18, 20, 22, 44, 67, 69, 70, 71, and 74.

Similarly, because Area E has been released from bond, the Area E permit boundary should be removed from all figures. This includes Figures 1, 2, 4, 7, 10, 11, 12, 16, 17, 18, 20, 21, 22, 31, 44, 48, 67, 68, 69, 70, 71, 74, 75. The text labels for Area E can be retained where relevant and informative (similar to the Pit 6 label on Figure 2).

On Figure 2, Area F is noted as "Anticipated Future Mining." This tag should be removed as Area F is now a permitted mine area.

The mineplan layers shown on Figure 3, 5 and 64 are not up to date. Locations of haul roads and the foot prints of some stockpiles have changed. Please ensure all maps include accurate mineplan layers.

Figure 4 should be updated to include all permitted mining in Area F.

On Figure 37, a text conversion error has affected some labels by replacing some letters with various symbols. Please correct this error.

There are two copies of Figure 49 (p. 362 and 363 of the pdf). The first (p. 362) shows the old permit boundary for Area B. Please delete this duplicate figure.

On Figure 72 the linear fit line should be fixed to pass through the origin (0,0). Water with a TDS of 0 mg/L should have a specific conductance of 0 uS/cm under the basic assumption that the conductivity of water is a result of dissolved ions in the water.

**ARM 17.24.314(5):** The requested information on postmine water quantity and quality for cumulative analyses was supplied in Attachment U of "Appendix O B AM5 PHC R4.pdf".

Please include annotation on Figures 1S through 6S in Attachment U showing the location of measured values for "L" and "W", same as was done in Attachment R.

**ARM 17.24.315(1):** The general plan submitted under Rich-3 Premine is "Pond Lee-3

Design.pdf." Please submit the correct file for this pond design.

**ARM 17.24.315(1)(a)(iii)**: "17-24-315 Plans for Ponds and Embankments.pdf" section (1)(a)(iii) states ponds will retain flows up to the 10-yr 24-hr event and release flows in excess of that event. However, section (1) of this document states ponds in the Rosebud Creek tributary drainages will be designed to contain runoff from the 100-yr 24-hr event. Please revise the text in section (1)(a)(iii) to be consistent with section (1) and the pond designs submitted with this application.

**ARM 17.24.321(1)(a)**: The Richard Haulroad Phase I is planned to be built prior to mining of the underlying coal in Cuts BXS92 and BXS93, however the design contours on "Area B AM5 EXHIBIT O Richard Haulroad Phase I Sheet 1 of 3 2019-10.pdf" appear to be based on the PMT. The portion of the road from approximately 125+00 to 200+00 must be redesigned based on the premine topography.

**ARM 17.24.325(1), (2), (3)**: In the Alluvial Valley Floors (AVF) section under the baseline tab of the e-permit there are two sections, Section 1: Alluvial Valley Floor Study and Section 2: Department's Written Determination. The permit documents associated with these two tabs are referenced as being Appendix Q. When in fact there are multiple Q appendices and more than one document addressing the Alluvial Valley Floor section.

The AVF section needs to be cleaned up and correctly referenced.

1. In Section 1: Alluvial Valley Floor Study; the "No" radio button is marked after the first question, "Will the operation be within or adjacent to a valley holding a stream?" following this there is a statement that says "If YES, Attach the Alluvial Valley Floor Study..." It is false to say No here. There would be no need for an AVF or multiple AVF studies and determinations if there were not any streams.
2. Change the Appendix Q references to match the appropriate numbers designating which Appendix Q is being referenced.
3. Where you are referencing the decision document the Departments determination decision, found under Section 2 Department's Written Determination, should be the referenced document. The Appendix Q documents are AVF requests and only a represent submission of data for AVF determination in the permitting process.
4. Ensure that the Richard Coulee determination is addressed now that it has been documented in the permit under this section.

**ARM 17.24.605(3)**: A riprap apron detail sheet is referenced on page 605-4. Please include for department review.

**ARM 17.24.639(1)**: The Rich-2 PMT pond design seems to incorporate the main Richard haulroad. With the construction of the Richard 2.0 haulroad to the north the original haulroad would cease to exist prior to the construction of Rich-2 PMT pond. It seems the Rich-2 pond design may not have been updated to accommodate the removal of the Richard haulroad and the inlet does not intercept the PMT drainage. There is no inlet structure for the drainage entering at the southwest corner of the pond. Please review the

February 24, 2020

Page 7 of 9

Rich-2 PMT pond design and adjust as needed.

**ARM 17.24.639(2)(a):** Some sediment pond designs specify the use of staple pattern "A" while others do not specify a staple pattern for erosion control matting on pond inlet channels. The use of staple pattern "A" may not be adequate for the high flow volumes and velocities calculated for the design event for some of the pond inlet channels. Staple pattern "A" appears to be designed for flow on 4:1 slopes, not for channelized flows. Please select and justify an appropriate staple pattern for each pond inlet based on design event flow velocities.

