



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

September 11, 2018

John Byars, General Manager  
Canyon Fuel Company, LLC  
597 South SR24  
Salina, Utah 84654

Subject: Approval of Annual Report Completion, Task #5726, Canyon Fuel Company, LLC,  
Sufco Mine, C/041/0002

Dear Mr. Byars:

The above-referenced amendment is approved effective September 11, 2018. The Division has completed a Technical Analysis of the change and found that it meets the requirements of the Utah Coal Rules. A stamped incorporated copy of the amendment is enclosed for your copy of the Mining and Reclamation Plan.

The information provided also completes the 2017 Annual Report requirements. A revised Annual Report form is enclosed.

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

Sincerely,

Daron R. Haddock  
Coal Program Manager

DRH/sqs  
Enclosure  
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## Technical Analysis and Findings

### Utah Coal Regulatory Program

**PID:** C0410002  
**TaskID:** 5726  
**Mine Name:** SUFCO MINE  
**Title:** ANNUAL REPORT COMPLETION

#### Operation Plan

#### Hydrologic General

##### Analysis:

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

The amendment updates Appendix 7-25 North Water Mitigation Plan to detail the work that was completed on three springs in the Muddy drainage from 2014 through 2015. The Pines 310 spring mitigation fulfills the Permittee's obligation to the Manti-La Sal National Forest. The Permittee went above and beyond their obligations to the Forest for the two additional spring mitigation projects on M-SP08 and GW-13. The mitigation included vegetation enhancement, installing troughs and spring collection boxes to improve spring collection and fencing sensitive areas to encourage vegetation growth in sensitive wetland areas. The District Ranger for the Forest, Darren Olsen, acknowledged the mitigation activities were completed in a January 21, 2016 letter sent to the Sufco mine.

kstorrar

# ANNUAL REPORT

This Annual Report shows information the Division has for your mine. Submit the completed document and any additional information identified in the Appendices to the Division by the date specified in the cover letter. During a complete inspection an inspector will check and verify the information.

GENERAL INFORMATION			
Company Name	Canyon Fuel Company, LLC	Mine Name	Sufco Mine
Permit Number	C/041/0002	Permit expiration Date	2022-05-21
Operator Name	Sufco Mine	Phone Number	+1 (435) 286-4489
Mailing Address	597 South SR 24	Email	arichard@bowieresources.com
City	Salina		
State	Utah	Zip Code	84654

## DOGM File Location or Annual Report Location

Excess Spoil Piles	<input type="checkbox"/> Required <input checked="" type="checkbox"/> Not Required	
Refuse Piles	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required	Certified reports previously submitted
Impoundments	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required	Certified reports previously submitted
Other:		

## OPERATOR COMMENTS

**REVIEWER COMMENTS**     Met Requirements     Did Not Meet Requirements

6/26/2018, PB. Quarterly waste rock inspection reports were received on 4/04/2017 (1st Qtr), 7/14/2017 (2nd Qtr), 01/03/2018 (3rd & 4th Qtrs).

9052018, PB. An annual report amendment received on August 13, 2018 (Confidential 8132018.5726) provides volumes hauled to the Waste rock site. In all future 2018 quarterly reports, please use the recommended reporting form found on the Division's web site.

# COMMITMENTS AND CONDITIONS

The Permittee is responsible for ensuring annual technical commitments in the Mining and Reclamation Plan and conditions accepted with the permit are completed throughout the year. The Division has identified these commitments below and has provided space for you to report what you have done during the past year for each commitment. If additional written response is required, it should be filed as an attachment to this report.

## Title: RAPTOR SURVEYS

**Objective:** Determine existence and status of raptor nests that may be impacted by mining. Any raptor nest that has the potential to be disturbed will be evaluated with DWR and FWS and an appropriate plan of action will be developed on a case by case basis.

**Frequency:** Any area with suitable habitat where raptor nests could be adversely affected will be monitored during the year that it will be subsided for both known and potential new nests on a yearly basis using aerial or ground surveys near the end of May.

