



# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

February 22, 2016

Corey Heaps, Mine Manager  
Canyon Fuel Company, LLC  
HC 35 Box 380  
Helper, Utah 84526

Subject: Flat Canyon Lease Addition, Canyon Fuel Company, LLC, Skyline Mine,  
C/007/0005, Task ID #5017

Dear Mr. Heaps:

The Division has reviewed your application for the Flat Canyon Lease Addition. Deficiencies remain in the application. The deficiencies are listed as an attachment to this letter. The names of the deficiency authors are provided so that your staff can communicate directly with that individual should questions arise.

Please revise the application accordingly and resubmit the entire package in order for us to complete the processing of your permit revision.

If you have any questions, please call me at (801) 538-5325.

Sincerely,

Daron R. Haddock  
Coal Program Manager

DRH/sqs  
O:\007005.SKY\WG5017 FLAT CANYON\Deficiencies.doc



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

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*Division Director*

## Technical Analysis and Findings

### Utah Coal Regulatory Program

February 19, 2016

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

#### General Contents

#### Violation Information

##### Analysis:

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

An AVS evaluation was generated on 2/11/2016. One outstanding violation is listed. Violation #8618015, BRC Alabama No 3 LLC, linking entities are Rickmeier Advisors Inc.

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

##### Deficiencies Details:

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

An AVS evaluation was generated on 2/11/2016. One outstanding violation is listed. Violation #8618015, BRC Alabama No 3 LLC, linking entities are Rickmeier Advisors Inc.

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

ssteab

#### Identification of Interest

##### Analysis:

The minimum requirements of R645-301-112 were met.

The Division performed a cross check with the Applicant Violator System and the MRP General Chapter 1, Appendix 1-1 Organizational Officers and Directors. No errors in the ownership and control information were identified.

ssteab

#### Right of Entry

##### Analysis:

The application meets the requirements of R645-301-114, Right of Entry for federal coal. Federal coal lease UTU-77114

gives Canyon Fuel Company, LLC right of entry to 2,692.16 acres, for twenty years, effective July 1, 2015. The leased lands are in T. 13 S., R. 6 E.: Sec 21, 28, and 33 and T. 14 S., R. 6 E.: Sec 4 and Sec 5, all within Sanpete County (Chap 1, p. 1-32). Importantly, the BLM ROD Attachment 2/Stipulation #22 requirement to provide plans for prevention of subsidence "prior to mining on the lease" was modified in the language of Lease UTU-71114 issued July 31, 2015 to read, "Prior to development of panels that would cause subsidence of" Boulger Reservoir or the Flat Canyon campground (Stipulations #25 and #26). A copy of the lease, with the precise legal description of the lands within the lease is found in App.118-A.

The application does not meet the requirements of R645-301-114 for 347 acres of fee coal which is included in the public notice for the application. In accordance with R645-301-521.141, Canyon Fuel Co., LLC. has stated an interest in an adjacent fee coal lease from the Collard Family Trust located in T. 13 S., R. 6 E.: NW1/4NW1/4 Sec 20 and N1/2 Sec 29 (Chap. 1 p. 1-24 and Plate 1.6-2 Mineral Ownership). This lease must be included in the current mining plan described by Table 1.114 and documented in App. 118A.

*Deficiencies Details:*

**Deficiency:**

R645-301-114 for 347, The application does not provide right of entry for 347 acres of fee coal which is included in the public notice for the application. In accordance with R645-301-521.141, Canyon Fuel Co., LLC. has stated an interest in an adjacent fee coal lease from the Collard Family Trust located in T. 13 S., R. 6 E.: NW1/4NW1/4 Sec 20 and N1/2 Sec 29 (Chap. 1 p. 1-24 and Plate 1.6-2 Mineral Ownership). This lease must be included in the current mining plan described by Table 1.114 and documented in App. 118A.

pburton

**Legal Description**

*Analysis:*

**Analysis:**

The application meets the requirements R645-103-220, suitability and R645-301-521, legal description.

In accordance with R645-103-220, the area was determined suitable for underground mining by the BLM subject the stipulations listed in the BLM Record of Decision Attachment #2 and subject to the consent by the USFS. (Refer to BLM Record of Decision Federal Lease Sale Offering: Flat Canyon Coal Tract (UTU-77114), April 11, 2002). The BLM's stipulations require single seam mining (unless the USFS approves multiple seam mining), backfilling of all portals, a plan for mining under Boulger Reservoir, a plan for the Flat Canyon Campground two years prior, monitoring the gradient of the perennial streams within the lease (Boulger Creek, Swens Creek, Little Swens Creek and Flat Canyon Creek), and notification of any seismic events that trigger a Richter scale reading in excess of 3.0. These stipulations were included with the Coal Lease at issuance, although the numbering is different.

In accordance with R645-301-521, the application gives the legal description of the leased lands which is T. 13 S., R. 6 E.: Sec 21, 28, and 33 and T. 14 S., R. 6 E.: Sec 4 and Sec 5, all within Sanpete County (Chap 1, p. 1-32). A copy of the lease, with the precise legal description of the lands within the lease is found in App.118-A.

Both the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS) recognize the fragile renewable resource lands within the Flat Canyon Lease. Each agency mentions the extreme importance of protecting the perennial streams, and the Boulger Dam and Reservoir from subsidence.

The USFS in their Record of Decision (ROD) agreed to the Selected Alternative to limit subsidence that would occur beneath perennial streams, under Boulger Dam and Reservoir, beneath State Route 264, and beneath the Flat Canyon Campground on National Forest Lands (The Decision. In. Record Of Decision FEIS Flat Canyon Lease Tract UTU -77114, USFS, 2002.). Special Coal Lease Stipulations Attachment 1 outlines the requirements for mining the Flat Canyon lease. The USFS Record of Decision (ROD) also requires incorporation into the Mining and Reclamation Plan, the monitoring and mitigation measures specified in Attachment 2 of the ROD. These USFS stipulations were also repeated in the coal lease.

R645-103-223, The Office of Surface Mining is currently in the process of preparing an Environmental Assessment relative to the Flat Canyon Lease. The Division is a cooperating agency in that process. The public notice for that EA was published in the Emery County Progress October 13 and 27, 2015. The comment period ended in mid-November, 2015. The EA has not yet been published. Therefore, federal mine plan modification approval is pending, and is required prior to permit issuance.

In accordance with R645-301-112.800, an interest in adjacent fee coal is stated in Chap. 1, p. 1-24.

*Deficiencies Details:*

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pburton

**Permit Term**

*Analysis:*

**Analysis:**  
The application meets the requirements of R645-301-116 Permit Term and R645-300-154, Right of Renewal. The five year permit issued October 22, 2013 was revised October 9, 2015 to include the North of Graben pad and shaft. The permit term expires on April 30, 2017. The Flat Canyon lease would extend the life of mine by 9 - 12 years (Incoming document 10132015a.5017 and Section 3.3)).

pburton

**Public Notice and Comment**

*Analysis:*

**Analysis:**  
The draft public notice filed with the application did not meet the requirements of R645-301-121, Filing and public notice. Accordingly, the draft public notice was revised (personal communication with G. Galecki, 2/2/2016) and was recently published in The Progress (Emery County), and the Sanpete newspaper, and in the Sun Advocate (Carbon County). (The lease is not within Carbon County however.) An affidavit of the public notice from all three papers should be provided with the application. The notice says that a copy of the application will be on file at the Emery County courthouse and the Sanpete County courthouse.

R645-301-525.700, Public Notice of Proposed Mining. Notification to surface owners prior to mining, (i.e. such as the drafts provided in App 118A), must be sent to the appropriate Sanpete County and Emery County water conservancy districts and the Huntington Cleveland Irrigation Company and the Huntington Cleveland Irrigation Company and the Utah Department of Transportation.

*Deficiencies Details:*

**Deficiencies:**  
R645-301-121, Filing and public notice. An affidavit of the public notice from Sanpete, Emery and Carbon county newspapers should be provided with the application.

R645-301-525.700, Public Notice of Proposed Mining. Notification to surface owners prior to mining, (i.e. such as the drafts provided in App 118A), must be sent to the appropriate Carbon County, Emery County and Sanpete County water conservancy districts and the Huntington Cleveland Irrigation Company, and Utah Department of Transportation.

pburton

**Identification of Interest**

*Analysis:*

**Analysis:**  
There has been no change to the information on file with the Division, which meets the requirements of R645-301-112, Identification of Interests. The corporate ownership is filed in a "General Chapter 1" volume for all the Bowie Mines, last updated January 2015. The applicant is Canyon fuel Co., LLC. Canyon Fuels address is listed in Chapter 1 of the MRP. Canyon Fuel co. LLC is owned by Bowie Resource Holdings, LLC. and Bowie Resource Partners, LLC. both with corporate offices in Louisville, Kentucky. Ultimate ownership of the above companies is by Galena US Holdings Inc and Cedars Energy, LLC. both Galena US Holdings Inc and Cedars Energy LLC are in turn controlled by individuals and corporate entities. The ownership tree is illustrated on Figure 1-1 of General Chapter 1. The list of officers and directors for Canyon Fuel Co., LLC and all its owners is found in Appendix 1-1 of General Chapter 1, which remains unchanged since 2013. The Resident Agent is Eugene DiClaudio. He is also responsible for the AML fee payment.

The application meets the requirements of R645-301-112.500 and R645-301-112.600, surface and mineral ownership, because a copy of lease UTU-77114 issued to Canyon Fuel Company, LLC effective July 1, 2015 was provided. The lease encompasses 2,692.16 acres of federal coal (BLM) with the USFS as the surface managing agency. Both federal agencies have placed stipulations on the lease issuance.