**ARM 17.24.639(4):** The ponds Rich-1 and Rich-3 premine have inlets that appear to be designed to capture flow from an adjacent drainage at near right angles. Please adjust inlets to fully capture drainage or incorporate an embankment/levee across the drainage to divert flow to the pond pursuant to ARM 17.24.639(4).

Based on the submitted design for Rich-3 premine it appears that inlet 2 doubles as a discharge. This would cause short cutting and not allow sufficient detention time to settle sediment. The pond design should be adjusted to prevent short circuiting.

**ARM 17.24.651(3):** Please provide an evaluation demonstrating whether or not Wetlands G048, G500, G515, or G054 contain a biological community which meets the definition in ARM 17.24.651(3).

**ARM 17.24.751(2)(a):** Include measures included in the most recent Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA.

**ARM 17.24.751(2)(b):** Haul roads – Stated measures to minimize impacts to wildlife resources are insufficient. Please include measures outlined in the USFWS Nationwide Standard Conservation Measures. Including seasonality of disturbance and surveys for migratory birds. In addition, prior to disturbance surveys should be conducted to determine presence of migratory bird nests, grouse leks, snake hibernacula, and mammalian predator dens.  
<https://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Schedule all vegetation removal, trimming, and grading of vegetated areas outside of the peak bird breeding season to the maximum extent practicable.

**ARM 17.24.751(2)(f):** The updated Appendix N-1 referenced in the response letter was not uploaded to the epermit system. As a result, this deficiency cannot be evaluated during this round.

Sites proposed for wetlands mitigation (Appendix N-1) are exclusively in the Armells Creek drainage, whereas the majority of wetland likely to be disturbed are in the Rosebud Creek

February 24, 2020

Page 8 of 9

drainage. While wetlands in adjacent drainages can be used for mitigation there should be some mitigation alternatives in the Rosebud Creek drainage.

Appendix N-1 Section 3.3, p. 3-5, states one of the waters (G700) will be impacted by "development of the high wall." This term is unclear as to the extent of the impact, and no mention is made of water 4-4/8 which will also be impacted by mining. Please state that waters 4-4/8 and G700 will both be mined out.

Based on the proposed mineplan, the descriptions in Appendix N-1, Table 3-3, are not accurate for several sites. These wetlands sites are expected to be impacted as follows:

G011: Disturbed – buried under soil stockpile

G012: Within disturbance limits – likely to be disturbed for access road to soil stockpile

G300: Buried under haul road fill

G602: Partially buried by haul road fill

G400: Partially disturbed by highwall reduction, haul road fill, and excavation for pond Rich-4

G500: Partially disturbed by highwall reduction and excavation for pond Rich-6

Please make sure this table is consistent with the expected impacts of the proposed mineplan.

**ARM 17.24.801(1), (2) and (3):** Appendix Q has now been included. Subsequent material is contingent on DEQ's determination pursuant to ARM 17.24.325(2)(b).

ARM 17.24.801-806 need to be updated now that the Richard Coulee AVF is in place.

**ARM 17.24.802(1), (2), (3), (4):** Appendix Q has now been included. Subsequent material is contingent on DEQ's determination pursuant to ARM 17.24.325(2)(b).

ARM 17.24.801-806 needs to be updated now that the Richard Coulee AVF is in place.

**ARM 17.24.804(1), (2), (3), (4):** Please update ARM 17.24.801-806 now that the Richard Coulee AVF is in place.

**ARM 17.24.805(1):** Appendix Q has now been included. Subsequent material is contingent on DEQ's determination pursuant to ARM 17.24.325(2)(b).

Please update ARM 17.24.801-806 now that the Richard Coulee AVF is in place.

**ARM 17.24.806(1), (2), (3), (4), (5):** Appendix Q has now been included. Subsequent material is contingent on DEQ's determination pursuant to ARM 17.24.325(2)(b).

Please update ARM 17.24.801-806 now that the Richard Coulee AVF is in place.

Upon receipt of satisfactory responses to these deficiencies, DEQ will determine the application to be acceptable.

February 24, 2020

Page 9 of 9

Please feel free to contact Robert D. Smith at 406-444-7444 with questions regarding this letter.

Sincerely,

A handwritten signature in blue ink that reads "Matthew R Dorrington". The signature is stylized, with the first name "Matthew" written in a cursive script, followed by "R" and "Dorrington" in a more blocky but still cursive style.

Matthew Dorrington, Supervisor  
Coal Section  
Coal and Opencut Mining Bureau  
Phone: 406-444-4967  
Fax: 406-444-4988  
Email: [Matthew.Dorrington@mt.gov](mailto:Matthew.Dorrington@mt.gov)

Cc: Jeff Fleischman, Office of Surface Mining  
Erica Trent, Office of Surface Mining