

"Healthy environment, healthy people"

Montana Department of
ENVIRONMENTAL QUALITY

Steve Bullock, Governor
Tracy Stone-Manning, Director

August 2, 2013 P. O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • Website: www.deq.mt.gov

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

Permit ID: C1993017
Revision Type: Amendment
Permitting Action: Third Round Deficiency
Subject: AM3; Increase in Mine Permit Area; Life of Mine (+7,161 acres)

Dear Dusty:

The Department of Environmental Quality (DEQ) reviewed Signal Peak Energy LLC's (SPE) submittal received October 5, 2012 and updated November 30, 2012, March 19, 2013 and July 1, 2013. The application was determined complete on December 14, 2012, which began the acceptability review process.

The following deficiencies have been identified and must be addressed before DEQ can determine Amendment 03 to be acceptable.

ARM 17.24.304(1)(f)(ii): A figure and number convention has been added to Addendum 5A, however "Table 1" should be "Table 1-5A." Please rename this table.

The purpose of DEQ's previous comments regarding ARM 17.24.304(1)(f)(ii) was to ensure that baseline conditions regarding potentially effected surface water resources in Fattig Creek were adequately documented and characterized, in accordance with ARM 17.24.304(1)(f)(ii). This information must be included in Addendum 5A. Additionally, Addendum 5A should only include those water quality and quantity data and conditions experienced in Fattig Creek drainage. Station 53486 is different from most stream monitoring stations in that it receives and records spring flows from several springs just upstream of the station (53455, 53465, 53475, 53485). Flow at station 53486 is recorded most of the year. The hydrograph for Fattig Creek monitoring station 53486 in Figure 2-5A only illustrates periodic high flows and not steady spring-derived flows (typically < 5gpm) as recorded regularly at this station. Additionally, Addendum 5A must include field parameter data collected from 2007 to present at station 53486.

SPE must include a narrative and empirical account of the Fattig Creek setting and associated data and observations in Addendum 5A. Please provide an accounting of all surface water baseline conditions in the Fattig Creek drainage, including stream and spring monitoring quality and quantity data sufficient to meet the requirements of ARM 17.24.304(1)(f)(ii)(A & B). Include a discussion of all relevant data and observations. For the purpose of characterizing baseline conditions per ARM 17.24.304, it is not necessary to compare baseline conditions in the Fattig Creek drainage to mine-wide conditions (i.e Table 2-5A).

Due to a few high flow events, the vertical scale on the continuous recorder hydrographs in Figure 2-5A does not display smaller flow events. These hydrographs are also shown on Figure 22 (314A). Please show all hydrographs using a log scale for the vertical axis (flow) to show the detail of smaller flow events.

ARM 17.24.314: Regarding SPE's comment:

Additional Discussion on 314 Tables/Figures

Updated Table 314-12 contains the exact information as Table 2-1 in Appendix 313-4. SPE proposed to remove table 314-12 in Amendment 3 application in October of 2012. SPE still proposes to delete Table 314-12 especially now since it is redundant information.

--Additional 314 items SPE has proposed to remove (and uncertain of Department's approval)

- *Table 314-4.1.2.1 should be deleted. A more comprehensive table for the hydrogeologic properties is provided in Table 1m of Appendix 314-6.*
- *Table 314.4.1.2.2 should be deleted. A new groundwater model has been created and is defended in Appendix 314-6.*
- *Tables 314-12 through Tables 314-15 should be deleted. Discussion on uncertainties is addressed in Appendix 314-5.*
- *Figures 314-1 through 314-6 should be deleted as a new groundwater model is developed (Appendix 314-6).*

SPE needs confirmation of which items above are approved for removal. Please provide verification or contact Dusty Weber so a permit update can be accurately submitted.

DEQ agrees that Table 314-4.1.2.1, Table 314-4.1.2.2, and Figures 314-1 through 314-6 may be removed from the permit. Tables 314-12 through Tables 314-15, however, must be retained as they provide support for the criteria used to develop spring impact probability scores. Furthermore, Section 2.0 of Appendix 314-2, and Section 2.2 of Appendix 313-4 reference Section 314 - 4.1.1.4 Impacts to Springs, which should provide a description of the analysis procedures employed to derive the information in Tables 314-12 through 314-15. This referenced material is no longer included in Section 314. SPE must reinstate the referenced material in Section 314-4.1.1.4 Impacts to Springs, so that connectivity of Tables 314-12 through 314-15, Appendices 313-4, 314-2 and Section 314-4.1.1.4 Impacts to Springs is restored.

ARM 17.24.314(3) Appendix 314-5 (PHC):

- Attachment F, Figures F-1 (314A) through F-4 (314A) have permit boundaries labeled incorrectly. In each map, the old permit boundary is labeled as the permit boundary: the existing and applicable permit boundary is the boundary established in Amendment 2. The orange permit boundary and its labels must be removed, and replaced with the existing permit boundary. The only two permit boundaries that should be shown are 1) the existing permit boundary, and 2) the proposed permit boundary established in pending Amendment 3. Maps and legends must be updated accordingly.

Also, Figures F-I (314A) and Figure F-2 (314A) are included twice in the submittal – once within Attachment F, and again as an attachment to the main body of the PHC. To avoid confusion, please remove this redundancy in figures.

- Attachment B identifies springs that have been recently undermined, and includes hydrographs of weekly spring flow monitoring data. The timing of undermining is not included in the submittal. SPE must include a table of all weekly monitoring data for all springs undermined thus far (17415, 17115, 17145, 17165, & 17185) including pond stage data, and identify the time period associated with undermining of each spring.

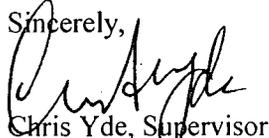
Additionally, SPE staff reported that spring flow at station 17185 was temporarily impacted

concomitant with undermining of this spring in mid-May (see MR 171). This condition must be acknowledged and discussed in Section 3.4.5 of the PHC, and in PHC Attachment B.

- Figure 22 shows flows from a continuous recorder at surface water station 53486. Recorded flows at this station include a rather steady baseflow derived from several upstream springs and is typically <5gpm for many months of the year. The scale of the hydrograph presented in Figure 22 does not illustrate these low-flow conditions. An adequate representation of flows observed at this site must illustrate the low-flow conditions recorded at station 53486.
- Table 4 (314A), "Water Quality Standards Summary", displays Aquatic Life Standards for certain trace metals which are dependent on hardness using a reference hardness value of 25 mg/L. Additionally, Circular DEQ-7 was last updated in October 2012, but Table 4 (314A) cites the previous (August 2010) version. Please justify the use of 25 mg/L as the reference hardness for the Aquatic Life Standards, or calculate the standards for the appropriate hardness based on area surface waters. Please also use and cite the most recent version of DEQ-7 for all standards:
- Section 4.0 states "More limited portions of the mine also overlie the Fattig Creek drainages as well as Railroad Creek and Fattig Creek drainages which are tributary to the Yellowstone River." Fattig Creek is listed twice in this statement, and appears to be listed as a tributary of the Yellowstone River. Please correct this statement to remove the second reference to Fattig Creek and include Pompeys Pillar Creek and Razor Creek. Please also clarify which streams are tributary to the Yellowstone and Musselshell Rivers.
- Section 6.0 does not discuss the potential impacts of mine portal discharge on the hydrologic balance in PM Draw. Please discuss the effects of a potential perennial or intermittent discharge from the mine portal on PM Draw including water quantity (PM Draw is currently ephemeral) and quality (will mine pool water meet surface water standards, or would treatment be necessary).

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

Sincerely,



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