Surface land ownership of leased areas and contiguous areas is shown on Dwg 1.6-1 . Mineral ownership is shown on Dwg 1.6-2. Mineral and surface ownership was updated with this application, as outlined in Section 112.600 of the MRP.

pburton

## Violation Information

### Analysis:

#### Analysis:

The application meets the requirements of R645-301-113, violations, which requires that the applicant provide a list of all violation notices received by the applicant during a three year period preceding the application date. Section 113 and Table 1-2 of General Chapter 1 provide information on violations at Canyon Fuel Co., LLC mines and mines controlled by the owners of Canyon Fuel Co, LLC. This table was updated on October 5, 2015.

pburton

## Reporting of Technical Data

### Analysis:

#### Analysis:

The application meets the requirements of R645-301-130, Reporting of Technical Data, because, the application contains the following reports.

#### Appendix A-1 Vol. 2:

Results of the 2015 Geomorphic Evaluation of Eccles Creek. Earthfax Engineering Group, LLC., (SLC UT) October 2015. Lease UTU-77114 Baseline Water Quality data of Proposed Additional Water Monitoring Sites Field and Lab Data (SW33-268, SW32-277, SW4-429, SW4-173, CS-30, CS-29, CS-28, CS-27, CS-31, SWS-590). SGS North America Inc., Minerals Services Division, Huntington, Utah. October 13, 2014 through September 15, 2015.

#### Appendix A-2 Vol. 2:

Western (Boreal) Toad Survey. Alpine Ecological, Allan R. Stevens, PhD (Greenwich, UT) Aug. 29, 2014.  
Prime Farmland Determination – NRCS, Joseph Dyer (Price UT). June 2014.  
USFWLS Species by County Review, Alpine Ecological, October 2015  
Vegetative Analysis of Seven Proposed Drill Sites and Seven Reference Sites. Alpine Ecological, August 2015.  
Subsidence Area Vegetative Monitoring Protocol. Alpine Ecological, October 2015.

#### Appendix A-3, Vol. 2:

Southwest Reserve Roof, Coal and Floor analysis ( 95-21-1, 95-28-1, 98-3-2C), Commercial Testing and Engineering, (Denver, CO) 1995 - 1999. Analysis of hole 99-3-1 was completed by Standard Laboratories, Casper WY.  
Southwest Reserves NEPA Analysis Area, 2011, Northern Goshawk, other Raptors and General wildlife Surveys. Western Land Services Inc. (Richfield, UT) 09.10.2011.  
Southwest Reserves NEPA Analysis Area, 2012, Northern Goshawk, other Raptors and General Wildlife Surveys. Western Land Services Inc. (Richfield, UT) 08.06.12.

#### Appendix A-4, Vol. 2:

Flat Canyon Lease Tract Final EIS, January 2002, jointly produced by USFS and BLM.  
Flat Canyon Record of Decision based on the Final Environmental Impact Statement for the Flat Canyon Lease Tract (UTU-77114). 2002, Manti-La Sal National Forest, Ferron-Price Ranger District.

#### Appendix A-4, Confidential File:

SHPO concurrence; Hopi Tribe concurrence; EPG email; NRHP site 42Sp445 map

#### Appendix N and O, Vol 2:

PHC Addendum Appendix N: Peterson Hydrologic (SLC, UT). Aug. 13, 2014. Investigation of Groundwater and Surface-Water Systems In the Flat Canyon Tract and Adjacent Area: Probable Hydrologic Consequences of Coal Mining in the Flat Canyon Tract, Sanpete County, Utah.  
PHC Addendum Appendix O: Peterson Hydrologic.(SLC, UT) Aug. 18, 2104. Groundwater Conditions in the Star Point Sandstone In the Vicinity of the Skyline Mine, 2014.

### Deficiencies Details:

pburton

## Permit Application Format and Contents

### Analysis:

#### Analysis:

The application does not meet the requirements of R645-301-121 to contain current information and be clear and concise because recent baseline data collection has not been included and the status of required baseline data is not clear.

Monitoring well 15-21-1 was recently drilled as described on page 2-29e. Please reference the location of this well on a map and if core analysis was completed, please add information to Appendix A-3 and indicate the hole location on Plate 2.2.4-1D.

It is unclear whether the plans required for undermining of Boulger Reservoir and Flat Canyon (page 3-6a) are separate from the subsidence data required for mining two seams (2002 BLM Record of Decision Attachment #2 Supplement to Stipulation #9). Please make a distinction between the two requirements in the narrative.

### Deficiencies Details:

#### Deficiencies:

R645-301-121.100, Monitoring well 15-21-1 was recently drilled as described on page 2-29e. Please reference the location of this well on a map and if core analysis was completed, please add information to Appendix A-3 and indicate the hole location on Plate 2.2.4-1D.

R645-301-121.200, It is unclear whether the plans required for undermining of Boulger Reservoir and Flat Canyon (page 3-6a) are separate from the subsidence data required for mining two seams (2002 BLM Record of Decision Attachment #2 Supplement to Stipulation #9). Please make a distinction between the two requirements in the narrative.

pburton

## Permit Application Format and Contents

### Analysis:

The amendment does not meet the State of Utah R645-301-120.200 requirements for being clear and concise.

The amendment is not consistent with references to special stipulations attached to the lease. In some cases, stipulations are referenced by number from the Record of Decision and in other cases stipulations are referenced by number in the Lease. In most cases, the actual stipulation is not defined and only the number is identified. The stipulations are not numbered the same in both documents and therefore it causes confusion.

The amendment is not clear about permit boundaries as they are not consistent on all maps. Some maps include a portion of the E2W2 in Section 33 T.13S, R.6E, whereas other maps do not. The legal description on page 1-32 does not include this small parcel. For example, plates 2.12.1, 3.1.8-3, 3.3-4- include the parcel, plate 1.6-3 does not.

### Deficiencies Details:

The amendment does not meet the State of Utah R645-301-120.200 requirements for being clear and concise.

R645-301-120.200. The amendment must cite stipulations consistently from the Lease and not previous documents.

Permit boundaries must be consistent on all maps and only include areas as described in the legal description in Chapter 1.

ireinhart

## Environmental Resource Information

### General

#### Analysis:

The amendment meets the State of Utah R645 requirements for general contents of maps and plans.

The amendment now meets the minimum requirements of R645-301-521 due to information stated the mine plan details,

plates, and drawings to address the Federal stipulations. The mine plan also details mining operations outside the provided legal description of the mine boundary, as shown on Drawing 1.6-3 so a note was added declaring "Any project mining shown beyond existing lease boundary lines is subject to future lease modification and approvals."

Specific Federal stipulations regarding the mining operations around the Flat Canyon Campground are outlined in BLM ROD Federal Stipulation #9 and #23. BLM ROD Federal stipulations regarding the mining operations around the USFS dam Boulger Reservoir are detailed in Federal stipulation #22. Several of the federal stipulations outlined in the previous Findings have changed within the final Lease agreement on 7/31/2015. The lease agreements stipulates that the Permittee is restricted to single seam full extraction mining are approved for areas under Boulger Reservoir, SR-264, and the Flat Canyon Campground pending final approval of all other baseline information as the Permittee's mining approaches the area.

Additionally, the mine plan shown on Plate 3.1.8-2 details mining operations outside the legal description detailed on drawing 1.6-3 as well as in Chapter 1. Specifically, the mine plan shows operations outside of the mine boundary for T.13., S.R.6.E. Section 32 and T.14.S., R.6E., Section 6 and Section 3. A note was added declaring "Any project mining shown beyond existing lease boundary lines is subject to future lease modification and approvals."

The amendment includes updates to Chapter 2, 3, and 4 to include the updated lease acres of the Flat Canyon Lease. The appendix A-4 was added to Volume to that contains a copy of the EIS. The FEIS was reviewed by the BLM Price Field Office staff and found the report to be adequate and current laws, additional information, and changing circumstances are not considered significant.

cparker

## Permit Area

### Analysis:

The amendment meets the State of Utah R645 requirements for general contents of maps and plans detailing the Permit Area.

The amendment now meets the minimum requirements of R645-301-521 by detailing the permit area on all relevant maps and plans. The mine plan shown on Plate 3.1.8-2 details mining operations outside the legal description detailed on Drawing 1.6-3 as well as in Chapter 1. Specifically the mine plan shows operations outside of the mine boundary in T.13., S.R.6.E. Section 32 and T.14.S., R.6E., Section 6 and Section 3. A note was added declaring "Any project mining shown beyond existing lease boundary lines is subject to future lease modification and approvals."

cparker

## Historic and Archeological Resource Information

### Analysis:

The amendment does not meet the State of Utah R645-301-411 requirements for historic and archeological resource information.

Cultural and historical resources are described and evaluated Section 3.1.12 of the FEIS, which is included with the amendment. In summary, six historic sites were inventoried with only one site (42SP445) recommended as eligible to the NRHP. Language in the FEIS and in letter from Any Yentsch indicate the Utah State Historic Preservation Officer recommended site (42SP443) also be eligible for the NRHP in letter dated 9/27/2001. In contrast, letter dated 8/29/2015 from Andy Yentsch of EPG states, site 42SP443 is determined, as non-eligible but there is no evidence of SHPO concurrence with his finding. An inquiry to the SHPO confirmed 42SP443 is recorded as "not eligible".

The amendment fails to provide a monitoring and mitigation plan should subsidence impact eligible site 42SP445.

A map showing the locations of cultural or historical resources listed or eligible for listing within the permit and adjacent area is not provided pursuant to 411.141.

### Deficiencies Details:

The amendment does not meet the State of Utah R645-301-411 requirements for historic and archeological information. The following deficiency must be addressed prior to final approval:

R645-301-411: The permittee must reconcile the eligibility of site 42SP443 and provide SHPO concurrence with the

eligibility. The permittee must identify a monitoring and mitigation plan should subsidence impact an eligible site. The permittee must provide a map showing the locations of cultural or historical resources listed or eligible for listing within the permit and adjacent area.

Ireinhart

## **Climatological Resource Information**

### *Analysis:*

The amendment meets the State of Utah R645 requirements for Climatological Resource Information.