**Status:** Ongoing

**Reports:** Upon receipt from consultant and evaluation of permittee.

**Citation:** MRP, Volume 1, Chapter 3, page 3-10 & 3-42

Operator Comments

The Raptor Survey has been submitted to DOGM for the calendar year 2017

Reviewer Comments  Met Requirements  Did Not Meet Requirements

The 2017 Annual Raptor Survey Results is found in Appendix 3-4 of the Confidential MRP. The raptor survey for 2017 was conducted in two separate occasions: May 26-27 and June 12-13. Goshawk vocalization broadcasting was only done during the June survey. Monitoring known nests, searching for new nests, and observing incidental wildlife occurrences were done during both survey periods. During the May survey, a golden eagle nestling, approximately 4 weeks old, was encountered in a previously-known nest. An adult red-tailed hawk was also seen at each of two previously-known red-tailed hawk nests. During the June survey, the same golden eagle nestling was found again and was estimated to be about 7 weeks old. In one of the red-tailed hawk nests there were 2 nestlings between 2 and 3 weeks old. In the other nest, 3 nestlings were observed and were estimated to be 2 weeks old. No northern goshawks or their nests were found during the surveys. Additional data, locations of the surveys, and photos of nests/nestlings can be found in the 2017 Annual Raptor Survey Results in Appendix 3-4 of the Confidential MRP.  
TM (5/16/18)

## Title: SUBSIDENCE MONITORING

**Objective:** To document the amount of subsidence that has occurred.

**Frequency:** Annually

**Status:** Ongoing

**Reports:** Annual

**Citation:** MRP, Volume 1, Chapter 5, page 5-29

Operator Comments

Attached is an Annual Subsidence Report and map for 2017.

Reviewer Comments  Met Requirements  Did Not Meet Requirements

Included in this annual report is a narrative chronicling the history of subsidence throughout the entirety of the permit area. Most of the subsidence that has ever occurred at SUFCO has stabilized and is now considered dormant. Areas that have been longwall mined since 2015 will continue to be monitored until they have demonstrated several consecutive years of no movement, at which time they will also be considered dormant and monitoring discontinued.

A subsidence map showing all of the past, present, and future mining plans has been included. Also included in this comprehensive subsidence map are overburden contours, subsidence isopach contours, survey stations, buffer zones, lease boundaries, tension cracks, roads, and projected subsidence limits. JE

### **Title: CLIMATOLOGICAL DATA**

**Objective:** Collect climatological data to aid in determining the impact to runoff, stream flow and local springs from mining.

**Frequency:** Annually

**Status:** Ongoing

**Reports:** Annual

**Citation:** MRP, Volume 2, page 7-51E

#### Operator Comments

Attached is a report. Comparison of Weather Data and Stream Discharge at the Sufco Mine during 2017.

Reviewer Comments  Met Requirements  Did Not Meet Requirements

The report is prepared by Peterson Hydrologic LLC. The climatic variability and stream discharge relationship for the Pines area is presented using weather station and SUFCO discharge data. The Permittee includes a discussion on the wetter than normal year in 2017. The permittee also includes site-specific climate/discharge relationships for Pines 407, Pines 408, FP-1, FP-2, Pines 106, USFS 109, USFS 110. [AU]

### **Title: Refuse Sampling and Report of Volume Placed.**

**Objective:** To determine chemical characteristics of the waste and ensure burial beneath four feet of non-toxic, non-acidic material and protect surface and groundwater.

**Frequency:** Quarterly, during periods of deposition at the waste rock site.

**Status:** Ongoing

**Reports:** Annual, indicate frequency of sampling (#samples/volume).

**Citation:** Vol. 3. Chap. 5 Sec. 528 and 536.100

#### Operator Comments

The refuse sampling lab analysis for Quarter 1 - Quarter 3 are attached. No material was taken to the Refuse pile during 4th Quarter.

