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December 15, 2011

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

Permit ID: C1993017
Revision Type: Amendment
Permitting Action: Deficiency
Subject: First Round Acceptability Deficiency; Amendment 2

Dear Dusty:

The Department has completed its acceptability review regarding Signal Peak Energy's amendment application. Several deficiencies which must be adequately addressed before the Department can determine the application acceptable have been identified. These deficiencies are as follows:

ARM 17.24.302(1) Format, Data Collection, and Supplemental Information:

- Map 314-3 and Map 322-1: The Permit Boundary shown on the map as a solid line is incorrectly indicated in the legend as a dashed line.
- Map 304(9)-1 and Map 304(11)-1: The revision tracking table date for Amendment 2 and the map date do not match. The map is dated June 26th, but the table shows the revision as July 26th.
- Map 304(5)-2: The Air Monitoring Station/ Weather Station must be relabeled so that the label on the map and the label in the legend match. Furthermore, the CAD layer "WEATHER STATION" does not match the locations shown on this map.
- Map 304(5)-2: The Johnson Precipitation Station is included in the CAD layer but not on the map. SPE must update the map and/or CAD layer to ensure that the two match.
- Map 304(6)-7: The Potentiometric Surface contours appear to be mislabeled, referring to the Mammoth Coal Potentiometric Surface rather than to the Sandstone above the Rock Mesa Potentiometric Surface, as the map suggests.
- Map 304(6)-10: The Potentiometric Surface contours appear to be mislabeled, referring to the Mammoth Coal Potentiometric Surface rather than to the Upper Underburden Potentiometric Surface, as the map suggests.

ARM 17.24.303(1)(b) Legal: The acreage breakdown on the legal description is a little different than the permit. The acres are only off by .10's of acres in the original permit (Permit = 4220.2 and Amendment 00187 shows 4220.9) and Amendment 00178 (Permit = 2171.7 and Amendment 00187 shows 2171.3). Please adjust to consistent whole numbers as the difference is an electronic error.

ARM 17.24.304 Baseline Information: Review of maps 304(5)-1 (Monitoring Well Locations) and 304(6)-1 (Topography, Drill Hole Locations and Cross Sections) indicates that there is the potential for confusion with regard to the monitoring network approved by the Department.

The monitoring wells included in the legend on map 304(6)-1 should be referred to as former monitoring wells since they have been replaced by the monitoring network shown on map 305(5)-1. For example, former monitoring wells 08-2, 08-3 and 08-4 on map 304(6)-1 were replaced by BMP-10, BMP-11 and BMP-12. This minor change will eliminate any confusion between the former and current monitoring networks.

Moreover, the Department suggests amending the labels of current groundwater monitoring wells to make it clear which rock unit or aquifer is being monitored. For example, BMP-10, BMP-11 and BMP-12 might be labeled BMP-10OV, BMP-11MC and BMP-12UN to indicate that the respective wells monitor the overburden, Mammoth Coal and underburden aquifers.

Surface Resources Map 304(5)-2 (Map 304(5)-2_AMEND 2.pdf) identifies 'surveyed' sites and (non-surveyed?) sites in the legend. Both types of surface water monitoring sites are included in the monitoring plan in the Annual Hydrology Report. Is there a reason for the difference in naming conventions between 'surveyed monitoring sites' and 'monitoring sites'? Within the permit, either 1) include an explanation of the difference in naming convention or 2) remove the 'surveyed' prefix to surface water resource station maps if it does not add any clarifying information.

Review of maps 304(6)-6, 304(6)-7, 304(6)-8 and 304(6)-10 showing the respective Alluvial Water Table, Sandstone Potentiometric Surface, Mammoth Coal Potentiometric Surface and the Upper Underburden Potentiometric Surface indicates that these maps are based on data collected from the old groundwater monitoring network that has been replaced by a network of 121 BMP wells. Moreover, all the maps showing major ion concentrations (304(6)- 11, 12, 13, 14 and 15 also are based on data that was collected over 20 years ago. Please update these respective maps, pursuant to ARM 17.24.314.