Section 2.6 of the approved MRP contains a description of climatological conditions in the Skyline Mine area. This information applies to the Flat Canyon Lease area as well. The permittee also submitted information prepared by Petersen Hydrologic that includes a discussion of climatic condition in the Flat Canyon Lease area. Information provides average annual seasonal precipitation amounts, monthly average temperatures, and other general climatic information.

adaniels

## **Vegetation Resource Information**

### *Analysis:*

The amendment meets the State of Utah R645-301-321 requirements for vegetation resource information.

The vegetation across the project area is very diverse and dependent on elevation, slope, and available water resources. Vegetation resources are summarized in subsection 2.7.10 on page 2-63a. Although not technically deficient, this section warrants complete restructure for clarity and consistency. The vegetation types and maps referenced and described in the EIS should be included in the MRP and not referenced.

Ireinhart

## **Fish and Wildlife Resource Information**

### *Analysis:*

The amendment does not meet the State of Utah R645-301-322 requirements for fish and wildlife information.

Several tributaries to Upper Huntington Creek and Mud Creek have the potential to be impacted from mining operations. Swens and Little Swens provide little habitat for fish due to shallow pools and riffles. As noted in the amendment, Boulger Creek provides higher quality fish habitat and as such will be monitored for fish populations.

Although not provided in the amendment, Section 2.9.7 references tables 2.9-1 through 2.9-7 for resource information. A review of the existing MRP reveals tables are as follows: 2.9-1 covers all mammals, 2.9-2 covers all amphibians, 2.9-3 covers all reptiles, Table 2.9-4 is the County list, Table 2.9-5 is the state list, Table 2.9-6 is the USFS Manti-La Sal list, Table 2.9-7 is the federal list. These lists adequately identify wildlife resources of the area.

There is adequate information contained in the U.S. Fish and Wildlife Service's Review prepared by Alpine Ecological to support TES resources. References to the EIS should be removed and references should be to the Alpine Ecological report to reduce confusion between different sources of information.

This amendment does not address fisheries at Boulger Reservoir. The amendment states impacts to Boulger reservoir are not being addressed at this time because the current mine plan does not include undermining of the reservoir. While impacts may not be anticipated, Boulger Reservoir is within the adjacent area and therefore must be identified.

As noted in the 2014 survey for the Western toads, inventories were completed in riparian areas and streams in Little Swens, Swens, Flat Canyon, Boulger Creeks and Huntington Creek. An adequate map of the survey locations is provided with the report. No Western toads were located during the surveys.

In July of 2011 and 2012, surveys for Northern Goshawk, other nesting raptors, and general wildlife inventories were completed by a qualified wildlife biologist. During the inventory biologists documented audible responses or visual detections of raptors, mostly from Red Tailed Hawks. Northern Goshawk nests were not located. While some habitat exists for the Bald Eagles (winter), Migratory birds, Flammulated Owl and the Three-toed Woodpecker, no sightings have been noted.

*Deficiencies Details:*

The amendment does not meet the State of Utah R645-301-300 requirements for fish and wildlife information. The following deficiency must be addressed prior to final approval:

R645-301-322: Each amendment will include fish and wildlife resource information for the permit area and adjacent area. The permittee must provide resource information for Boulger Reservoir pursuant to R645-301-322 since it is within the adjacent area.

Ireinhart

**Land Use Resource Information**

*Analysis:*

The amendment meets the State of Utah R645-301-411 requirements for land use information.

Section 2.12 discusses land use which is wildlife habitat, grazing, recreation, natural gas transmission and forestry. The MRP fully evaluates land use resources in more depth. Several grazing allotments are within the proposed mining area. Table 2.12.1-1 includes production measurements in AUM's. Allotments within the Flat Canyon lease area have been added to table 2.12.1-1. Boulger Reservoir and Flat Canyon Campground are also within the mining areas. With this permit amendment, the mine plan does not include undermining or subsiding either area and therefore there should be no impact. Plate 2.12.1-1 has been updated to include the additional permit area and associated grazing allotments.

Ireinhart

**Alluvial Valley Floors**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Alluvial Valley Floors.

Alluvial Valley Floors rules are not applicable due to the absence of identified alluvial valley floors in the Flat Canyon Lease Area.

adaniels

**Geologic Resource Information**

*Analysis:*

The applicant has not met the minimum requirements for Geologic Resource Information as there are labeling errors with Drawing 2.2.4-1D.

Section 2.2 of Chapter 2 includes a discussion of the geology and geotechnical data for the Flat Canyon Area.

Appendix A-3 includes analysis of the roof, floor and coal samples. Figure 4 of the Petersen Hydrologic Report shows the generalized geology map of the Flat Canyon Area.

Dwgs 2.2.7-1 and 2.2.4-1D show the structural geology and the seam isopachs. Also shows the structural profile of the area which includes a fence diagram using 9 drill holes as correlation.

The existing MRP discusses plans for casing and sealing drill holes. No changes have been proposed with this revision. Flat Canyon Lease has low potential for generating acid and toxicity from the mining of the coal. Within the lease, the merged Flat Canyon / Lower O'Connor A and Lower O'Connor B seams will be mined. Lab analysis from drill holes show the coal and surrounding rock to be consistent with the materials generated in Mines #1 and #2 located to the east and Mine #3 in the North Lease. Table 2.2.8-2 has been updated to illustrate the sulfur and acid-forming potential in the seams to be mined. Plate 2.2.4-1 D provides a fence diagram of the stratigraphy and the seams to be mined. This plate may be mislabeled as it is referred to as Drawing 2.3.4-1D in various sections of the text and on the C1C2 form. This discrepancy should be corrected.

The chemical and acid-base potential analysis of the roof, coal, floor of selected drill holes are provided in Appendix A-3. The analysis shows a very low potential for acid forming materials to be generated, with only one of the floor samples showing a -1.5 acid base potential and all other samples were a positive number. Locations for holes 95-21-1 , 95-28-1 , 99-33-1, and 98-3-2C are available on Plate 2.2.4-1 D; sites used in the fence diagram.

*Deficiencies Details:*

R645-301-622. Cross Sections, Maps and Plans. Plate 2.2.4-1D provides a fence diagram of the stratigraphy and the seams to be mined. Either the plate is mislabeled or the text in section 4.17 is wrong in several locations as it refers to Dwg. 2.3.4-1 D as being the fence diagram. This discrepancy still needs to be corrected.

dhaddock

## Hydro Sampling and Analysis

*Analysis:*

The amendment meets the State of Utah R645 rules for Sampling and Analysis.

Methods used to conduct water sampling are described in the Peterson Hydrologic Investigation of Groundwater and Surface-Water Systems in the Flat Canyon Tract and Adjacent Areas report. Laboratory analysis of water samples were performed by SGS Laboratories and Chemtech Ford Laboratory. These labs are both NELAC certified. Any isotopic analysis done of water samples were conducted at the University of Miami, Florida, the BYU Department of Geology, and Geochron Laboratories of Cambridge, Massachusetts.

adaniels

## Hydro Baseline Information

*Analysis:*

The amendment meets the State of Utah R645 requirements for Baseline Information.

The Peterson Hydrologic report goes into detail describing the type of baseline monitoring that has taken place in the Flat Canyon Lease area. See the Hydro Ground Water Monitoring Plan section and the Hydro Surface Water Monitoring Plan sections for an in depth analysis and findings.

Table 1, attached to this analysis is a summary of baseline water monitoring that has been conducted by the Permittee throughout the Flat Canyon Lease Area. The sampling location names correspond with water monitoring maps provided in the Peterson Hydrologic PHC report for Flat Canyon (Figures 2).

Baseline monitoring information has included springs, streams and well locations. Sampling parameters for groundwater have included total dissolved solids (TDS), temperature, pH, total iron, and total manganese. Also include is flow rates of springs or water levels in groundwater wells. Sampling parameters for surface water sampling has included total suspended solids (TSS), temperature, pH, total iron and total manganese. Flow rates of streams have also been provided. All of this data has been provided and is located in both PHC Addendum Volume 2 Appendix N & O, and Appendix A-1 of Volume 2 of the proposed amendment.

Groundwater Baseline Information:

The Permittee has sampled 18 springs for baseline parameters throughout the Flat Canyon lease area. These springs issue from each geologic formation that is exposed within the lease. These formations include the Price River formation, the Castlegate formation, and the Blackhawk formation. The sampling of these springs can be found in more detail in Table 1, attached to this analysis. Some of these springs have average flow rates as high as 35 gpm and as low as about 1 gpm. By collecting from springs that discharge from each formation, as well as selecting some springs that have high discharge rates and some that have low discharge rates, we are able to get a wide view of spring activities and trends throughout the lease. Most of the springs located in the lease produce water with a low TDS value, in the range of about 72 - 272 mg/L.

There are at least four groundwater wells that have been drilled throughout the lease area. These wells area 99-4-1, 20-4-1, 20-28-1, and 99-21-1. Well 99-21-1 has had depth monitored since 2001, wells 99-4-1 and 20-28-1 have had depth monitored since 2002, and well 20-4-1 has had depth monitored since 2002 but became blocked in 2014. Well 15-21-1 was being drilled in 2015, but due to the water monitoring plate not being a part of this submission, and analysis of this well will not be included at this point. The four wells listed above area all completed within the Star Point formation aquifer below the coal seams to be mined. These wells have a potentiometric head 700 to 1000 feet above the coal seam. There are no known outcrops of the Star Point formation within the Flat Canyon lease. Refer to Plate 2.3.6-1 for well locations.

