



January 29, 2016

Sent via electronic mail

Mr. Dusty Weber
Signal Peak Energy, LLC
Bull Mountain Coal Mine #1, C1993017
100 Portal Drive
Roundup, MT 59072

Permit ID: C1993017
Revision Type: Amendment
Permitting Action: Deficiency
Subject: AM3, Fifth Round Acceptability Deficiency

Dear Dusty:

The Department of Environmental Quality (DEQ) has completed its acceptability review regarding Signal Peak Energy, LLC's application for Amendment AM3. The following deficiencies must be adequately addressed before DEQ can determine the application acceptable:

ARM 17.24.314(3): In Appendix 314-5, the Executive Summary on pages ES-2 and ES-4, and Sections 3.4.5 on page 314-5-22 and 5.1.1 on page 314-5-40 discuss the potential that one spring has shown mining related impacts. Sections 6.1 on page 314-5-43 and 6.5.1 on page 314-5-58 state there is no evidence any springs have been impacted. Please revise Sections 6.1 and 6.5.1 so that they do not contradict the earlier sections. Recent data (up to Sept 2015) provide evidence that Spring 17145 may have been affected by mining activity.

ARM 17.24.314(3): In Appendix 314-5, Attachment I, Table I-1, the values for sodium from both gob water samples are above the maximum baseline values, however the final column states the gob values are within the baseline range. Please correct this error.

ARM 17.24.314(3): In Appendix 314-5, Table I-1 in Attachment I lists the minimum and maximum baseline values for analytical parameters in the Mammoth coal and overburden groundwater. Please also include the median baseline values in the Mammoth coal and overburden for all parameters listed in this table.

ARM 17.24.314(3): Table ES-1 shows 'Existing Uses' and 'Assessment of other Possible Uses'. Please identify, include and assess the capability of waters to meet the specific beneficial uses for Class II and Class III water as given in ARM 17.20.1006.

ARM 17.24.314(3): In several places in the PHC, support of 'existing uses' is assessed. To be consistent with the groundwater standards, please address designated beneficial uses, rather than only existing uses.

ARM 17.24.314(3): In Section 3.3.3, estimates of groundwater flow through the Mammoth Coal is estimated at 1.2 gpm, based on modeling conducted during baseline studies (Appendix 304(6)-10 is cited). The basis and background for this modeling study cannot be confirmed and, presumably, are based on permit boundaries and geological dimensions derived from the initially permitted acreage. For instance, the northern permit boundary was different from this application than it is in the present application. It is recommended that this portion of analysis rely on the more recent modeling effort (Appendix 314-6), rather than the original baseline modeling results found in Appendix 304(6)-10.

ARM 17.24.314(3): In several places in the PHC, it is stated that the deep underburden is suitable in quality and quantity to supply any future mitigation needs. Five of six samples collected recently from deep underburden wells (BMP 128, BMP129) showed exceedances of the arsenic human health standard. Presumably, high arsenic values may render these waters unsuitable (without treatment) for public and private water supply. SPE must clarify these statements further and/or address how high arsenic levels would be addressed in the mitigation for public and private water supplies.

ARM 17.24.314(3): Section 3.4.2 of the PHC (pp 314-5-16, 314-5-17) describes subsidence effects associated with longwall mining from a theoretical standpoint. Longwall mining in the Bull Mountains has progressed since year 2010. Please describe the actual observed effects of longwall mining in the Bull Mountains. For example, surface cracking has occurred throughout the mine area, as is evidenced on aerial photographs and through field visits. This appears to be contrary to the statement that "The deformation zone does not fracture upon subsidence."

ARM 17.24.314(3): In Section 3.5 of the PHC, please do not ascertain the class of groundwater using 'average' conditions. Wells showing water quality results that span Class II to Class III criteria should be described as producing both Class II and Class III water.

ARM 17.24.314(3): In the PHC where baseline water quality and/or quantity is addressed, it must be noted that most baseline wells were not BMP wells, but were separate wells drilled by Meridian. BMP wells were emplaced later at approximately the same location as the original Meridian wells.

ARM 17.24.314(3): In Section 4.0 of the PHC, it is stated that "*Whether the surface expression of flow meets the definition of an intermittent or ephemeral waterbody is a regulatory determination made by the Water Quality Standards Section of the DEQ*". Please change 'Water Quality Standards Section of the DEQ' to the 'permitting authority'.

ARM 17.24.314(3): In Section 4.1.2 of the PHC, the period of record for surface water monitoring station 11746 is referenced to support the position that Rehder Creek is

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ephemeral in nature. Station 11746 recently replaced station 11756, which is very close in proximity to 11746 and has a period of record from 2003 to 2014. Please include this longer period of record in the discussion.

ARM 17.24.314(3): Section 7.0 of the PHC references Table 314-11. This table is a summary of the probable hydrologic consequences, their significance, and potential mitigation measures. Please include this table within the PHC (Appendix 314-5).

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

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 "Chris Yde".

Chris Yde, Supervisor
Coal and Uranium Program
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C: Jeff Fleischman, Office of Surface Mining
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Gilbert, Sharona

From: Gilbert, Sharona
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Subject: C1993017 AM3 Fifth Round Acceptability Deficiency
Attachments: AM_AcceptabilityDeficiency_1292016_Final_01-29-16.pdf

Please see attached electronic correpondence. Have a great day!

Sharona Gilbert

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*The best laid schemes o' Mice an' Men,
Gang aft agley ~Robert Burns*