W A T E R Q U A L I T Y
MEMORANDUM
Utah Coal Regulatory Program

June 27, 2019

TO: Internal File

THRU: Steve Christensen, Coal Program Manager

FROM: Amanda Daniels, Environmental Scientist

RE: 2018 4th Quarter Water Monitoring, Canyon Fuel Company, LLC, Sufco Mine, C/041/0002, Task ID #5823

The Sufco Mine is an operating longwall mine. Current operations are in the Quitchupah and Muddy Tracts. Water monitoring requirements can be found in Section 7.3.1.2 of the MRP, see Tables 7-2, 7-3, 7-4, 7-5, and 7-5A.

Sufco has added additional stream monitoring points to their plan: Sufco 006A, 006B, 006C, and 006D are intended to monitor the upstream and downstream flow along the South Fork of Quitchupah Creek. Additional spring sample locations were approved for the South Fork reach of Quitchupah located in the headwaters area and further downstream. These springs include: Spring 006A, Roberts Spring, RS-A, RS-B, Wedge Spring, Amanda Spring, 94-113 Seep.

1. Was data submitted for all of the MRP required sites?

Springs **YES** ☒ **NO** ☐

The MRP requires the Permittee to monitor 29 springs during the second, third, and fourth quarter as per Table 7-2. Some require full laboratory analysis according to Table 7-4, while others simply require field measurements.

Streams **YES** ☒ **NO** ☐

The MRP requires the Permittee to monitor 20 streams during the second, third and fourth quarter as per Table 7-2. Perennial stream monitoring of Box Canyon is required at FP-1 and FP-2 at the beginning of the month of October each year.

Wells **YES** ☒ **NO** ☐

The MRP requires the Permittee to monitor water levels for 7 wells. Monitoring

wells US-80-2, 89-20-2W, US-81-3, US-81-4 and 01-8-1 are monitored quarterly. Monitoring wells US-80-4 and US-79-13 are monitored annually during the 3rd quarter. Groundwater monitoring at the Waste Rock site occurs three times per year.

UPDES

The UPDES Permit/MRP require bi-weekly monitoring of 3 outfalls: UT0022918-001: *mine water discharge to Spring Canyon;* UT0022918-002: *sedimentation pond discharge to Spring Canyon; and* UT0022918-003A*: the mine water discharge to the North Fork of Quitchupah Creek.*

The Permittee submitted all required samples for the UPDES sites.

2. Were all required parameters reported for each site? YES ☒ NO ☐

3. Were any irregularities found in the data? YES ☒ NO ☐

The following sites reported parameters more than two standard deviations from the mean:

Springs:

Amanda Spring:	Specific Conductivity
Broad Hollow Sp:	Specific Conductivity
GW-9:	Specific Conductivity
Pines 100:	Chloride
Pines 209:	Specific Conductivity
Pines 212:	Specific Conductivity

Streams:

007:	Bicarbonate
	Dissolved Calcium
	Dissolved Magnesium
	Specific Conductivity
	Dissolved Sodium
	Dissolved Potassium
047:	Dissolved Calcium
	Dissolved Magnesium
	TDS
	Specific Conductivity
	Dissolved Sodium
	SO4
	Chloride
047A:	Dissolved Potassium
090:	Specific Conductivity

Pines 403: Bicarbonate
Dissolved Calcium
Dissolved Magnesium
TDS
Specific Conductivity
Dissolved Sodium
Dissolved Potassium
SO4
Chloride
Pines 405: Specific Conductivity
Pines 407: Specific Conductivity

Wells:

WRDS-B3:	Dissolved Calcium
	Dissolved Sodium
	Dissolved Potassium
	SO4
WRDS-B6:	Dissolved Potassium

4. On what date does the MRP require a five-year re-sampling of baseline water data.

There is no commitment in the MRP to resample for baseline parameters.

5. Based on your review, what further actions, if any, do you recommend?

No recommendations are warranted at this time.