Suzanne Steab <suzannesteab@utah.gov>

2019 Annual Report Review Completion

Suzanne Steab <suzannesteab@utah.gov> Wed, Jul 1, 2020 at 1:36 PM
To: jbyars@wolverinefuels.com, Vicky Miller <vmiller@wolverinefuels.com>
Cc: "Christensen, Steve" <stevechristensen@utah.gov>, Amanda Daniels <amandajdaniels@utah.gov>

Hello,

The Division staff have completed the review of the 2019 Annual Report for the Sufco Mine. Attached is a copy of the review with comments.

No hard copy will follow.

Thank you for your diligence in completing the Annual Report.

--
Suzanne Steab, Engineering Technician II
Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801
(801) 538-5265

Sufco.pdf
42K

2019 ANNUAL REPORT

Submit the completed document and any additional information identified to the Division by March 31, 2020.

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@wolverinefuels.com
City	Salina		
State	Utah	Zip Code	84654

		DOGM File Location or Annual Report Location
Excess Spoil Piles	☐ Required ☒ Not Required	
Refuse Piles	☒ Required ☐ Not Required	Certified reports previously submitted
Impoundments	☒ Required ☐ Not Required	Certified reports previously submitted
Other:		

OPERATOR COMMENTS

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

Reports for 2019 refuse pile and sediment ponds were submitted to the Division immediately after each quarterly or annual inspection was conducted. A review of the submitted reports is as follows:

First Quarter 2019
Refuse Pile inspected on 02/12/2019.
Waste Rock Site North Pond inspected on 02/12/2019.
Waste rock Site South Pond inspected on 02/12/2019.
Mine Site Primary Pond inspected on 03/02/2019.

Mine Site Overflow Pond inspected on 03/02/2019.

Second Quarter 2019
Refuse Pile inspected on 06/12/2019.
Waste Rock Site North Pond inspected on 06/27/19.
Waste rock Site South Pond inspected on 06/27/2019.
Mine Site Primary Pond inspected on 06/20/2019.
Mine Site Overflow Pond inspected on 06/20/2019.

Third Quarter & Annual 2019
Refuse Pile inspected on 09/27/2019.
Waste Rock Site North Pond inspected on 09/27/2019. Sediment level is 2.35' below the 60% elevation.
Waste rock Site South Pond inspected on 09/27/2019. Sediment level is 9.55' below the 60% elevation.
Mine Site Primary Pond inspected on 09/27/2019. Sediment level is 7.35' above the 60% sediment elevation Needs to be cleaned.
Mine Site Overflow Pond inspected on 09/27/2019. Sediment level is 1.89' above the 60% elevation. Needs to be Cleaned.

Fourth Quarter 2019
Refuse Pile inspected on 12/31/2019.
Waste Rock Site North Pond inspected on 12/31/2019.
Waste rock Site South Pond inspected on 12/31/2019.
Mine Site Primary Pond inspected on 12/31/2019.
Mine Site Overflow Pond inspected on 12/31/2019. (KRH)

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: Chapter 3, page 3-10 & 3-42

OPERATOR COMMENTS

The Raptor Survey has been submitted to DOGM for the calendar year 2019

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

The 2019 raptor survey was incorporated into Appendix 3-4 of the Confidential MRP on Oct. 3, 2019. None of the previously known nests in the survey area were observed as being active. One new GOEA nest was observed approx. 100 m from a known nest. No activity was noted at that nest. Additionally, no northern goshawk nests were observed during the surveys. Survey data sheets are included in the report along with a map. TM

Title: SUBSIDENCE MONITORING

Objective: To document the amount of subsidence that has occurred.
Frequency: Annually
Status: Ongoing
Reports: Annual
Citation: Chapter 5, page 5-29

OPERATOR COMMENTS

Attached is the Annual Subsidence Report and map for 2019. The report is located in the folder Subsidence Report

