

#4122  
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# WATER QUALITY M E M O R A N D U M Utah Coal Regulatory Program

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December 11, 2012

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *SCC*

FROM: Amanda Daniels, Environmental Scientist II *AD*

RE: 2012 Second Quarter Water Monitoring, Hidden Splendor Resources, Inc.,  
Horizon Mine, C/007/0020, WQ12-2, Task ID #4122

The Horizon Mine is operational and mining coal. The water-monitoring plan is outlined in Chapter 7 - Hydrology of the MRP, which was most recently updated in June 2005. Surface and groundwater monitoring is required for the Horizon Mine under the operation plan, and monitoring procedures and parameters are discussed in MRP Section 7.1.5 (groundwater) and Section 7.2.2.3 (surface water). UPDES permit UTG040019 authorizes discharges from two outfalls and expires on April 30, 2013.

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 the Operator. The data were downloaded into file O:\007020.HZN\Water Quality\Spreadsheets\HorizonWQ.xlsx for this review.

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

**Springs**      YES [X]      NO [ ]

Springs SP-1, SP-2, SP-4, SP-9 (Jewkes Spring), 2-6-W (Homestead Spring) and GV-70 will be monitored once each calendar quarter (when the springs are accessible) during the operational and reclamation phases. Ground water quality parameters to be checked are outlined in Table 7-2 of the MRP.

**Streams**      YES [X]      NO [ ]

Stations SS-3, SS-5, SS-7, SS-8, SS-10 and SS-11 will be monitored once each quarter (as access conditions permit). Surface water quality parameters are outlined in Table 7-5 of the MRP.

**Wells**            **YES [X]**        **NO [ ]**

Water level data will be collected during the operational and reclamation phases from wells HZ-95-1, HZ-95-1S, HZ-95-2, and HZ-01-06-1 once each quarter, when accessible.

**UPDES**            **YES [X]**        **NO [ ]**

Monthly monitoring is required for the UPDES outfalls associated with the sedimentation pond (001) and the mine discharge (002).

UPDES sites were monitored monthly for the quarter and all required data were submitted. No flow was reported from the sedimentation pond. Discharge from the underground mine ranged from 115 to 170 gallons per minute.

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

**Springs**            **YES [X]**        **NO [ ]**

**Streams**            **YES [X]**        **NO [ ]**

**Wells**              **YES [X]**        **NO [ ]**

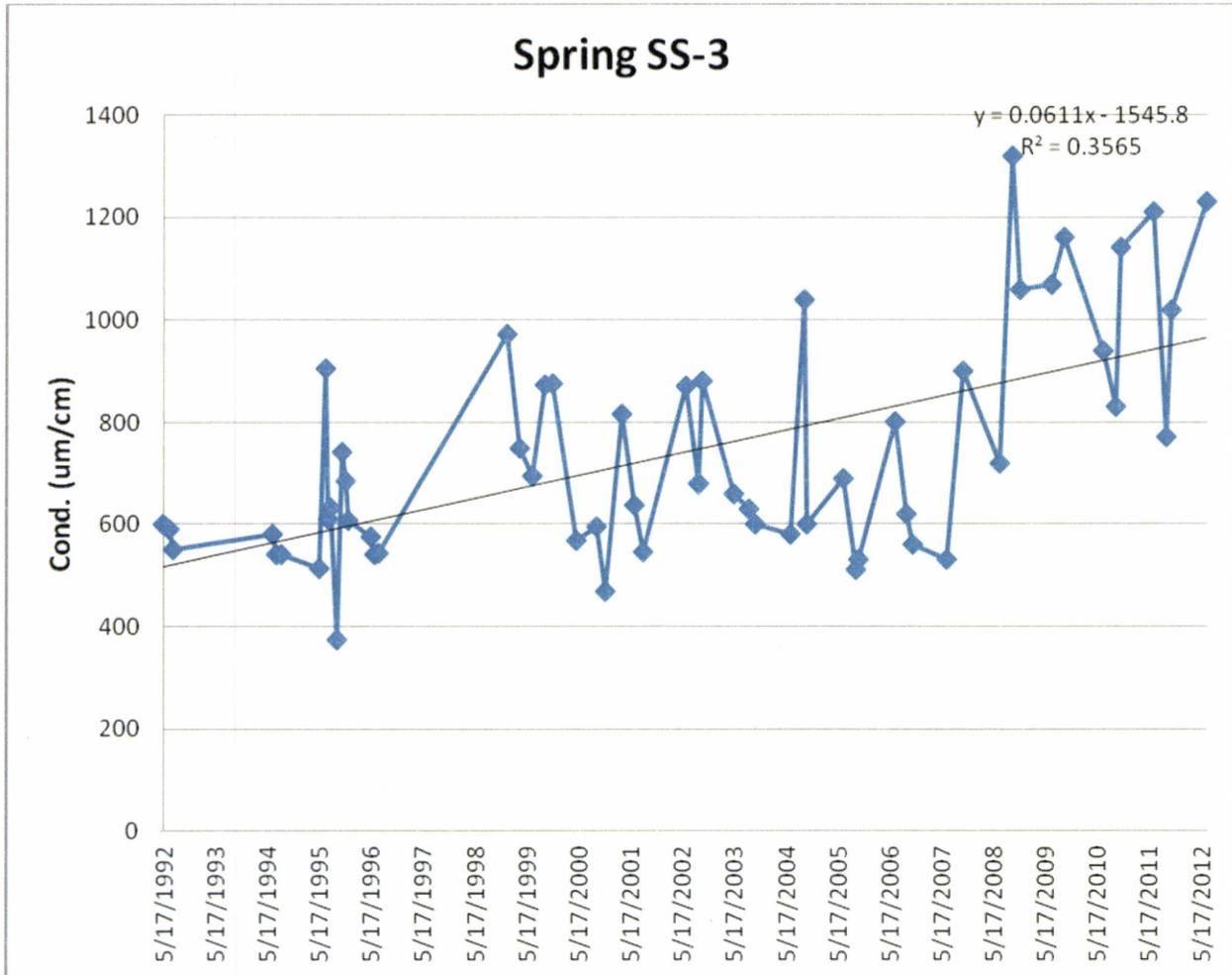
**UPDES**            **YES [X]**        **NO [ ]**

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

**Springs**            **YES [ ]**        **NO [X]**

**Streams**            **YES [X]**        **NO [ ]**

Stream monitoring location SS-5 and SS-3 are monitored on Jewkes Creek above and below the mine surface facilities respectively. SS-3 has been reporting a gradual upward trend in conductivity since about September of 2008. See the figure below. Site SS-5 has not seen an increase in conductivity. Between these two monitoring points the mine discharges into the creek (monitored as UPDES 002). Conductivity is not a required monitoring parameter at UPDES 002, but the matter was discussed with the Horizon mine representative, Kit Pappas, and he has agreed to add conductivity to his monthly monitoring at this point and report it to the DOGM database. Having the mine discharge monitored for conductivity help determine the source of the rising conductivity.



Wells YES [ ] NO [X]

UPDES YES [ ] NO [X]

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

Re-sampling due date is third quarter, July-September 2012.

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

Conductivity monitoring at UPDES site 002 will begin in the first quarter of 2013.

Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements? YES [ ] NO [X]

- 6. Follow-up from last quarter, if necessary.  
Did the Mine Operator submit all the missing and/or irregular data (datum)?**

None needed.

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