Reviewer Comments  Met Requirements  Did Not Meet Requirements

6/26/2018, PB.. Phase 2 of the expanded waste rock site was active through the 3rd Quarter of 2017. Eight composite samples were taken in 2017 (Incoming 4022018.5660.pdf). All samples were analyzed by Inter-Mountain Labs, Sheridan, WY. Analysis of all parameters analyzed resulted in suitable values. The texture of the waste is assumed to be a sandy loam, but it should be included in the analysis,

henceforth.

9/5/2018, PB. During January to May, one sample was taken each month. The last 3 samples were taken in July, August and September, one each month. Based on an estimated density of 1.2 ton/CY, the volumes hauled (Confidential Incoming 8132018.5726), the samples were taken at a rate of 1 per 2,772 tons to 5,549.50 tons (or 2,310 CY - 4,624 CY).

**Title: Topsoil Sampling during Waste Rock construction**

**Objective:** To determine soil chemistry and nutrient status prior to disturbance. During each phase of construction, "a composite sample will be taken [of each soil map unit] during each phase and analyzed for the pH; % Saturation; EC; Soluble Na, K, Mg, Ca; Available N03-N; Available Phosphorus; Particle Size% very fine sand, sand, silt, clay; Organic Matter%; CaC03%; and Extractable Potassium."

**Frequency:** During each Phase of construction prior to soil salvage.

**Status:** During construction of each Phase of the Waste Rock site.

**Reports:** Appendix V

**Citation:** MRP Vol 3 Chap 2 Sec 222.400

Operator Comments

No construction was conducted in 2017

Reviewer Comments  Met Requirements  Did Not Meet Requirements

Phase 1 & Phase 2 as-built topsoil and subsoil analysis were reviewed with Task 5434 in May 2017.

**Title: Topsoil Salvage**

**Objective:** Topsoil and subsoil salvage will be under the direction of a qualified person and will utilize pits or trenches to determine depth of salvage. "The quantity of topsoil/subsoil salvaged during the construction of the expanded WRDS will be determined by surveying the phased area prior to salvage and post salvage. The M&RP will be updated with as-built drawings, cross sections and a table( s) listing volumes of subsoil and topsoil stockpiles."

**Frequency:** During each Phase of construction within six months of completion of salvage

**Status:** During construction of each Phase of the Waste Rock site.

**Reports:** As Built drawings and updated narrative listing volumes salvaged

**Citation:** Vol 3. Chap 2. Sec. 231.100 and 242.100 page 2-22.

Operator Comments

No construction was conducted in 2017

Reviewer Comments  Met Requirements

Did Not Meet Requirements

As bulits were reviewed as Task 5434 in May 2017.

## FUTURE COMMITMENTS AND CONDITIONS

The following commitments are not required for the current annual report year, but will be required by the permittee in the future as indicated by the "status" field. These commitments are included for information only, and do not currently require action. If you feel that the commitment is no longer relevant or needs to be revised, please contact the Division.

**Title: COLOR INFRARED PHOTOGRAPHY**

**Objective:** To assess changes in vegetation due to mining. Photos submitted after 2008 must include an analysis between 2008 and current photos to assess changes in vegetation due to subsidence.

**Frequency:** Once every 5 years beginning in 2008.

**Status:** Due in 2018.

**Reports:** Annual

**Citation:** MRP, Volume 1, Chapter 3, page 3-45, Chapter 5, page 5-29

**Title: PROTECTION OF WILDLIFE DURING EXCLUSIONARY PERIODS**

**Objective:** To avoid disturbance to wildlife during critical periods of their life cycle. Surface activities are curtailed from Nov. 1-April 1, & May 1 and July 1 in the calving area, except in the portal areas, for wintering elk. Any maintenance requiring heavy equipt will require monitoring from Dec.1 -April 15 for big game winter range and from Jan.1-Aug15 for raptors.

**Frequency:** During surface disturbing activity

**Status:** When construction or mitigation activities during wildlife exclusionary periods

**Reports:** Not Required, Contact DOGM if disturbance occurs during exclusion period

**Citation:** MRP, Vol. 1, Ch.3, Pg. 3-42 through 3-44 and 3-9

**Title: VEGETATION SURVEY OF SOUTH FORK QUITCHUPAH**

**Objective:** To provide sufficient data to make a determination of the degree of impacts of subsidence on riparian vegetation.