Surface Water Baseline Information:

The Permittee has had 12 stream monitoring locations which they have been monitoring for baseline parameters. Little Swens Canyon stream is a perennial stream with monitoring locations CS-27 and CS-17 located above and below proposed mining. Swens Canyon Stream is perennial, with monitoring locations CS-28 and CS-16 located above and below proposed mining. Flat Canyon stream is perennial and has monitoring locations C-6 and C-4 located above and below proposed mining. Boulger Canyon stream is perennial and has stream monitoring locations CS-31 and CS-2 located above and below proposed mining. Stream monitoring location UPL-10 is located at the inlet to Electric Lake from Huntington Creek and Stream monitoring location CS-10 is located on Huntington Creek just outside of the north east point of the Flat Canyon lease. These monitoring locations can be found on Plate 2.3.6-1 of the MRP and baseline collection data is shown on Table 1, attached to this analysis.

adaniels

## Hydro Baseline Cumulative Impact Area

### *Analysis:*

The information provided is not sufficient to meet the requirements of the State of Utah R645-301 Coal Mining Rules.

Petersen Hydrologic submitted a report, "Groundwater Condition in the Star Point Sandstone", separate from their baseline monitoring report. This report summarizes groundwater conditions around the Skyline Mine, specifically in the Star Point Sandstone formation. This report uses a number of studies, and data collected over the years in the vicinity of the Flat Canyon Lease.

There are also four monitoring wells located in the area of the Flat Canyon Lease that are completed in the regional Star Point Formation aquifer below the coal seams to be mined. These wells have a potentiometric surface ranging from 700 to 1000 feet above the coal seam. This has remained consistent since pumping began in the #2 mine in 2001.

There are many springs in the lease area to be undermined. The campground spring has structures like collection boxes and conveyance pipes. A list and description of these structures should be included in the MRP to fully evaluate potential impacts that could occur to pre-mining structures. The discussion of groundwater rights on page 2-30(l) should be expanded to include a description of any structures related to the development of these springs. Documentation of these structures will help establish a baseline condition of the structures, which can be referenced if there is any future damage caused by subsidence when the area is undermined.

The proposed permit revision excludes the area of Boulger Reservoir from being undermined. If in the future, the mine plan changes, and the reservoir will be undermined, it will have to be permitted through the Division.

In the PHC submitted as Appendix N of the current PHC addendum volume 2, it is contemplated that discharges from the Skyline Mine during mining of the Flat Canyon Lease will possibly be in the range of 15,000 gpm. It goes on to state that if this kind of discharge is released into Eccles Creek, as is currently the plan, it could result in stream bank erosion, undercutting of valley side-slopes and sloughing, channel widening, and some headcutting. In 2002 the PHC was updated to include a report from a study conducted by EarthFax Engineering. This report was updated by EarthFax Engineering in 2015. The Permittee has also proposed that if mine discharge were ever to exceed 5,000 gpm, annual monitoring and inspections of the creek will be reestablished to evaluate the condition of the creek. The mine should include a commitment in the MRP that any annual surveys will be included in the mine's annual report. There is one point of confusion in the MRP when on page 2-46b, the Permittee states that the creek can safely handle 30,000 gpm, when the report provided by Peterson Hydrologic states in the PHC Addendum Volume 2 Appendix N that damage could start occurring at flows of 15,000 gpm. This should be clarified by the Permittee.

The revision proposed to meet the requirements of lease stipulation #27 by monitoring the perennial streams, (as indicated on Figure 4-1) before and after mining takes place. This monitoring will include using survey grade equipment to monitor for stream channel changes and subsidence damage. The Permittee has proposed including this information in Appendix A1 of the MRP.

The perennial stream reaches were shown in Figure 4, submitted as page 2-41a of the MRP. However, the map resolution is unclear and hard to read. A better copy should be submitted.

### *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

### *Analysis:*

The information provided is not sufficient to meet the requirements of the State of Utah R645-301 Coal Mining Rules.

There is not an updated model with this permit revision, however, during conversations with the Permittee; it appears that they have been working on updating this. Any updated modeling information related to the Flat Canyon Lease should be included in the application.

### *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

### *Analysis:*

The information provided is not sufficient to meet the requirements of the State of Utah R645-301 Coal Mining Rules.

Appendix N of the PHC Addendum Volume 2, is a PHC report prepared by Petersen Hydrologic. The report gives a detailed description of the natural surface and ground water systems within the lease. This report overviews the baseline ground and surface water data that has been collected and contains a compilation of this data. Table 1, attached to this report overviews the spring and stream baseline monitoring that has taken place, and when these samples were collected. The report states that coal mining in the Flat Canyon Lease tract will likely not result in significant adverse impacts to the hydrologic balance. However, in light of comments the Division has already received from water users in the area of the lease, as well as a lack of analysis regarding Electric Lake, the Permittee needs to provide additional information to support this determination. Currently, there are a number of conflicting studies conducted and reported between 2001 and 2005.

Electric Lake lies directly east of the mains proposed in the Flat Canyon lease. When high inflows of water were encountered in the mine beginning in 1999, a number of reports and studies were generated regarding speculation that modern components of mine water inflows may or may not be sourced from Electric Lake. The Division has never concluded that Electric Lake was the source of the mine water inflows, but the Permittee should, using new or past studies, provide details of how mine water conditions compare to the conditions faced in mine #2.

*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

## **Hydro GroundWater Monitoring Plan**

*Analysis:*

The information provided is sufficient to meet the requirements of the State of Utah R645-301 Coal Mining Rules.

Table 1, attached to this report, is a summary of baseline sampling. It includes spring monitoring locations, from which formation they discharge, and the amount of baseline data collected. Sites chosen for the operational monitoring have had more baseline sampling over the last two years. Sampling has included TDS, pH, total iron, total manganese, discharge information, as well as other lab parameters. This new sampling data has been submitted as part of the amendment.

Plate 2.3.6-1, the water monitoring map, is missing from the submittal. This needs to be submitted. Without this map it has made it difficult to evaluate the location of spring and well sampling locations.

There are many springs located throughout the Flat Canyon Lease area, so care has been taken to select springs that will give us the most information regarding groundwater flowing from each geologic formation, and monitoring that will establish the baseline conditions of springs with important uses and associated water rights.

There are four monitoring wells within the Flat Canyon Lease area. These are wells 99-21-1, 20-28-1, 99-4-1, and 20-4-1. Well 99-21-1 has had depth monitored since 2001, wells 99-4-1 and 20-28-1 have had depth monitored since 2002, and well 20-4-1 has had depth monitored since 2002 but became blocked in 2014. These wells were completed in the Starpoint Formation aquifer below the coal seam and have a potentiometric surface ranging from 700 to 1000 feet above the coal seam.

See the deficiency in the Monitoring and Sampling Location Maps section about the water monitoring map.

adaniels

## **Hydro SurfaceWater Monitoring Plan**

*Analysis:*

The information provided is sufficient to meet the requirements of the State of Utah R645-301 Coal Mining Rules.

Table 1, attached to this report, is a summary of baseline sampling. It includes stream monitoring locations, and the amount of baseline data collected. Some of the stream monitoring locations have had many years of baseline data because they were part of the existing MRP's monitoring program. Stream sampling sites that have been selected for operational monitoring have had additional baseline sampling conducted over the last two years. This data was included as part of the amendment. Also, CS-31 has been added upstream of mining in Boulger Canyon as an additional stream sampling location, and baseline sampling started on that location in 2015.

The surface water monitoring plan has been established to give baseline conditions of all of the perennial streams within the lease boundaries. Sampling locations were established so that any effects of mining could most easily be detected. This includes monitoring locations above and below proposed mining operations.

See the deficiency in the Monitoring and Sampling Location Maps section about the water monitoring map.

adaniels

## Maps Affected Area Boundary Maps

### Analysis:

The amendment meets the State of Utah R645 requirements for affect area boundary maps.

The amendment now meets the minimum requirements of R645-301-521.100 through-521.130 by updating all the relevant maps for the entire area shown on the mine plan as detailed on Plate 3.1.8-2. The Permittee corrected the mine boundary line on Drawing 1.6-3 to match the mine plan presented on Plate 3.1.8-2.

R645-301-521.110 requires previously mined areas to be shown on cross sections and maps. The Flat Canyon lease has not been previously mined. Drawing 2.2.7-7 shows the locations of previously mine operations within the permit area. The amendment meets the minimum requirements of R645-301-521.110.

cparker

## Maps Affected Area Boundary Maps

### Analysis:

The amendment meets the State of Utah R645-301-323 requirements for maps and aerial photographs.

The amendment includes maps of the permit and adjacent areas including vegetation resources on Figures 2.7.9-2 and 3.5. Maps of survey areas for wildlife are available in the wildlife reports. These maps provide the location and boundary of proposed reference areas, monitoring stations for fish and wildlife, and habitat features. Plate 2.12.1-1 shows land use and grazing allotments.

lreinhart

## Maps Existing Structures and Facilities

### Analysis:

The amendment meets the State of Utah R645 requirements for existing structures and facilities maps.

R645-301-521.120 through-521.125 requires maps to clearly show existing surface and subsurface facilities. The amendment now meets the minimum requirements of R645-301-521.122 as it includes a drawing or plate that clearly calls out the existing surface and subsurface man made features within, passing through, or passing over the permit area such as SR-264, facilities such as buildings and pipelines associated with the Flat Canyon compound, and Boulger Reservoir/Dam on Plate 2.12.1-1

cparker

## Maps Existing Surface Configuration

### Analysis:

The amendment meets the State of Utah R645 requirements for existing surface configuration maps.

R645-301-521.140 requires maps to clearly show existing surface configuration. The amendment now meets the minimum requirements of R645-301-521.122 as it includes a drawing detailing the existing surface configuration.

cparker

## Maps Mine Working

### Analysis:

The amendment meets the State of Utah R645 requirements detailing mine workings.

R645-301-521.140 requires maps that clearly show all mine plans. The amendment now meets the minimum requires as all relevant existing drawings and plates were updated. Drawing 1.6-2 was updated within the amendment to show the details of existing coal ownership within the Flat Canyon lease boundary (UTU-77114). The drawing meets the minimum requirements of R645-301-521.131.