Map 304(10)-1: The legend should be better defined to identify current monitoring vs historic monitoring efforts.

17.24.305(1)(u) Maps: SPE must indicate all "items shown on the map" in the legend.

- Map 303-1: The Historic Mining areas are missing from the legend.
- Map 304(5)-2: The Water Resources Study Area Boundary is missing from the legend. While it is clearly labeled on the map, SPE must include all map features in the legend pursuant to this rule.
- Map 304(6)-16: : while it seems obvious that the topo background for this map is "pre-mine," and the contour interval is properly labeled, background topography or aerial photos must be clearly labeled pursuant to this rule.
- Map 304(9)-1: While it seems obvious that the topography background for this map is "pre-mine," and the contour interval is properly labeled, background topography or aerial photos must be clearly labeled pursuant to this rule.
- Map 304(10)-2: The Wildlife Survey Boundary is missing from the legend.
- Map 304(10)-2: The legend shows a label for Rock Outcrops; however, no outcrops are present in the map. The legend item must be removed or rock outcrops added to the map.

- Map 304(11)-1 while it seems obvious that the topography background for this map is “pre-mine,” and the contour interval is properly labeled, background topography or aerial photos must be clearly labeled pursuant to this rule.
- Map 314-3: The Water Resources Study Area Boundary is missing from the legend. While it is clearly labeled on the map, SPE should include all map features in the legend pursuant to this rule.

ARM 17.24.305(2)(c) Maps: Maps must not contain data which is not relevant for the intended purpose of the map, and which distracts from and/or obscures the relevant information contained in the map.

- Map 308-1 and Map 308-1a contain many points, presumably wells (i.e. the “Well_Existing” layer in the accompanying CAD drawing), that are not indicated in the legend and do not appear to be relevant to the subject of the map. Alternatively, if these wells are relevant to the intended purpose of the maps, indicate the layer in the legend.
- Map 304(9)-1: the background topo layer is set over top of the vegetation type area, thus obscuring the intended layer. The background topo layer must be moved to the back so that it appears underneath the vegetation types area so that these areas are clearly legible pursuant to 17.24.305(2)(c).

ARM 17.24.308 Operations Plan: Additional text is needed to explain the types of material supplies entering the mine and the access points. In particular, further information concerning the quantity and type of materials entering the mine through the boreholes is needed. If the air intake portal is to be used for material access, information concerning the intended types and quantities of material entering at that location is needed, as well as, the expected duration of that use.

The landowner access agreement(s) in place must be consistent with the type and quantity of traffic contemplated at the Air Portal.

Map 308-4: The roads that will be used to access boreholes need to be identified. Relying on the background topography maps is not sufficient as these roads will be improved. The legend should be updated to include the “type” of road as described in the permit (haul road, access road, etc.).

Map 308-4: The roads and boreholes identified appear to be incomplete as previous mining demonstrated a larger need for boreholes. This must be a complete plan including all roads and boreholes to operate this facility.

Map 308-4: While there are advantages to including archaeological sites on the operation map this map is available for public review. These archaeological sites should be removed from the map and moved to the map addressed in ARM 17.24.304(1).

ARM 17.24.313 (c) Reclamation Plan and 17.24.404(6) Review of Application: requires a detailed estimate of the cost of reclamation of the proposed operations that will be covered by a performance bond with supporting calculations for the estimate. Please update the Bond Calculation including the new panels, bore holes, pads, roads, etc. that have been added since the last bond update or will be included in this amendment. An updated performance bond must be completed and approved before the amendment to the permit can be issued. This cannot be completed as a minor revision as stated in

your permit application letter dated August 1, 2011, but must be submitted as part of the amendment application.

