

#4176

Q

# WATER QUALITY M E M O R A N D U M

## Utah Coal Regulatory Program

---

February 11, 2013

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *SFC*

FROM: April A. Abate, Environmental Scientist III *AAA 2/11/12*

RE: 2012 3rd Quarter Water Monitoring, Hiawatha Coal Company (HCC), Hiawatha Mine, C/007/0011, Task ID #4176

HCC has supplied schedules for water monitoring and parameter reporting in Tables 7-12 through 7-17, in the Mining and Reclamation Plan (MRP), updated on October 11, 2011. Water monitoring locations can be found on Plates 7-1 and 7-2 in the Hiawatha MRP.

The Hiawatha mine holds Utah Discharge Elimination System (UPDES) Permit #UT0023094. A total of 13 outfalls are permitted at the site. Two of these outfalls discharge consistently (D001 – Mohrland Mine Portal and D002 – Mine Discharge to Miller Creek). As of February 11, 2013, the Division has deactivated outfall locations D010 – the North Fork Vent Portal 4 and D013 – King Water Tank Overflow. These locations are still permitted outfalls under the Department of Environmental Quality- issued UPDES permit. Point D010 is a discharge from the King 4 mine ventilation portal that is currently inactive and Point D013 is from an overflow pipe from the King 6 unused water tank in South Fork Canyon.

The Hiawatha Mine is currently in temporary cessation. There is currently no underground mining taking place.

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

*Identify sites not monitored and reason why, if known:*

**Springs**

YES  NO

Not applicable. Currently, no spring locations are monitored. Hiawatha will resume monitoring of the springs listed on Table 7-17 two years prior to the start up of any underground mining activities.

**Streams**

YES  NO

HCC monitors 10 stream locations at/near the mine site, ST-1, ST-2, ST-2B, ST-3, ST-3A, ST-3B, ST-4, ST-4A, ST-4B, and ST-5. HCC currently monitors field parameters of streams on a monthly basis from May through August and the month of October. Operational sampling occurs in April and September (Tables 7-13).

All stream sampling locations required were monitored for field parameters on a monthly basis during the 3rd quarter. Operational sample monitoring was performed on the stream locations during the September 25, 2012 sampling event.

ST-3, ST-3A, ST-3B, ST-4, ST-4A, ST-4B all reported no flow during each month of the third quarter of 2012.

**UPDES**

YES  NO

There are a total of 13 UPDES sample locations listed in Permit #UT0023094 for the Hiawatha Mine used to establish discharge quality. UPDES locations are monitored quarterly according to permit. The UPDES locations D003 through D013 listed in the current UPDES permit typically do not discharge. The current permit is due to expire in December 2014. All UPDES sample locations are outlined below:

Pond No.	Location
D001	Mohrland Portal
D002	Overflow at Hiawatha
D003	Upper Coal Storage Yard
D004	North of Slurry Pond No. 1
D005	East of Slurry Pond No. 4
D006	North East of Slurry Pond No. 5
D007	South East of Slurry Pond No. 5
D008	Middle Fork Mine Yard
D009	South Fork Mine Yard
D010	King Mine 4 Discharge
D011	South Fork Truck Loading Facility
D012	Mohrland Pipeline Drain
D013	King 6 Water Tank Overflow

During the third quarter of 2012, monthly data from UPDES locations D001 and D002 were reported this quarter. Analytical data were collected from outfalls D001 and D002 on September 25-26, 2012.

**WATER QUALITY MEMO**

---

**2. Were all required parameters reported for each site?**

**Springs**      YES       NO

Not Applicable

**Streams**      YES       NO

**UPDES**      YES       NO

The flow rate of discharge from the Morhland portal discharge (UPDES D001) this quarter averaged 217 gallons per minute (gpm) while flow rates from the mine to Miller Creek (UPDES D002) were reported consistently at 130 gpm all three quarters. Oil and grease, total suspended solids (TSS), pH, and total iron were all either not detected, or within the acceptable UPDES permit limits.

Total Dissolved Solids (TDS) was reported at concentrations of 707 mg/l and 690 mg/L at UPDES D001 and D002, respectively. Loading limits were calculated for each location and determined to be 1,698.16 and 1,077.26 lbs/day, respectively. Added together, these outfalls exceed the 2,000 lbs/day, or 1 ton effluent loading limitation specified in the Hiawatha UPDES permit. The UPDES permit states that if the 1.0 ton/day limit cannot be achieved, then a 366-ton/year TDS limit is allowed for the facility.

**3. Were irregularities found in the data?**

**Springs**      YES       NO

Not applicable

**Streams**      YES       NO

The following parameters were flagged as being outside of at least two standard deviations:

<b>Sample ID</b>	<b>DATE</b>	<b>Parameter</b>	<b>Value</b>	<b>Std. Deviation</b>
ST-1	9/25/2012	T-Alk	417 mg/l	2.75
		Bcrb	417 mg/l	5.55
ST-2B	9/25/2012	T-Alk	284 mg/l	2.43
		Bcrb	284 mg/l	3.86
ST-5	9/25/2012	D-K	6.54 mg/l	2.32

UPDES      YES       NO

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

No baseline sampling obligations are stipulated in the Hiawatha MRP.

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

Please be aware that TDS effluent loading limits at discharging outfalls could potentially exceed the 366-tons/year limit specified in the Hiawatha UPDES permit.

**6.      Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements?**

No.

**7.      Follow-up from last quarter, if necessary.**

None.