Drawing 1.6-3 was updated within the amendment to detail the new permit boundary, lease boundary, and adjacent areas including the Flat Lease. The new mine boundary does not include T.13., S.R.6.E. Section 32 and T.14.S., R.6E., Section 6 and Section 3 which Plate 3.1.8-2 shows mining operations will be conducted. A note was added declaring Any project mining shown beyond existing lease boundary lines is subject to future lease modification and approvals. This drawing coincides with the mine plan presented in Chapter 3 of the amendment and meets the minimum requirements of R645-301.521.141

Plate 2.12.1-1 was updated within the amendment to meet the minimum requirements of R645-301-521.120 clearly showing the items detail in -521.120 through-521.125.

Drawing 2.2.7-1 was updated in the amendment and meets the minimum requirements of R645-301-522 and R645-301-622 with all isopach contours and the seam isopach information for T.13., S.R.6.E. Section 32 and T.14.S., R.6E., Section 5 and Section 6. Plate 3.1.8-2 details mining operations to include the above sections. A note was added declaring Any project mining shown beyond existing lease boundary lines is subject to future lease modification and approvals.

Drawing 2.2.7-3 was updated in the amendment and meets the minimum requirements of R645-301-522 and R645-301-622 due to information of the isopach that details for the lower OConner B seam for T.14.S., R.6E., Section 5 and Section 6. Plate 3.1.8-2 details mining operations to include the above sections.

Drawing 2.2.7-4 was updated in the amendment and meets the minimum requirements of R645-301-522 and R645-301-622 due to information of the Overburden details for the lower OConner B seam for T.14.S., R.6E., Section 5 and Section 6. Plate 3.1.8-2 details mining operations to include the above sections.

Drawing 2.2.4-1D The drawing was updated to show the flat canyon seam legend and planned reserve workings. The amendment meets the minimum requirements of R645-301-522.

cparker

## Maps Monitoring and Sampling Locations

### Analysis:

The information provided not is sufficient to meet the requirements of State of Utah R645-301 Coal Mining Rules.

Plate 2.3.6-1, the water monitoring map, is missing from the submittal. This needs to be submitted. Without this map it has made it difficult to evaluate the location of spring, stream and well 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

## Maps Permit Area Boundary

### Analysis:

The amendment meets the State of Utah R645 requirements for permit area boundary maps.

The amendment now meets the minimum requirements of R645-301-521.140 as Drawing 1.6-3 was updated within the amendment to detail the new permit boundary, lease boundary, and adjacent areas to include the Flat Lease. A note was added declaring "Any project mining shown beyond existing lease boundary lines is subject to future lease modification and approvals." The new mine boundary does not include T.13., S.R.6.E. Section 32 and T.14.S., R.6E., Section 6 and Section 3 which Plate 3.1.8-2 shows mining operations will be conducted within.

cparker

## Maps Subsurface Water Resources

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301 Coal Mining Rules.

Plate 2.2.4-1D was added, and includes a structure profile cross section of the Flat Canyon Lease area. It includes a potentiometric surface established from a series of 4 wells throughout the lease.

Plate 2.3.4-2 maps a potentiometric surface for the entire Skyline permit area, including the flat canyon lease.

adaniels

## **Maps Surface and Subsurface Ownershiip**

*Analysis:*

The amendment meets the State of Utah R645 requirements for surface and subsurface ownership maps.

The amendment meets the minimum requirements of R645-301-521.130 which requires landowners, right of entry, and public interest maps. The Flat Canyon lease includes about 3,792 acres that underlie the Manti-LaSal National Forest in Sanpete County about 10 miles Southwest of Scofield, Utah on the Wasatch Plateau. Coal of economic interest is in the Upper and Lower OConnor, and Flat Canyon Coal beds, all located within the Blackhawk Formation. The intent of the Permittee is to mine approximately 41 million tons of coal. The surface estate is on 2,962 acres of Manti-La Sal National Forest and 1,100 acres privately owned. Plate 1.6-1 details the land owners for the various parcels in and adjacent to the permit boundary and was updated in the amendment.

cparker

## **Maps Surface Water Resource**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301 Coal Mining Rules.

Plate 2.3.6-1 includes surface water features. This includes reservoirs, streams, and ponds. Plate 2.3.5.1-1 is a map showing water rights within the Skyline permit area. This plate was updated with the submission and includes the entire lease area.

adaniels

## **Maps Well**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

Plate 2.3.6-1 includes the location of groundwater monitoring wells within the Skyline lease area, including the Flat Canyon Lease area. Page 2-29e of the proposed changes to the MRP includes a description of the 4 monitoring wells that area located within the lease area. The 4 monitoring wells are completed in the Starpoint Formation aquifer below the coal seams to be mined. There is also discussion on the potentiometric surface established from these wells.

See the deficiency in the Monitoring and Sampling Location Maps section about the water monitoring map.

adaniels

## **Operation Plan**

### **Mining Operations and Facilities**

*Analysis:*

The amendment meets the State of Utah R645 requirements mining operations and facilities.

The amendment now meets the minimum requirements of R645-301-526 due to addressing the Federal Stipulations of the

lease in Chapter 3 and Chapter 4, page 4-94. Specifically Plate 1.6-3 has been modified to include the Energy West boundary line and Plate 3.1.8-2 has been modified to show mining only within the lease boundary and will not include the undermining of Boulger Reservoir. All working in the southwest portion of the mine plan will be named Mine 4. Federal stipulations #10, #25 and #26 were addressed within the amendment in regards to minimizing subsidence under Boulger Reservoir and Flat Canyon Campground.

Chapter 3 of the Skyline MRP details the mining operations. Narrative was added to Section 3.1.2 and 4.17 to address the stipulation of the lease. The addition of the Flat Canyon lease will be mined utilizing longwall and room/pillar methods. A note was added declaring "Any project mining shown beyond existing lease boundary lines is subject to future lease modification and approvals" on relevant drawings.

cparker

## Existing Structures

### Analysis:

The amendment meets the State of Utah R645 requirements for existing structures.

The amendment now meets the minimum requirements of R645-301-526 due to narrative added to Section 2.12 chapter 2 page 2-132 to include the discussion of the existing buildings of the Flat Canyon Campground, Boulger Reservoir, and SR-124. Narrative was also added to Section 3.1.7 indicating the research into no existing pipelines or wells within the flat canyon lease area. The amendment also references any procedures to meet the Federal stipulation 10 relevant to said existing structures.

cparker

## Relocation or Use of Public Roads

### Analysis:

The amendment meets the State of Utah R645 requirements for relocation or use of public roads.

The amendment now meets the minimum requirements of R645-301-521.133 due to information detailing measure to be used such as a general mining method that will be employed under or within 100 ft of public roads to protect interest of the public in Section 4.17, Section 3.1.6 and section 4.17.4.

cparker

## Air Pollution Control Plan

### Analysis:

The amendment meets the State of Utah R645-301-422 requirements for air pollution control plan.

A description of the coordination and compliance efforts with the Utah Division of Air Quality is evidenced by letter dated 7/13/15 from DEQ in which Approval Order to increase haulage of coal and to add stacking tube was approved. A copy of Approval Order AN0092007-03 and DAQE- AN100920001-15, dated 7/13/15 is provided. A more comprehensive air pollution control plan is outlined in section 4.22 of the MRP.

Ireinhart

## Coal Recovery

### Analysis:

The amendment meets the State of Utah R645 requirements for coal recovery.

The amendment now meets the minimum requirements of R645-301-522 due to a discussion on how the Federal stipulation will be met in Chapter 3. Specific panels need approval of mining by the Authorized Officer prior to development under Boulger Reservoir and Flat canyon campground. Plate 3.1.8-3 and 3.3-4 were updated to illustrate the mining in the southwest reserve to be named as Mine 4. Narrative was clarified in section 3.1.2, 3.1.6, 3.1.8 and 3.3 to discuss the coal mining sequencing.

cparker

## Subsidence Control Plan Renewable Resource

### Analysis:

The amendment does not meet the State of Utah R645 requirements for subsidence control plan.

The minimum requirements of R645-301-525 are still not met in the amendment as the Permittee addressed the Federal stipulations for UTU-77114, Flat Canyon Lease and present a clear subsidence plan for protected areas but failed to detail a pre subsidence survey for the water facilities associated with the Flat Canyon campground.

The amendment addresses R645-301-525.200 by detailing how no underground mining will be allowed under normally protected areas. The amendment includes an updated to Section 4.17 where a paragraph referencing Boulger Reservoir was added. The information states that the coal seam is approximately 1,200 feet below the reservoir, and that no adverse impacts are anticipated. The text goes on to detail that even though adverse impacts are anticipated the reservoir may be drained prior to undermining as a safety precaution and that both the reservoir and campground will not be undermined. Any future under mining of the reservoir or campground would be subject to stipulations #25 and 26 within the lease agreement.

### Deficiencies Details:

R645-301-525.100-.240: The Permittee will submit a detailed map and plan for a pre subsidence survey of the Flat Canyon campground water facilities, as detailed in the Hydrology analysis and findings.

cparker

## Subsidence Control Plan Renewable Resource

### Analysis:

The amendment does not meet the State of Utah R645-301-332 requirements for anticipated impacts of subsidence on vegetation and fish and wildlife resources.

Section 4.17 describes the potential of subsidence on Boulger Reservoir and Flat Canyon Campground and indicates undermining will occur with explanation that overburden separating the coal from the reservoir is approximately 120 times the extraction thickness therefore no adverse impacts are anticipated. Furthermore, any mitigation measures will be negotiated prior to undermining the reservoir. Monitoring of perennial streams for reduced water flow or changes in riparian vegetation as a result from subsidence are discussed in sections 2.3, 2.7, 4.7, and 4.17.4.

Contrarily, language in section 2.8 page 2-71a, indicates Boulger Reservoir will not be undermined and additional permitting will occur if it is planned.