ARM 17.24.314 Protection of the Hydrologic Balance: Section 314 has not been updated for this permit amendment. Data collected under existing surface water and groundwater monitoring programs should be evaluated and incorporated into Section 314, including but not limited to: surface and ground water sampling and reporting plans, discussion of past and existing surface and groundwater quantity and quality, pre and post-mining changes in quality and quantity of surface and ground water, probable and anticipated hydrologic consequences of mining in the amendment area. Accompanying maps, figures, tables and appendices should also be updated as appropriate to reflect empirical data collected. Please submit an updated analysis for permit amendment 00187 that meets the requirements of ARM 17.24.314, PLAN FOR PROTECTION OF THE HYDROLOGIC BALANCE. Adequacy Review of Section 314 is withheld until the operator submits a completed analysis.

ARM 17.24.321 Transportation Plan: Map 321-2A must be updated to identify current and proposed secondary access roads. Access routes to the pumpable crib borehole pads receive traffic in excess of what can be considered "occasional" use.

ARM 17.24.322(1) Geologic Information and Coal Conservation: The Coal Conservation and Isopach maps do not contain PE Stamps, as required.

ARM 17.24.322(3): The department requests that the additional information required in (3) be submitted to justify not mining polygons labeled 13 and 14 located on Map 322-4.

ARM 17.24.524 (3) Signs and Markers: Due to the unusual permit boundary (angle across many sections) the Department will be requiring that the permit boundary be clearly marked, pursuant to ARM 17.24.524(3).

ARM 17.24.645(6) and ARM 17.24.646(6) Ground Water and Surface Water Monitoring: The Department requires that surface and groundwater sampling be conducted in accordance with 40 CFR 136 (*Guidelines Establishing Test Procedures for the Analysis of Pollutants*) and the Circular DEQ-7, *Montana Numeric Water Quality Standards*.

WQB-7 is no longer used by the Department, and has been replaced with Circular DEQ-7, *Montana Numeric Water Quality Standards*. The Administrative Rules of Montana (ARM 17.24.645 and 646) which refer to the 2004 DEQ Circular WQB-7 are currently being updated to refer to the acting version of Circular DEQ-7, *Montana Numeric Water Quality Standards*. Water quality sampling must adhere to the Required Reporting Values (RRVs) listed in the acting version of DEQ-7. DEQ-7 is available on DEQ's website <http://deq.mt.gov/wqinfor/Circulars.mcp>. Both RRVs and human health criteria for some parameters have been updated from the 2004 WQB-7.

SPE must review all surface and ground water sampling methods and laboratory procedures to ensure that the updated RRVs (from DEQ-7) are met by the mine's sampling and quality assurance programs to include RRVs established in Circular DEQ-7

In addition, ARM 17.24.645(6) and ARM 17.24.646(6), specifies that sampling and analysis activity must include a quality assurance program acceptable to the Department. A Quality Assurance Program is a set of processes that describe the objectives of a project, and the quality assurance

management processes and activities necessary to develop data that will support those objectives. For the purposes of complying with ARM 17.24.645 and ARM 17.24.646, a quality assurance program shall include:

- Sampling and Analysis Plans for surface and groundwater sampling
- Data Validation and Quality Assurance Reports

The Sampling and Analysis Plan shall document all aspects of sampling and analysis activities to be performed, assure that project objectives will be met, and ensure the quality of the environmental data so it may be used by to make defensible regulatory decisions. The DEQ's Water Quality Bureau has established guidance (document MDEQTECH-001) for the development of approvable water quality Sampling and Analysis Plans, (available at <http://deq.mt.gov/wqinfo/qaprogram>).

Data Validation and Quality Assurance Reports shall include a summary of sampling activities actually performed, review and validation of all data results (analytical lab data and field measurements), explanations of any deviations from the approved Sampling and Analysis Plan (SAP), a description of any issues or problems encountered in implementing the SAP, and how issues/problems were resolved. Data Validation Quality Assurance Reports shall also include copies of all analytical lab data sheets, performance of quality control samples, field/site visit forms, chain of custody forms, instrument calibration logs, photographs (where appropriate), and final electronic data deliverables.

A review of the existing *Quality Assurance/Quality Control Plan for the Bull Mountains Mine No. 1 Coal Project* (Appendix 304(5)1) reveals deficiencies in the existing required Quality Assurance Program. This appendix should be modified and updated to conform with DEQ's Water Quality Bureau's Quality Assurance Program (<http://deq.mt.gov/wqinfo/QAProgram>).

