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DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

June 30, 2017

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

Subject: 2016 Annual Report Review Completion, Sufco Mine, C/041/0002, Task #5427

Dear Mr. Byars:

The Division staff has completed the review of the 2016 Annual Report. Enclosed is a copy of the review with each reviewer's comments.

Thank you for your diligence in completing the Annual Report. If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen
Permit Supervisor

SKC/sqs
Enclosure
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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	2017-05-21
Operator Name	Canyon Fuel Company, LLC - Sufco Mine	Phone Number	+1 (435) 286-4880
Mailing Address	597 South SR 24	Email	arichard@bowieresources.com
City	Salina		
State	Utah	Zip Code	84654

DOG M 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 have previously been submitted to the Division
Impoundments	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Not Required	Certified reports have previously been submitted to the Division
Other:		

OPERATOR COMMENTS

REVIEWER COMMENTS Met Requirements Did Not meet Requirements

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

A summary of the information reported in the raptor survey (annual) and the survey will be provided to the Division within three months following the receipt and review of the survey by the permittee. MRP, Volume 1, Chapter 3, page 3-42

The raptor survey for Sufco has already been submitted and is on file at the Division.

Reviewer Comments Met Requirements Did Not Meet Requirements

The 2016 raptor survey was incorporated into to Appendix 3-4 of the MRP as part of Task 5251 on 8/3/16. The Division has determined that based on the raptor survey and the location of subsidence, mining operations should not have an impact to protected avian species. LR 5/8/17.

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

The subsidence monitoring report is included in the annual report under Subsidence Monitoring

Reviewer Comments Met Requirements Did Not Meet Requirements

The Permittee included a subsidence mine map, report, and historical summary with the annual report. The subsidence map shows subsidence contours for all areas mined in 2016, and details how the majority of the monitoring areas are dormant. The maximum subsidence witnessed in 2016 was 13 feet. The Permittee has addressed the requirements of this commitment. 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

The Climatological Data is included in the annual report under Climatological Data

Reviewer Comments Met Requirements Did Not Meet Requirements

The Permittee provides information for the relationship between climatic variability and stream discharge rates using weather station and SUFCO discharge data to prepare the report. The report is included with this annual report and is prepared by Petersen Hydrologic, LLC. [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 sheets are in the annual report under Waste Rock Samples.. Samples were taken quarterly during periods of deposition at the waste rock site. 96272.26 tons of waste rock were placed in Phase 1 and 2 at the waster rock site.

Reviewer Comments Met Requirements Did Not Meet Requirements

PB, 7/3/2017. Phase 1 and 2 of the expanded waste rock site were active throughout 2016. One composite sample was taken each month during the year. Given the total deposition of 96,272.26 tons during the year, each sample represents approximately 8,000 Tons of waste. Analysis of all parameters analyzed resulted in suitable values.

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%; CaCO3%; 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

The topsoil sampling during waste rock construction has been completed and the analysis has been submitted in the Amendment. The amendment is currently under review.

Reviewer Comments Met Requirements Did Not Meet Requirements

PB, 7/3/2017. SUFCO As Builts included topsoil sampling and were reviewed under Task 5434 in May 2017. One composite sample was taken of the topsoil recovered from combined Phase 1 & 2, as well as five samples of the topsoil replaced on Lift #5. These soil samples were added to Appendix V Soils Report. The analysis of sample WRS Lift 5#5 indicates saline-sodic clay loam soil on the surface in one Lift 5 location. This location should be identified and visually monitored for signs of soil impermeability and plant toxicity.

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

An amendment containing as-built drawings and updated narrative listing volumes salvaged have been submitted. The amendment is under review.

Reviewer Comments Met Requirements Did Not Meet Requirements

PB, 7/3/2017. SUFCO As Builts were reviewed under Task 5434 in May 2017. MRP Operational Map 4B provides the current contours and as built volume of topsoil (27,900 CY) and subsoil (25,850 CY) held in stockpiles. The volume of topsoil stockpiled equates to 1.65 feet or 19 inches topsoil recovered on average. The volume of subsoil stockpiled equates to 1.53 feet or 18 inches subsoil recovered on

average. (10.45 acres were reported disturbed in Phases 1 & 2 on Table 2016 in Chapter 2 of the MRP.)



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 equipment will require monitoring from Dec. 1 -April 15 for big game winter range and from Jan. 1-Aug 15 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

OPERATOR COMMENTS (OPTIONAL)

All subsidence cracks will be repaired as soon as they are located.

REVIEWER COMMENTS

A subsidence map showing locations of subsidence cracks is included along with a commitment to mitigate cracks upon discovery. JE

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:

Reviewer Comments

MAPS

Copies of mine maps, current and up-to-date, are to be provided to the Division as an attachment to this report in accordance with the requirements of R645-301-525.240. The map copies shall be made in accordance with 30 CFR 75.1200 as required by MSHA. Mine maps are not considered confidential.

Map Name	Map Number	Included		Confidential	
		Yes	No	Yes	No
Annual subsidence map	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mine Map	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reviewer Comments Met Requirements Did Not Meet Requirements

The Permittee included a map with approximate locations and dates for projected mining out to 2021. Also included was a subsidence map showing subsidence contours above the mined out panels in Area 16. These maps satisfy the requirements of Utah R645-301-525.240. JE