### Deficiencies Details:

The amendment does not meet the State of Utah R645-301-332 requirements for impacts of subsidence on Boulger Reservoir. The following deficiency must be addressed prior to final approval:

R645-301-331: The permittee must consistently provide clear language throughout the amendment and specifically in section 4.17 that undermining or subsidence of Boulger Reservoir/Dam is not an approved action of this amendment.

lreinhart

## Subsidence Control Plan Subsidence

### Analysis:

The amendment does not meet the State of Utah R645 requirements for performance standards for subsidence control.

The amendment does not meet the minimum requirements of R645-301-525.400-.490 due to missing a discussion of the measure taken to survey for damage done to the Flat Canyon Campground water facilities. The Permittee did include some general discussion that addresses the measures taken around buildings to address the Federal stipulations for mining under protected areas as detailed in R645-301-525.200.

### Deficiencies Details:

R645-301-525.400-490: The Permittee will submit a detailed map and plan for a subsidence survey of the Flat Canyon

### **Subsidence Control Plan Performance STD**

*Analysis:*

The amendment meets the State of Utah R645 requirements for performance standards for subsidence control.

The amendment meets the minimum requirements of R645-301-525.300 due to a discussion that addresses the measures the Permittee will conduct to address the Federal stipulations for mining under protected areas as detailed in R645-301-525.200.

cparker

### **Subsidence Control Plan Notification**

*Analysis:*

**Analysis:**  
In accordance with R645-301-525.700, draft notices to the Emery County Conservancy District and the USFS are provided in Appendix 118A for the Flat Canyon Lease. Prior to sending these notices, please ensure that appropriate Water Conservancy District in Sanpete County, Carbon County (due to discharge in Eccles) and Emery County are notified, along with UDOT (refer to Section 4.17.4 of the MRP). Ensure that the authorized signature for Canyon Fuel is current, and provide a copy to Suzanne Steab at the Divison, rather than Angela Nance.

*Deficiencies Details:*

**Deficiency:**  
In accordance with R645-301-525.700, draft notices to the Emery County Conservancy District and the USFS are provided in Appendix 118A for the Flat Canyon Lease. Prior to sending these notices, please ensure that appropriate Water Conservancy District in Sanpete County, Carbon County (due to discharge in Eccles) and Emery County are notified, along with UDOT (refer to Section 4.17.4 of the MRP). Ensure that the authorized signature for Canyon Fuel is current, and provide a copy to Suzanne Steab at the Divison, rather than Angela Nance.

pburton

### **Subsidence Control Plan Notification**

*Analysis:*

The amendment meets the State of Utah R645 requirements for Subsidence Control Plan Notification.

The amendment meets the minimum requirements of R645-301-525 due to a discussion that addresses the notification measures the Permittee will conduct to address the Federal stipulations for mining under protected areas as detailed in R645-301-525.

cparker

### **Subsidence Control Plan Slides and Other Damage**

*Analysis:*

The amendment meets the State of Utah R645 requirements for performance standards for subsidence control.

The amendment meets the minimum requirements of R645-301-525.300 due to a discussion that addresses the measures the Permittee will conduct to address the Federal stipulations for mining under protected areas as detailed in R645-301-525.200.

cparker

### **Fish and Wildlife Protection and Enhancement Plan**

*Analysis:*

The amendment meets the State of Utah R645-301-333 requirements for using best technology currently available to minimize disturbance and adverse impacts to fish and wildlife resources.

As noted in section 2.8, tributaries to Upper Huntington Creek include Boulger, Burnout, Swens, and Little Swens Creeks, which contribute to fish populations in Electric Lake. These creeks are also important habitat for wildlife forage and drinking sources. The only creek to be monitored for fish, is Boulger Creek but all the creeks will be monitored for water flow and quantity. Since mine water is not proposed to be discharged into any of the creeks (except Eccles), macroinvertebrate monitoring in these additional creeks is not warranted. The concern is disrupted flow of the creeks due to undermining and not contamination of water quality from discharge. Table 2-72a is updated to show the schedule of fish monitoring on Boulger Creek starting in 2016 as is the same schedule for Eccles Creek. Macroinvertebrate monitoring in Eccles Creek will continue as defined in the MRP.

Conflicting language regarding undermining Boulger Reservoir causes confusion. Page 2-71a states "In the event Boulger Reservoir is undermined, additional permitting will outline the mitigation of possibly draining the reservoir. All necessary regulatory agency concerns will be addressed prior to undermining". However, on page 2-41 it states, "Drainage of the reservoir may be necessary during mining" and Section 4.17, page 4-94 discusses undermining Boulger Reservoir and Flat Canyon Campground. This plan is intermingling the approval of undermining the reservoir and campground and yet indicating that it would be a separate permitting action which is confusing.

Ireinhart

## **Vegetation**

*Analysis:*

The amendment does not meet the State of Utah R645-301-331 requirements for protection of vegetative resources.

Section 2.7.10, describes how riparian areas will be monitored by first collecting a baseline prior to undermining the creeks identified in figure 2.7.9-2 (Swens Canyon, Little Swens, and numerous reaches of Boulger). Additional monitoring after collection of baseline is not planned unless quarterly water monitoring reports fall below historic low flows. If flows fall below historic levels, monitoring will continue on annual basis until cause of lower flow is determined. The source of information for historic low flows is not provided. Monitoring will follow methods outlined in Appendix A-2 (Subsidence Area Veg. Monitoring Protocol).

Although referenced in other sections of the amendment, and in the lease, this section does not provide a narrative describing how using the BTCA the riparian areas will not be impacted. If these areas will not be mined in both seams and thus reduce potential for subsidence, that practice should be explained in this section as a use of BTCA.

The permittee commits to update baseline vegetation data for riparian area along Eccles Creek. Due to potential increased mine water discharge, there could be additional impacts to Eccles Creek. In the event it is determined that flow causes material damage or loss of riparian habitat, the Permittee has committed to mitigate the damage as agreed upon by the Mine, DOGM, and DWR.

*Deficiencies Details:*

The amendment does not meet the State of Utah R645-301-331 requirements for protection of vegetative resources. The following deficiency must be addressed prior to final approval:

R645-301-330: The plan must include a narrative describing how using the BTCA and protective measures, impacts as a result of subsidence to the riparian areas are not expected pursuant to R645-301-332. The permittee must commit to providing an annual report summarizing the quarterly hydrologic flow monitoring data and pre/post subsidence data in an effort to identify if any streams exhibited low flow levels or if Eccles Creek is exhibiting higher flow levels which may lead to excessive erosion of the streambed.

Ireinhart

## **Road Systems Classification**

*Analysis:*

The amendment meets the State of Utah R645 requirements for performance standards for road system classification.

The amendment did not contemplate and changes to this section of the MRP at this time.

cparker

## Road System Plans and Drawings

### Analysis:

The amendment meets the State of Utah R645 requirements for performance standards for road system plans and drawings.

The amendment did not contemplate and changes to this section of the MRP at this time.

cparker

## Road System Performance Standards

### Analysis:

The amendment meets the State of Utah R645 requirements for performance standards for road system performance standards.

The amendment did not contemplate and changes to this section of the MRP at this time.

cparker

## Road System Certification

### Analysis:

The amendment meets the State of Utah R645 requirements for performance standards for road system certification

The amendment did not contemplate and changes to this section of the MRP at this time.

cparker

## Road System Other Transportation Facilities

### Analysis:

The amendment meets the State of Utah R645 requirements for performance standards for road system other transportation facilities.

The amendment did not contemplate and changes to this section of the MRP at this time.

cparker

## Spoil Waste Disposals of Noncoal Mine Wastes

### Analysis:

The amendment meets the State of Utah R645 requirements for spoil and waste materials.

The amendment meets the minimum standards of R645-301-528 due to not changes in the MRP text. The amendment does not include any changes general description of noncoal mine waste disposal located in the current Chapter 3 Section 3.2.8 plans for noncoal mine wastes.

cparker

## Spoil Waste Coal Mine Waste

### Analysis:

The amendment meets the State of Utah R645 requirements for coal mine waste.

The amendment meets the minimum standards of R645-301-528 due to not changes in the MRP text. The amendment does not include any changes general description of coal mine waste disposal located in the current Chapter 3 Section 3.2.8 plans for coal mine wastes.

cparker

## Spoil Waste Refuse Piles

### Analysis:

The amendment meets the State of Utah R645 requirements for refuse piles.

The amendment meets the minimum standards of R645-301-528 due to not changes in the MRP text. The amendment does not include any changes general description of coal mine waste disposal located in the current Chapter 3 Section 3.2.8 plans for coal mine wastes.

cparker

## Spoil Waste Impounding Structures

### Analysis:

The amendment meets the State of Utah R645 requirements for impoundments

The amendment meets the minimum standards of R645-301-500 due to not changes in the MRP text. The amendment does not include any changes to the impoundments.

cparker

## Spoil Waste Burning and Burned Waste Utilization

### Analysis:

The amendment meets the State of Utah R645 requirements for burning and burned waste.

The amendment meets the minimum standards of R645-301-500 due to not changes in the MRP text. The amendment does not include any changes to the burned waste.

cparker

## Spoil Waste Coal Processing Waste to Abandoned

### Analysis:

The amendment meets the State of Utah R645 requirements for return of coal processing waste to abandoned underground workings.

The amendment meets the minimum standards of 645-301-528 due to not changes in the MRP text. The amendment does not include any changes general description of returning coal mine waste underground located in the current Chapter 3 Section 3.2.8 MRP.

cparker

## Spoil Waste Excess Spoil

### Analysis:

The amendment meets the State of Utah R645 requirements for excess spoil.

The amendment meets the minimum standards of R645-301-500 due to not changes in the MRP text. The amendment does not include any changes to the excess spoil operations.

cparker

## Hydrologic General

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301 Coal Mining Rules.

The application to approve mining in the Flat Canyon lease does not include any surface disturbances. The Federal EIS for the lease does discuss the possibility of needing ventilation shafts for mining in the lease, but if shafts are needed they will go through the permitting process in the future.

