

0019

W: PJK ✓

INCOMING
C0150019

Beginning in the third quarter 2001, sulfate concentrations increased markedly at SW-2 and exceeded the mean by two standard deviations for the five following quarters. The most recent sample, second quarter 2003, was still high but fell within two standard deviations of the mean. The source of this increased sulfate is clearly discharge to Cottonwood Creek from the Trail Mountain Access (TMA) tunnel of the Cottonwood/Wilberg Mine. The Utah Division of Water Quality approved relocation of UPDES discharge point UT0022896-001 from Grimes Wash to the TMA in July 2001. Coinciding with this relocation of the Cottonwood/Wilberg Mine discharge to Cottonwood Creek, the ongoing drought caused natural flow in the creek to drop to little or nothing so that there is no dilution of the mine discharge.

Sulfate concentrations in the TMA discharge are similar to what they had been when the discharge was to Grimes Wash. Discharges from the TMA have been monitored for only seven quarters, but there does appear to be a downward trend in both discharge volume and in sulfate concentration. Because the channel of Cottonwood Creek has been dry, water discharged to the channel disappears quickly and is usually not detected several hundred feet farther downstream at SW-3. In the past, coal-mining activities at the Trail Mountain Mine have typically resulted in sulfate concentrations being higher at SW-3 than at SW-2 and SW-1, and for several years even higher than those now being measured at SW-2 and the TMA. When normal flows return to the creek at the end of the current drought, sulfates entering the stream from the TMA discharge will be diluted.

For the present, there is no recommendation for remedial action.

Pam -
This is Jim's analysis
on SW-2 sulfate issue, (Trail Mt. Mine)
Pete

| | | | | | |
|------------------|--------------|---------|------------|------------|---|
| Post-It Fax Note | 7671 | Date | 9/24/03 | # of Pages | 1 |
| To | Pam Conbaugh | From | Pete Hess | | |
| Co./Dept | Littig | Co. | PFO / DOGM | | |
| Phone # | | Phone # | | | |
| Fax # | | Fax # | | | |

SEP 24 2003