



Suzanne Steab <suzannesteab@utah.gov>

Flat Canyon Review

Daron Haddock <daronhaddock@utah.gov>

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To: Gregg Galecki <ggalecki@bowieresources.com>

Cc: Priscilla Burton <priscillaburton@utah.gov>, Suzanne Steab <suzannesteab@utah.gov>, Keenan Storrar <kstorrar@utah.gov>, "cherylparker@utah.gov" <cherylparker@utah.gov>, Lisa Reinhart <lreinhart@utah.gov>

Gregg,

As discussed on the phone, I have attached the list of remaining deficiencies that have been identified on the Flat Canyon Lease Addition so that you can prepare a response to them without having to wait for the entire review to be completed. You will note that there are several hydrology related deficiencies that were identified by Amanda Daniels before she left. You may have already responded to these and we are still conducting the hydrology review of this project. The hydrology review will be sent to you as we complete it at a later date.

If you have any questions, let me know. Thanks, Daron

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Daron R. Haddock

Coal Program Manager

Utah Division of Oil, Gas & Mining

[\(801\) 538-5325](tel:(801)538-5325)**20161107140933.pdf**

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Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0070005
TaskID: 5017
Mine Name: SKYLINE MINE
Title: FLAT CANYON LEASE ADDITION

General Contents

Violation Information

Deficiencies Details:

The minimum requirements for R645-301-113 were not met.

An AVS evaluation was generated on 10/18/2016. Three outstanding violations are listed. Violation #833-9006 Bowie Refined Coal LLC, Violation #C61014-P004/1 BRC Chinook LLC, Violation #C61014-P004/2 BRC Chinook LLC, linking entities are Rickmeier Advisors Inc.

Any outstanding violations in the Applicant Violator System must be settled prior to permit issuance.

ssteab

Right of Entry

Deficiencies Details:

R645-301-121.100, The Cunningham lease and the Tracy lease included in Appendix 118A will expire in October 2016.

pburton

Permit Application Format and Contents

Deficiencies Details:

R645-301-121.100, The location of monitoring well 15-21-2 must be shown on Dwg 2.3.6-1, Location of Hydrologic Monitoring Stations.

pburton

Environmental Resource Information

Hydro Baseline Cumulative Impact Area

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Baseline Cumulative Impact Area Information. The

following deficiency must be addressed prior to final approval:

R645-301-725, R645-301-525 The Permittee must provide a detailed description of all water resources within the lease area. The discussion of groundwater rights on page 2-30(l) should be expanded to include a description and condition of any structures related to the development of these springs, such as the campground spring. Documentation of these structures will help establish a baseline condition, which could then be referenced if there is any future damage caused by subsidence when the area is undermined.

R645-301-725 & 728, R645-301-525 The Permittee must provide a clear timeline of how soon after each perennial stream survey (conducted before and after mining) an amendment to the MRP will be submitted with survey results. A commitments needs to be added that states that any subsidence repairs related to streams, or stream banks will be done in consultation with the Division.

R645-301-725 The perennial stream reaches shown in Figure 4, submitted as page 2-41a of the MRP, are unclear and hard to read. A better copy must be submitted.

R645-301-728 The Permittee needs to include a commitment in the MRP which would clearly state that any annual stream surveys conducted on Eccles Creek will be submitted with the annual report.

R645-301-728 There is conflicting information within the MRP about the flow levels in Eccles Creek that would potentially cause damages to the stream bank. On page 2-46b of the MRP, the Permittee states that the creek can safely handle 30,000 gpm, when the report provided by Peterson Hydrologic in the PHC Addendum Volume 2 " Appendix N, states that damage could start occurring at flows of 15,000 gpm. This must be clarified or corrected.

adaniels

Hydro Modeling

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Modeling. The following deficiency must be addressed prior to final approval:

R645-301-726 The Permittee must provide the updated modeling information related to the Flat Canyon Lease.

adaniels

Probable Hydrologic Consequences Determination

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Probable Hydrologic Consequences Determination. The following deficiency must be addressed prior to final approval:

R645-301-728 The Permittee must directly address the potential impact of surface water interception as a result of coal mining within the Flat Canyon Lease and potential for impacts to Electric Lake. When high inflows of water were encountered in the mine beginning in 1999, a number of reports and studies were generated regarding speculation that the modern components of mine water inflows were or were not sourced from Electric Lake. The Division never concluded that Electric Lake was the source of the mine water inflows, but the Permittee must, using new or past studies, provide details of how mine water conditions compare to the conditions faced in mine #2. Also, any updated information that clarifies conflicting studies conducted between 2001 and 2005 should also be provided.

adaniels

Maps Monitoring and Sampling Locations

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Monitoring and Sampling Location Maps. The following deficiency must be addressed prior to final approval:

R645-301-722 Plate 2.3.6-1, the water monitoring map, is missing from the amendment. This needs to be submitted.

adaniels

Operation Plan

Hydrologic Ground Water Monitoring

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Groundwater Monitoring. The following deficiency must be addressed prior to final approval:

R645-301-731.210 Due to concerns about groundwater volumes that could be encountered while mining in the Flat Canyon Lease, the Permittee should specify how flow volumes, coming out of the Flat Canyon Lease area specifically, will be monitored and reported.

adaniels