The Permittee has revised their plan to undermine Boulger Reservoir. Currently the mine is not planning to mine under the reservoir, but will submit an amendment in the future to address this issue, and related lease stipulations, if their plans change.

adaniels

## Hydrologic Ground Water Monitoring

*Analysis:*

The information provided is not sufficient to meet the requirements of State of Utah R645-301 Coal Mining Rules.

The currently approved MRP contains a commitment to monitor inflows and conduct age dating on any mine inflows of groundwater if inflows of 800 gpm or more are encountered. This is a commitment that will continue through mining of the Flat Canyon Lease.

There are 5 additional springs that will be incorporated into the regular water monitoring program, and already have or will have baseline data collected on them. These springs represent discharge from the Price River Formation, Castlegate Sandstone, and Blackhawk Formation.

Spring S33-268 is a spring that is developed with a collection box and pipeline to provide water to the Forest Service Campground. While it will be difficult to get true spring flow measurements from this site, it will continue to be monitored due to its importance as a water source.

During a hydrology field visit on June 18, 2015, there were discussions about picking up more spring monitoring locations. If this has since then been incorporated into the monitoring plan, these should be updated into the proposed plan.

There are four water level monitoring wells within the Flat Canyon lease area, 99-21-1, 20-28-1, 99-4-1, and 20-4-1. These wells are completed in the Starpoint Formation, located just below the coal seams to be mined. These wells will continue to be monitored through the operational ground water monitoring program. The Permittee has added an additional well that was planned to be drilled in 2015, but without the water monitoring map, it is not possible to evaluate where this well is located. See the deficiency in the Monitoring and Sampling Location Maps section about the water monitoring map.

Due to concerns about groundwater volumes that could be encountered while mining in the Flat Canyon Lease, the Permittee should specify how they will monitor flow coming out of the Flat Canyon Lease area.

*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

## Hydro Surface Water Monitoring

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301 Coal Mining Rules.

The operational surface water monitoring program has been expanded to monitor four additional stream monitoring locations, CS-27, CS-28, CS-29, and CS-30. The points are to monitor stream sections along Little Swens Canyon, Swens

Canyon, Flat Canyon and Boulger Canyon. Each of these canyons stream are perennial.

Stream monitoring locations CS-27 and CS-17 provide upstream of mining and downstream of mining monitoring along Little Swens Canyon respectively. CS-28 and CS-16 provide monitoring up and downstream of mining monitoring of Swens Canyon. CS-29 and CS-18 provide upstream and downstream of mining monitoring of Flat Canyon. CS-18 also provides a downstream of mining monitoring location for Boulger Canyon, and CS-30 is monitoring the stream from Boulger Canyon within mining. CS-310 was established upstream of mining in Boulger Canyon in 2015. New data from these sampling locations, sampled over the last two years, has been included with this submission.

adaniels

## Hydrologic Acid and Toxic forming Materials

### Analysis:

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

Material from the new Flat Canyon lease area will be handled in a manner similar to the way coal is being handled at the site now. There are no proposed changes to handling acid or toxic forming materials. Coal mine waste will be managed in the currently permitted Skyline waste rock site.

adaniels

## Hydrologic Transfer Wells

### Analysis:

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

Water monitoring wells, under the current plan, are planned to be capped and sealed according to the rules set forth by the Utah Division of Water Rights.

adaniels

## Hydrologic Discharge Into an Underground Mine

### Analysis:

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There are no new portals or underground openings proposed with this submission. There are no changes to the currently approved MRP regarding discharge into underground mines.

adaniels

## Hydrologic Gravity Discharge From Underground Mine

### Analysis:

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There are no proposed changes to the way Skyline mine is discharging water from their underground workings. For more detailed analysis on how the higher volumes of discharge will be handled in Eccles Creek, see the sections of the findings titled "Baseline Cumulative Impact Area Information".

adaniels

## Hydrologic Water Quality Standards

### Analysis:

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology

Rules.

The Skyline mine holds a current UPDES permit to cover their discharges from the mine and their sedimentation ponds. Their UPDES permit was recently renewed and is effective until April 30, 2020.

adaniels

### **Hydrologic Diversion General**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Diversion Perennial and Intermitten**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Diversion Misc. Flows**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Stream Buffer Zones**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Sediment Control Measures**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Siltation General**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.  
There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Siltation Sedimentation**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.  
There is no new surface disturbance associated with this submission, and a new pond is not proposed.

adaniels

### **Hydrologic Siltation Treatment**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.  
There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Exemptions**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.  
There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Discharge Structures**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.  
There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Impoundments**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.  
There is no new surface disturbance associated with this submission.

adaniels

### **Hydrologic Ponds Impoundments Banks Dams**

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There is no new surface disturbance associated with this submission.

adaniels

### **Support Facilities and Utility Installations**

*Analysis:*

The amendment meets the State of Utah R645 requirements for support facilities and utility installations.

The amendment meets the minimum requirements of R645-301-521.180 and -526 the require the description, plans, and drawing for each support facility to be constructed, used, or maintained within the proposed permit area. Future amendments are will likely come in association with ventilation shafts in the Flat Canyon area and text will need to be edited under Chapter 3 Section 3.2.8.

cparker

### **Signs and Markers**

*Analysis:*

The amendment meets the State of Utah R645 requirements for signs and markers.

The amendment meets the minimum requirements of R645-301-521.200 by the general discussion of signs in Chapter 3 section 3.2.7. No changes were made to the MRP to detail Flat Canyon operations specifically.

cparker

### **Explosives General**

*Analysis:*

The amendment meets the State of Utah R645 requirements for explosives.

The amendment meets the minimum requirements of R645-301-525 by the general discussion of explosives. No explosives on the surface will be needed at the time of this review.

cparker

### **Explosives Preblasting Survey**

*Analysis:*

The amendment meets the State of Utah R645 requirements for explosives.

The amendment meets the minimum requirements of R645-301-525 by the general discussion of explosives. No explosives on the surface will be needed at the time of this review.

cparker

### **Explosives General Performance Standards**

*Analysis:*

The amendment meets the State of Utah R645 requirements for explosives.

The amendment meets the minimum requirements of R645-301-525 by the general discussion of explosives. No explosives on the surface will be needed at the time of this review.

cparker

### **Explosives Blasting Signs Warnings Access Control**

*Analysis:*

The amendment meets the State of Utah R645 requirements for explosives.

The amendment meets the minimum requirements of R645-301-525 by the general discussion of explosives. No explosives on the surface will be needed at the time of this review.

cparker

### **Explosives Control of Adverse Effects**

*Analysis:*

The amendment meets the State of Utah R645 requirements for explosives.

The amendment meets the minimum requirements of R645-301-525 by the general discussion of explosives. No explosives on the surface will be needed at the time of this review.

cparker

### **Explosives Records of Blasting Operations**

*Analysis:*

The amendment meets the State of Utah R645 requirements for explosives.

The amendment meets the minimum requirements of R645-301-525 by the general discussion of explosives. No explosives on the surface will be needed at the time of this review.

cparker

### **Maps Affected Area**

*Analysis:*

The amendment meets the State of Utah R645 requirements for affected area maps in operations.

The amendment meets the minimum requirements of R645-301-521.100 through-521.130 by updating all the relevant maps for the entire area shown on the mine plan as detailed on Plate 3.1.8-2.

cparker

### **Maps Facilities**

*Analysis:*

The amendment meets the State of Utah R645 requirements for mining facilities maps.

R645-301-521.120 through-521.125 requires maps to clearly show existing surface and subsurface facilities. The amendment meets the minimum requirements as it includes a drawing or plate that clearly calls out the existing features such as SR-264, facilities such as buildings and pipelines associated with the Flat Canyon compound, and Boulger Reservoir/Dam.

cparker

### **Maps Mine Workings**

*Analysis:*

The amendment meets the State of Utah R645 requirements for mine workings maps in operations.

R645-301-521.140 requires maps that clearly show all mine plans. The amendment meets the minimum requires as all relevant existing drawings and plates were updated.

- Drawing 1.6-2 was updated within the amendment to show the details of existing coal ownership within the Flat Canyon lease boundary (UTU-77114).

- Drawing 1.6-3 was updated within the amendment to detail the new permit boundary, lease boundary, and adjacent areas including the Flat Lease.
- Drawing 2.2.7-1 was updated to show seam isopach
- Drawing 2.2.4-1D was updated to show the flat canyon seam legend and planned reserve workings.

cparker

## Maps Monitoring and Sampling Locations

### Analysis:

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

Water Monitoring Map 2.3.6-1 was updated to include new water monitoring locations, but was missing from this submission. See the deficiency in the Monitoring and Sampling Location Maps section about the water monitoring map.

adaniels

## Maps Certification Requirements

### Analysis:

The amendment meets the State of Utah R645 requirements for certification requirements.

R645-3010-512 minimum requirements are met as all mine drawings and plates are stamped by a Utah certified professional engineer with experience in underground mining operations upon final approval.

cparker

## Reclamation Plan

### General Requirements

#### Analysis:

The amendment meets the State of Utah R645 requirements for general reclamation plan.

The minimum requirements of R645-301-540 are met within the amendment as there is no change to the existing MRP reclamation details.

cparker

### PostMining Land Use

#### Analysis:

The amendment meets the State of Utah R645-301-412 requirements for postmining land use. Section 4.12 of the MRP adequately addresses PMLU of the permit area. There is no information regarding postmining land use in the amendment but the Flat Canyon Lease is not included in the "Permit Area" it is "Mining Area".

#### Deficiencies Details:

lreinhart

## WildLife Protection

### Analysis:

The amendment does not meet the State of Utah R645-301-342 requirements for a fish and wildlife plan for the reclamation

and postmining phase of operation.

The Permittee commits to monitor riparian areas in the Flat Canyon Lease area where subsidence of creeks could reduce surface flow to the creek and impact aquatic habitat. If monitoring shows a fall below the recorded historic low-flow values the Permittee commits to using the BTCA to mitigate damage in coordination with the Division and USFS.

