

the mine has been able to pass its chronic water testing. The Utah Division of Water Quality recently modified the mine's UPDES discharge permit to include a limit of 500 mg/l TDS and no total ton per day limit or the mine would discharge less than 7.1 tons per day of TDS if the water had a TDS concentration greater than 500 mg/l.

A UPDES permit was obtained by PacifiCorp to operate the JC-3 mine dewatering well in James Canyon. This well will discharge high quality mine water to Electric Lake. However, since it is mine water, Skyline will be obligated under SMCRA to assure the quality of the water discharged is within the UPDES permit limits assigned to JC-3. Skyline will submit the required DMRs to the Division as required in Section 2.3.7.

Periodically, due to difficult recovery conditions or roof collapse, mining equipment is abandoned underground. Prior to leaving equipment underground, hazardous materials and lubricating fluids are drained when possible. Since the equipment is steel and not too different compositionally from the roof support throughout the mine, contamination to ground water from abandoned equipment is not anticipated.

Mining equipment such as longwall mining machines, roof bolters, and continuous miners, is made of high quality steel containing chromium, and is highly resistant to corrosion. Calculations of the corrosion potential of the steel used in long wall mining machines have been performed by the University of Utah Metallurgy Department (BLM 1998s). They determined it would take thousands of years for the metal to corrode away. The University of Utah (BLM 1998a) report indicated that the general conditions required to hasten the corrosion of this metal do not exist in the Utah mining environment. A map illustrating the location of equipment left underground is provided as Drawing 2-3-6-3:2.5.2-1. The drawing includes a description of each piece of equipment.

Because of the high alkalinity and low acidity concentrations in the area (differing normally by two orders of magnitude), acid drainage problems do not occur as a result of mining. This is supported by the fact that coal in the area has a low sulphur content. The pyritic sulfur content within the coal is approximately 0.10 percent. Approximately 0.931 pounds of Iron are taken out of the ground for each ton of coal that is produced. Assuming Skyline produces 3 million tons of coal per year, approximately 1,400 tons of Iron is extracted from the formation each year with the mining of the coal. On typical year, metal roof support associated with mining – on the order of 1,300 tons per year – is left underground. Over 25 years of water monitoring of the natural waters surrounding the Mine does not show any degradation in water quality.

Skyline Mine anticipates potentially discharging approximately 2,800 gpm of mine water to Eccles Creek after the completion of mining and subsequent abandonment of the 11 Left, 12 Left A and B, and 6 Left B panels in 2004. However, this rate may vary with changes in the operation of JC-3 and because of the steady decline in potentiometric head within the aquifer discharging into Mine #2. Assumptions used in developing the discharge amount can be found in July 2002 Addendum to the PHC in Appendix F.

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File in:

Confidential

Shelf

Expandable

Refer to Record No. 0032 Date 04/15/2008

In C 0070005, 2008, Incoming

For additional information

2-51c

The water consumed in operating underground equipment, dust suppression, and evaporation is obtained from ground water sources within the mine. These underground water sources are not connected to the surface waters in the area. Extensive research has been performed by the mine to verify that water currently entering the mine is not coming from the surface or depleting surface waters. The recent July 2002 Addendum to the PHC presents data supporting this statement. The data suggests the water intercepted underground is at least 4,000 to 25,000 years old and, based on the results of tritium analyses from most of the mine waters, does not typically contain water that has been exposed to the atmosphere in the past 50 years. Additionally, the steady rate of decline in ground water levels in monitoring wells within the permit area and the results of age-dating the ground water inflows to the mine indicating the water is not getting appreciably younger, suggests that the aquifer is not receiving significant recharge of "young" surface waters.. Continued monitoring by the mine of the surface waters and seeps and springs flows in the permit and adjacent areas have shown no discernable impacts due to the increased mine inflows that were encountered in March 1999 and have continued through November 2002. It is the operator's position that the water consumed in operating Skyline Mine is not depleting surface water sources. In fact, there is an overall net gain to local river systems discharging to the Colorado River as a result of Skyline Mine discharge.

The following information is supplied as required by the Windy Gap process as it applies to existing coal mines in the Upper Colorado River basin:

Mine Consumption: (culinary well - Water Right 91-5010) =41.69 ac-ft (2004 consumption)

Ventilation Consumption / Evaporation:

(assumes 70 deg. F, 60 total days annually, 20% humidity air intake, 95% humidity air out-take; air density difference of 0.001 lbs/ft )

$$(353,312 \text{ cu-ft/min}) (.001)(0.1198) = 42 \text{ gal/min.}$$

$$= 11.21 \text{ ac-ft annually}$$

Coal Producing Consumption / Coal Moisture Loss:

- 6.1% Inherent moisture
- 8.54 % run-of-mine moisture
- 2.44% moisture added to coal by cutting (8.54-6.1)

Projected 2005 Tonnage 237, 500 tons

Projected 5 yr Average 1,898,672 tons

$$\text{Tons water/year} = (1,898,672)(0.0244) = 46,328 \text{ tons water/year}$$

$$\text{Lbs water/year} = 92,656,000$$

$$\text{Gallons/year} = 92,656,000 (0.1198) = 11,100,189 \text{ gallons/year}$$

$$= 34.06 \text{ ac-ft annually}$$

Sediment Pond Evaporation:

Evaporation estimate calculation uses evaporation data from Pacificorp evaporation pan located at Electric Lake spillway. Data was from 1998 through 2003.

Pond 001 (Mine Site) - 0.39 acre (surface area)