Operator must review the existing Quality Assurance Program and updated as necessary to meet Quality Assurance Program objectives acceptable to the Department, pursuant to ARM 17.24.645(6) and ARM 17.24.646(6). Please consult with DEQ regarding the format and content of acceptable surface and ground water sampling quality assurance program elements.

The following files are missing from the Department's database and need to be submitted:

CAD Layers (AM2):

- Mineral Ownership
- Historic Mining
- Mine Plan
- Emergency Air Boreholes
- Sealed/Reclaimed Boreholes
- Borehole Access Roads
- Premine Topography (for entire Life of Mine area)
- Premine Streams (for entire Life of Mine area)
- Parting Intervals
- 200 Feet of Cover
- Terrestrial Monitoring Stations
- Aquatic Monitoring Stations
- Wildlife Survey Boundary

- Alluvial Aquifer Water Table
- Staff Gauge
- Mammoth Coal Potentiometric Surface
- Upper Underburden Potentiometric Surface

CAD Layers (Annual):

- As-Built Topography
- Coal Recovery
- Mined Out Area

CAD Layers (Permitted):

- Life of Mine Disturbance
- MPDES Points
- Subsidence Area
- Subsidence Monitoring Locations
- Waste Disposal Area Boundary
- Postmine Topography
- Postmine Drainage Basins
- Postmine Streams
- Power Lines

Pursuant to the Department's Submittal Guidelines the following must be completed:

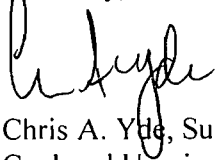
- Maps must include the date in the title. For example, the map title "MAP 303-1_AMEND 2" should include the date (e.g. MAP 303-1_AMEND 2_20110713). The date allows for tracking the versions of a map as it passes through the review and response cycle (i.e. the date is updated with each deficiency response, provided updates were necessary), and allows for tracking the last date the map was changed.
- CAD layer names must include the revision number and date submitted, for the same reasons discussed above.
- Each map must contain a scale bar. All the maps in this submittal contain a reference scale, but not a scale bar. A scale bar is especially critical when reviewing electronic maps.
- Layers that do not correspond to a proposed or permitted feature must not be submitted. Several layers submitted in the CAD drawing do not appear to correspond to any permit map (or are not named intuitively enough to understand which map features they correspond to).
- SPE must rename the following layers intuitively or provide a key that describes layers. Layer names must be readily decipherable, and should match the map legend.
 - Map 304(5)-2: The CAD drawing contains two separate layers for springs, "SPRINGS" and HYDRO-SPRINGS," which appear to contain differing data. It is not clear which layer is the correct layer.
 - Map 304(5)-2: The CAD layers, "WELLS-GWIC" and "WELLS-NON-GWIC," should be labeled as private wells, as they appear to correspond to those layers in the map.
 - Map 304(6)-1: The CAD layer "Well_Existing" appears to correspond to the Drill Holes shown on the map, and if so, should be appropriately relabeled.

- Map 304(6)-6: The Alluvial Monitoring Well CAD layer does not match the Alluvial Well layers in the map.
- Map 304(5)-1: The CAD layer for monitoring wells is not labeled appropriately, and contains multiple layers of overlapping labels/text, making it difficult to read.
- Each updated PDF file name should include a suffix, in the following format, which conveys the revision number and submittal date information (for more details, please see the Submittal Guidelines):
 - Volume1_APP187_20110801
 - Year format = Year, Month, Day (e.g. YYYYMMDD)
 - Use the Date Submitted for applications; use the Approval Date for permit updates
- The cover letter must list all of the revised layers submitted in the accompanying CAD drawings.

There may be additional deficiencies resulting from the Department's review of the on-going operations associated with carbon monoxide entering the underground portion of the mine, which is requiring additional surface disturbance to build roads, drill emergency boreholes, and repair subsidence cracks.

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

Sincerely,



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