Due to a potential increases in discharge into Eccles Creek, increasing erosion could become a problem and impact the benthic community of the Creek . The permittee has committed to perform macroinvertebrate and fish studies as identified on table 2.8-1a. However, the plan does not contemplate or discuss the restoration plan for Eccles Creek once mining is complete and the discharge of water is eliminated. The loss of water will have an impact on the vegetation and wildlife that have adjusted to the conditions created by the mine discharge.

*Deficiencies Details:*

The amendment does not meet the State of Utah R645-301-342 requirements for wildlife protection and enhancement. The following deficiencies must be addressed prior to final approval:

R645-301-342: The Permittee must address restoration of Eccles Creek upon cessation of mining and related water discharge into the creek.

ireinhart

### **Approximate Original Contour Restoration**

*Analysis:*

The amendment meets the State of Utah R645 requirements for general reclamation plan to AOC

The minimum requirements of R645-301-540 are met within the amendment as there is no change to the existing MRP reclamation details to restore AOC.

cparker

### **Backfill and Grading General**

*Analysis:*

The amendment meets the State of Utah R645 requirements for backfill and grading.

The minimum requirements of R645-301-553 are met within the amendment as there is no change to the existing MRP grading reclamation details.

cparker

### **Backfill and Grading Previously Mined**

*Analysis:*

The amendment meets the State of Utah R645 requirements for backfill and grading.

The minimum requirements of R645-301-553 are met within the amendment as there is no change to the existing MRP grading reclamation details.

cparker

### **Backfill and Grading on Steep Slopes**

*Analysis:*

The amendment meets the State of Utah R645 requirements for backfill and grading.

The minimum requirements of R645-301-553 are met within the amendment as there is no change to the existing MRP grading reclamation details.

cparker

## Backfill and Grading Steep Special Provisions

### Analysis:

The amendment meets the State of Utah R645 requirements for backfill and grading.

The minimum requirements of R645-301-553 are met within the amendment as there is no change to the existing MRP grading reclamation details.

cparker

## Mine Openings

### Analysis:

R645-301-641. The application meets the requirements for casing and sealing of exploration and boreholes. The existing MRP discusses plans for casing and sealing drill holes. No changes have been proposed with this revision.

dhaddock

## Mine Openings

### Analysis:

The amendment meets the State of Utah R645 requirements for mine openings.

The minimum requirements of R645-301-529 and -551 are met within the amendment as there is no change to the existing MRP sealing of mine openings at the time of final reclamation.

cparker

## Road System Reclamation

### Analysis:

The amendment meets the State of Utah R645 requirements for road systems reclamation.

The minimum requirements of R645-301-534 are met within the amendment as there is no change to the existing MRP reclamation of roads throughout the permitted area.

cparker

## Road System Retention

### Analysis:

The amendment meets the State of Utah R645 requirements for road systems retention.

The minimum requirements of R645-301-534 and -552 are met within the amendment as there is no change to the existing MRP reclamation of roads that will be retained at the end of mining that exist throughout the permitted area.

cparker

## Hydrological Information Reclamation Plan

### Analysis:

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

There is no new surface disturbance associated with this submission.

adaniels

## Contemporaneous Reclamation General

*Analysis:*

The amendment meets the State of Utah R645-301-352 requirements for contemporaneous reclamation.

ireinhart

## **Cessation of Operations**

*Analysis:*

The amendment meets the State of Utah R645 requirements for cessation of operations.

The minimum requirements of R645-301-515 and -541 are met within the amendment as there is no change to the existing MRP plan of communication with the appropriate parties in the event of the cessation of operations and final reclamation.

cparker

## **Maps Affected Area Boundary**

*Analysis:*

The amendment meets the State of Utah R645 requirements for affected area boundary maps in reclamation.

The minimum requirements of R645-301-542 are met within the amendment as previously discussed in affected maps operations.

cparker

## **Maps Bonded Area**

*Analysis:*

The amendment meets the State of Utah R645 requirements for bonded area map.

The amendment is currently being reviewed by the Division in an effort to expedite the significant revision process. No bonding information or maps were included within the amendment at this time.

cparker

## **Maps Reclamation BackFilling and Grading**

*Analysis:*

The amendment meets the State of Utah R645 requirements for reclamation backfill and grading maps.

The minimum requirements of R645-301-542 are met within the amendment as there is no change to the existing MRP plan

cparker

## **Maps Reclamation Facilities**

*Analysis:*

The amendment meets the State of Utah R645 requirements for reclamation facilities maps.

The minimum requirements of R645-301-542 are met within the amendment as there is no change to the existing MRP plan

cparker

## **Maps Reclamation Final Surface Configuration**

*Analysis:*

The amendment meets the State of Utah R645 requirements for final surface configuration maps.

The minimum requirements of R645-301-542 are met within the amendment as there is no change to the existing MRP plan.

cparker

## Maps Reclamation Monitoring and Sample Locations

*Analysis:*

The information provided is sufficient to meet the requirements of State of Utah R645-301-700 Coal Mining Hydrology Rules.

Water Monitoring Map 2.3.6-1 was updated to include new water monitoring locations, but was missing from this submission. See the deficiency in the Monitoring and Sampling Location Maps section about the water monitoring map.

adaniels

## Maps Reclamation Surface and Subsurface Man Made

*Analysis:*

The amendment meets the State of Utah R645 requirements for reclamation surface and subsurface manmade feature maps.

The minimum requirements of R645-301-542 are met within the amendment as there is no change to the existing MRP plan

cparker

## Maps Reclamation Certification Requirements

*Analysis:*

The amendment meets the State of Utah R645 requirements for certification requirements.

R645-3010-512 minimum requirements are met as all mine drawings and plates are stamped by a Utah certified professional engineer with experience in underground mining operations in the clean copies upon approval of the amendment.

cparker

## Bonding and Insurance General

*Analysis:*

The amendment meets the State of Utah R645 requirements for general bonding and insurance.

The amendment meets the minimum requirements of R645-301-800 as the amendment is currently being reviewed by the Division in an effort to expedite the significant revision process. No bonding information or maps were included within the amendment at this time due to no surface disturbances associated with the current Flat Canyon lease.

cparker

## Bonding Form of Bond

*Analysis:*

The amendment meets the State of Utah R645 requirements for determination of bond amount.

The amendment meets the minimum requirements of R645-301-830.140 as the amendment is currently being reviewed by the Division in an effort to expedite the significant revision process. No bonding information or maps were included within the amendment at this time due to no surface disturbances associated with the current Flat Canyon lease.

cparker

## Bonding Determination of Amount

*Analysis:*

The amendment meets the State of Utah R645 requirements for determination of bond amount.

The amendment meets the minimum requirements of R645-301-830.140 as the amendment is currently being reviewed by the Division in an effort to expedite the significant revision process. No bonding information or maps were included within the amendment at this time due to no surface disturbances associated with the current Flat Canyon lease.

cparker

**Bonding Terms and Conditions Liability Insurance**

*Analysis:*

The amendment meets the State of Utah R645 requirements for terms and conditions for liability insurance.

The amendment meets the minimum requirements of R645-301-850 as the amendment is currently being reviewed by the Division in an effort to expedite the significant revision process. The Skyline mine currently holds liability insurance through National Union Fire Ins Co, effective until 2/1/16. The insurance includes the required Marsh from, explosives and claims made per occurrence.

cparker

**CHIA**

**CHIA**

*Analysis:*

The CHIA will require a revision. This will be analyzed once all hydrologic information has been submitted to the Division and is ready for approval.

adaniels

**Table 1 - Baseline Sampling - Flat Canyon Lease**

Site Type	Sampling Site	Geologic Formation	Sampling Years (xxxx-xxxx)		Minimum Lab Sampling Parameters	Field Parameters
Springs	29-138	Price River	1997	2000	x	
			2006	Current		x
	32-277	Price River	1997	2000	x	
			2006	2014		x
			2014	2015	x	
	MSS-1	Price River	'97 (1), '00 (1)		x	
	4-429	Castlegate	'97 (1), '99 (1), '00 (1)		x	
			2006	2014		x
			2014	2015	x	
	8-253	Castlegate	1997	2000	x	
			2005	Current		x
	29-133	Castlegate	1997	2000	x	
			2006	2014		x
	33-268	Castlegate	'97 (1), '98 (1)		x	
			2006	2014		x
			2014	2015	x	
	21-222	Castlegate/Blackhawk	1997	2000	x	
			2006	Current		x
	32-183	Castlegate/Blackhawk	1997	2000	x	
	32-279	Castlegate/Blackhawk	1997	2000	x	
	3-290	Blackhawk	1997	2005	x	
			2005	Current		x
	4-173	Blackhawk	1997	2000	x	
2006			2014		x	
2014			2015	x		
5-590		2015	2015	x		
5-231	Blackhawk	1997	2000	x		
28-110	Blackhawk	1997	2000	x		
		2006	2014		x	
MST-1	Composit - water tank	'97 (1)		x		
MST-2	Composit - water tank	'97 (1)				
MST-3	Composit - water tank	'97 (1), '00 (1)		x		
		'98 (1)			x	
Streams	C-5	-	1997	2000	x	
			2007	Current		x
	C-6 (CS-29)	-	'99 (1), '00 (1)		x	
			2006	2014		x
			2014	2015	x	
	C-7	-	'99 (1), '00 (1)		x	
			2006	Current		x
	C-8 (CS-30)	-	'99 (1), '00 (1)		x	
			2006	2014		x
			2014	2015	x	
	CS-10	-	Part of current plan		x	x
	CS-16	-	Part of current plan		x	x
	CS-17	-	Part of current plan		x	x
	CS-18	-	Part of current plan		x	x
	CS-27	-	2014	2015	x	
	CS-28	-	2014	2015	x	
	CS-31	-	2015	2015	x	
	UPL-10	-	Part of current plan		x	x