

*"Healthy environment, healthy people"*

**Montana Department of  
ENVIRONMENTAL QUALITY**

Steve Bullock, Governor  
Tracy Stone-Manning, Director

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June 3, 2014

Ms. Dicki Peterson  
Western Energy Company  
Rosebud Coal Mine Area B, C1984003B  
P.O. Box 99  
138 Rosebud Lane  
Colstrip, MT 59323-0099

Permit ID: C1984003B  
Revision Type: Amendment  
Permitting Action: Deficiency  
Subject: AM4, Seventh Round Acceptability Deficiency

Dear Dicki:

The Department of Environmental Quality (DEQ) has completed its acceptability review regarding Western Energy Company's application for Amendment AM4. The following deficiency must be adequately addressed before DEQ can determine the application acceptable:

**17.24.314(4) and (5):** A more complete explanation of the hydrologic response of East Fork Armells Creek to mining is needed. This information is needed to better determine the impacts to the hydrologic balance caused by current mining as well as to confirm that the proposed operation has been designed to minimize impacts to the hydrologic balance and prevent material damage to the hydrologic balance outside the permit area.

More information is needed to anticipate and predict the long-term effects of mining on stream flow and water quality of the stream and alluvium. Please provide a water budget that includes inputs to the stream from:

- the release of pond and pit water
- infiltration from sediment ponds adjacent to the stream
- disposal of water from operations and domestic use at the Area A facilities

Please indicate how the additional sources of water associated with mine activity have affected stream flow.

Review of the available data indicates the stream and alluvial wells adjacent to the facilities area are showing steadily increasing concentrations of ionic water quality components. These components have narrative standards based on uses. Please address the following:

- What is the source of the increase and at what point is the concentration expected to reach equilibrium or begin to decrease in concentration?

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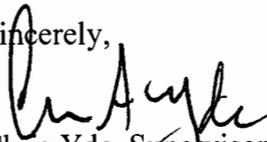
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- How is the increased saturation of spoil adjacent to the stream likely to affect long term water quality in the stream and alluvium? What is the TDS concentration expected to be at full saturation of the spoil?
- What are the long term implications for stream and alluvial water quality associated with inputs from the facilities area, including the fate and breakdown products of lignin sulfonate?
- How have increases in specific water quality parameters affected the uses identified below and how are those uses likely to be affected with future predicted water quality changes?

EFAC existing and anticipated uses include water for livestock, wildlife, and aquatic life. Please confirm, based on current and future anticipated concentrations in the stream, that uses have not or will not be impaired. Three aquatic life surveys were completed in the 1970's but there have been none since that time. Please conduct a current aquatic survey along stretches of EFAC adjacent to the Rosebud Mine permit areas (Areas A, B, and C) to identify assemblages of aquatic life using the stream habitat. This information also will be useful for future permit revisions in Area A and Area C.

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

Sincerely,



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