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

A comprehensive subsidence monitoring report has been included in the annual report. This report is based on photogrammetric data collected in 2019, and is a compliment to Map 1. Map 1 is a PE certified map that contains all of the subsidence features across the entire permit area. According to the report, the entire permit area is divided into sections, and monitored according to how prevalent subsidence is within that section. Once subsidence no longer occurs for an extended period of time within a section then that section is no longer surveyed and is considered dormant. To date, there are 20 sections within the permit area, 14 of which are considered dormant. A table on Map 1 lists the subsidence monitoring status as well as the maximum amount of subsidence within any given section. In addition to the overburden contours, known tension cracks and monitored springs are also documented. This map has been signed and stamped by Jacob D. Smith, Professional Engineer in the State of Utah. (JE - 4/15/2020)

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: Chapter 7, page 7-59

OPERATOR COMMENTS

Attached is a report, Comparison of Weather Data and Stream Discharge at the Sufco Mine during 2019. The report is located in the folder Climatological Data.

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

A Peterson Hydrologic report was submitted to fulfill this requirement. The report analyzes climatological data as well as an analysis of specific spring and stream monitoring data analysis. The report indicates that the 2018-2019 water year near the Sufco mine experienced a transition from severe to extreme drought conditions in 2018 to moderate wet conditions in 2019, despite a period of unusually dry conditions from August 2019 to November 2019. (AD 6/4/2019)

Title: REFUSE SAMPLING/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: Chapter 5 Sec. 528 and 536.100

OPERATOR COMMENTS

No material was taken to the refuse pile in 2019

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

Quarterly waste rock inspection reports are Incoming files 3112019.pdf (1st Qtr), 7252019.pdf (2nd Qtr), 11012019.pdf (3rd Qtr/Annual Waste Rock Certification) and 01062020.pdf (4th Qtr). The quarterly reports state that re-mining of the waste from Phases 1 and 2 began in the second quarter 2019 and continued in the third quarter. Storage capacity of the expanded waste rock site was estimated to be 938,207 CY (Waste Rock, Section 536.100, p. 5-28). 5/19/2020, PB.

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: Chapter 2 Sec. 222.400

OPERATOR COMMENTS

The lab results have been submitted to DOGM and added to the MRP

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

The analytical report of two samples is found in Waste Rock Appendix V(A). The two samples analyzed were reported to have SAR values of 20.2 and 20. The analyses describes sandy loam or loam soil with high SAR values of 20.2 and 20. These SAR values are extraordinarily high and do not agree with the chemical characteristics of the soils surveyed in the area in 2014. The stockpiles should be re-sampled and analyzed for pH, EC, SAR and Exchangeable Sodium Percentage to confirm the soil chemistry. This guidance is provided in the Utah Guidelines for Management of Topsoil and Overburden, Table 4, notes a & b. 5/19/2020, PB.

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: Chapter 2, Sec. 231.100 and 242.100

OPERATOR COMMENTS

As built drawings were submitted and approved (Task 6043) by DOGM on January 21, 2020

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

The waste rock site as-built table on p. 2-27 provides as built volumes of topsoil and subsoil salvaged and stockpiled from Waste Rock expansion Phases 1, 2, 3, &4. This table states that there currently is in storage 64,410 CY of topsoil and 55,343 CY of subsoil. Total volume of soil stored is 119,753 CY. 5/19/2020, PB.

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: 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: Chapter 3, page 3-42 through 3-44 and 3-9

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: Chapter 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: 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: Chapter 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:

Sufco has submitted pond monitoring data for 2019. The pond monitoring information is located in the folder Stock Pond Monitoring

REVIEWER COMMENTS

Stock watering ponds in the area of the Sufco mine are monitored to evaluate conditions and to report if subsidence has impacted the ponds. These were provided, along with photographs of each stock watering pond. Subsidence cracking was not observed at any of the inspected stock watering ponds. (AD 6/4/2019)

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	Map 1	☒	☐	☐	☒
Mine Map	Map 1	☒	☐	☐	☒
		☐	☐	☐	☐
		☐	☐	☐	☐
		☐	☐	☐	☐

REVIEWER COMMENTS ☒ Met Requirements ☐ Did Not Meet Requirements

A SUFCO Mine Plan 5 Year Projection has been included as well as a subsidence overview included in Map 1. Both maps have been updated to reflect conditions as of the end of 2019, and are PE certified by Jacob D. Smith, Professional Engineer in the State of Utah. (JE - 4/15/2020)