

# WATER QUALITY MEMORANDUM

## Utah Coal Regulatory Program

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December 27, 2017

TO: Internal File

THRU: Steve Christensen, Permit Supervisor 

FROM: Arati Umarvadia, Environmental Scientist 

RE: 2017 Second Quarter Water Monitoring, UtahAmerican Energy Inc., Horse Canyon Complex, C/007/0013, WQ17-1, Task ID #5536

This report was prepared from monitoring data queried from the UDOGM database. The data that support this report were collected and submitted to the database by UtahAmerican Energy Inc. (UEI). The data were downloaded into file O:\007013.HOR\WaterQuality\Spreadsheets\HorseCanyonWQ.xlsx for this review.

### Lila Canyon Mine

UEI received permit approval for the Lila Canyon Mine on May 18, 2007 with special conditions attached. The Conditions were clarified on August 3, 2007. Operational water monitoring is described in Section 731.200 and monitoring sites are listed in Table 7-3 of the Lila Canyon MRP. Table 7-4 and Table 7-5 list the monitoring parameters for surface water and groundwater, respectively, and Plate 7-4 shows the water monitoring sites. The list of parameters for baseline, operational and post-mining water monitoring are the same.

#### **1. Were data submitted for all required sites?**

**Springs** YES  NO

Operational monitoring for Lila Canyon includes quarterly monitoring at springs L-11-G, L-12-G, L-16-G and L-17-G. Springs L-12-G, L-16-G, and L-17-G had no flow this quarter. All springs were monitored in compliance with the schedule.

**Streams** YES  NO

Surface water (stream) sites are monitored quarterly. Sites L-1-S, L-2-S, L-3-S, and L-19-S are identified for surface water monitoring for the Lila Canyon Mine.

Stream monitoring sites were monitored according to the schedule. No streams had flow.

**Wells** YES  NO

The wells were monitored for water level in compliance with the monitoring schedule.

**UPDES** YES  NO

Discharges from the Lila Canyon Mine are authorized under UPDES Permit No. UT0026018. The Lila Canyon Mine UPDES permit identifies two discharges: 001 is discharge from the sediment pond and 002 is discharge from the underground mine. These discharges are being monitored as sites L-4-S and L-5-G, respectively. The UPDES permit specifies monitoring frequency and required parameters. The underground mine and sediment pond are constructed but not discharging.

L-4-S and L-5-G did not discharge this quarter.

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

**Springs** YES  NO

**Streams** YES  NO

**Wells** YES  NO

**UPDES** YES  NO

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

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

**Springs** YES  NO

**Streams** YES  NO

**Wells** YES  NO

IPA-2 has shown a significant drop in water level over the last several quarters. The water level hovered around 900 feet until 2<sup>nd</sup> quarter 2016. Water levels have steadily declined: 978 feet (2Q16), 994 feet (4Q16), 1067 feet (2Q17).

Data is missing for 3Q16.

**UPDES** YES  NO

L-5-G has been deleted from APPX and must be re-added. Doug is working on this.

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

Re-sampling for baseline parameters is due preceding permit renewal. Analysis of baseline water samples is conducted according to the operational monitoring plan, therefore no additional parameters are required for baseline monitoring.

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

Continue to monitor L-9-G, and the IPA-2 well closely for the next quarter.

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

IPA-2 water level continues to decrease. IPA-3 was plugged 4Q17.