**Frequency:** Surveys will be conducted the fifth year following undermining (2018)

**Status:** Ongoing, Reports were provided in 2013. Next report due 2018.

**Reports:** 2018, (Reports shall provide information and data collected before the area is mined, throughout the mining period, and after mining is past. Monitoring and data collection will continue until the mine, Division and Forest agree that mining impacts, if any, have occurred, have been mitigated, and no further impacts are anticipated. Two reports shall be provided and the Division will provide the second copy to the Fishlake National Forest.)

**Citation:** MRP, Volume 5, appendix 3-14 page 5

**Title: Topsoil sampling at reclamation**

**Objective:** "The topsoil will be tested for need of nutrients and soil amendments following application and grading at the rate of one sample/acre. The depth of sampling should be the surface six inches of distributed topsoil. Parameters for testing will include plant available nitrogen, phosphorus and potassium. Section 528 contains the sampling commitments for the placed waste rock. Application will be on an as needed basis as determined by the tests."

**Frequency:** Reclamation

**Status:** Reclamation

**Reports:** Confer with the Division and include in the Annual Report (where easily found at bond release)

**Citation:** Vol 3. Chap 2. Sec. 231.300 and Section 243.

**Title: NORTHWATER SPRING MITIGATION****Objective:** Mitigation for water loss**Frequency:** 3 years prior to mining cessation**Status:** The system is completed but perpetual maintenance must be determined 3 years prior to cessation of mining.**Reports:** A summary report of the systems performance and maintenance was included in the 2014 Annual Report. By 2017, a perpetual maintenance agreement needs to be constructed between the Division, USFS and Sufco. Three years prior to cessation of mining, the hydrologic condition of the Northwater area will be evaluated. A report will describe conditions of water systems and future mitigation will be evaluated.**Citation:** MRP, Volume 9, Appendix 7-25, Page 5**Title: SUBSIDENCE CRACKS****Objective:** Protect livestock and wildlife from physical hazards of surface cracks**Frequency:** Upon discovery of subsidence cracks**Status:** Subsidence cracks observed Summer 2016**Reports:** Annual Report**Citation:** MRP, Volume1, Ch. 3, page 3-42

## REPORTING OF OTHER TECHNICAL DATA

Please list other technical data or information that was not included in the form above, but is required under the approved plan, which must be periodically submitted to the Division.

Please list attachments:

VEGETATION SURVEY SOUTH FORK QUITCHUPAH

Per request during a meeting at DOGM in March of 2018, it was requested that Sufco submit pond monitoring data for 2017. Additional pond monitoring information is available upon request.

### Reviewer Comments

The Permittee submitted all necessary stock pond monitoring data for 2017. The data includes a table outlining conditions and photos. The monitoring corresponds to a commitment from SUFCO to monitor conditions in stock ponds in the Pines and Quitchupah Tract during the Spring, Summer, and Fall months. SUFCO maintains historical files of stock pond monitoring dating back to 2000. These field are on-site at SUFCO and are available upon request. [AU]  
The MRP meets the State of Utah R645 requirements for Hydrologic Information.

Appendix 7-25 North Water Mitigation Plan is up to date in the MRP detailing the work completed on three springs in the Muddy drainage from 2014 through 2015. The Pines 310 spring mitigation fulfills the Permittee's obligation to the Manti-La Sal National Forest. The Permittee went above and beyond their obligations to the Forest for the two additional spring mitigation projects on M-SP08 and GW-13. The mitigation included vegetation enhancement, installing troughs and spring collection boxes to improve spring collection and fencing areas to encourage vegetation growth in sensitive wetland areas. The District Ranger for the Forest, Darren Olsen, acknowledged the mitigation activities were completed in a January 21, 2016 letter sent to the Sufco mine.

