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# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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November 3, 2010

TO: Internal File

THRU: James D. Smith, Permit Supervisor *JS 03 Nov 2010*

FROM: Kevin Lundmark, Hydrologist *KWL*

RE: Discontinue Water Monitoring, Plateau Mining Corporation, Star Point Mine, C0070006, Task ID #3663

## SUMMARY:

On October 25, 2010 the Division received an amendment to discontinue water monitoring at the Star Point Mine. The amendment includes a revision to page 700-1 of the MRP indicating that water monitoring would cease following third quarter 2010, and the addition of Exhibit 728i which provides supporting documentation for the discontinuance of water monitoring at Star Point Mine.

Information submitted by PMC has made the demonstration necessary for approving a reduction in water monitoring requirements under Utah Coal Mining Rules R645-301-731.214 and R645-301-731.224. The proposed amendment should be approved at this time.

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**TECHNICAL ANALYSIS:**

**OPERATION PLAN**

**HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

**Analysis:**

**Background**

On April 22, 2002 the Division approved an amendment to reduce water monitoring requirements at the Star Point Mine (Amendment C/007/0006-AM02A). This amendment identified that surface water sites 10-1 and ST-1 would be monitored through Phase II Bond Release, and that spring site 971 would be monitored until the 1998 citizen's complaint filed by the Huntington Cattle Association and Huntington Cleveland Irrigation Company was resolved. The Division approved an amendment to discontinue subsidence monitoring on June 23, 2003 (Amendment C/007/0006-AM03B). At that time, the Division found that there has been no impact to surface water or groundwater and that the area is stable. Phase II Bond Release at Star Point Mine was approved in June 2008.

On October 25, 2010 the Division received an amendment from Plateau Mining Corporation (PMC) to discontinue water monitoring at Star Point Mine. The amendment includes a revision to page 700-1 of the MRP indicating that water monitoring would cease following third quarter 2010, and the addition of Exhibit 728i which provides supporting documentation for the discontinuance of water monitoring at Star Point Mine.

Utah Coal Mining Rules R645-301-731.214 and R645-301-731.224 provide that Division may modify the groundwater and surface water monitoring requirements, including the parameters covered and the sampling frequency, if the operator demonstrates using monitoring data that:

- The coal mining and reclamation operation has minimized disturbance to the prevailing hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area; water quantity and quality are suitable to support approved postmining land uses; or

- Monitoring is no longer necessary to achieve the purposes set forth in the approved monitoring plan.

### **Groundwater Monitoring**

PMC currently monitors one groundwater site, Spring 971, which has been monitored since 1989. Spring 971 has been dry (no flow) during the period 1989 to 2010 with the exception of one monitoring event in 1990. The Division previously approved an amendment identifying that groundwater monitoring at Spring 971 would continue until the 1998 citizen's complaint filed by the Huntington Cattle Association and Huntington Cleveland Irrigation Company was resolved. Attachment C to Exhibit 728i is a Settlement and Release Agreement entered into on December 6, 2005 between Plateau Mining Corporation, the Huntington Cattle Association and the Huntington-Cleveland Irrigation Company which fully and finally resolves all existing and future claims concerning the disappearance or alteration of flow for Spring 971. This Agreement effectively resolves the 1998 citizen's complaint; therefore, monitoring at Spring 971 is no longer required.

### **Surface Water Monitoring**

Two surface water sites are currently monitored by PMC: site 10-1 is the main reclamation channel draining the Star Point Mine site and site ST-1 is on the Norht Fork of the Right Fork of Miller Creek above the confluence with the Right Fork of Miller Creek. Exhibit 728i presents a summary and discussion of water monitoring data for these sites.

No flow has been measured at site 10-1 since 2001; mining operations ceased in 2000. Continued monitoring at site 10-1 was required to evaluate the success of reclamation activities at the mine at preventing the contribution of suspended solids to surface water. Phase II Bond Release for Star Point mine was approved in June 2008. Utah Coal Mining Rule R645-301-880.320 identifies that for Phase II Bond Release "[n]o part of the bond or deposit will be released under this paragraph so long as the lands to which the release would be applicable are contributing suspended solids to streamflow or runoff outside the permit area in excess of the requirements set by UCA 40-10-17(j) of the Act and by R645-301-751". Reclamation efforts at Star Point mine have successfully prevented the contribution of suspended sediment to streamflow; therefore, monitoring at site 10-1 is no longer required.

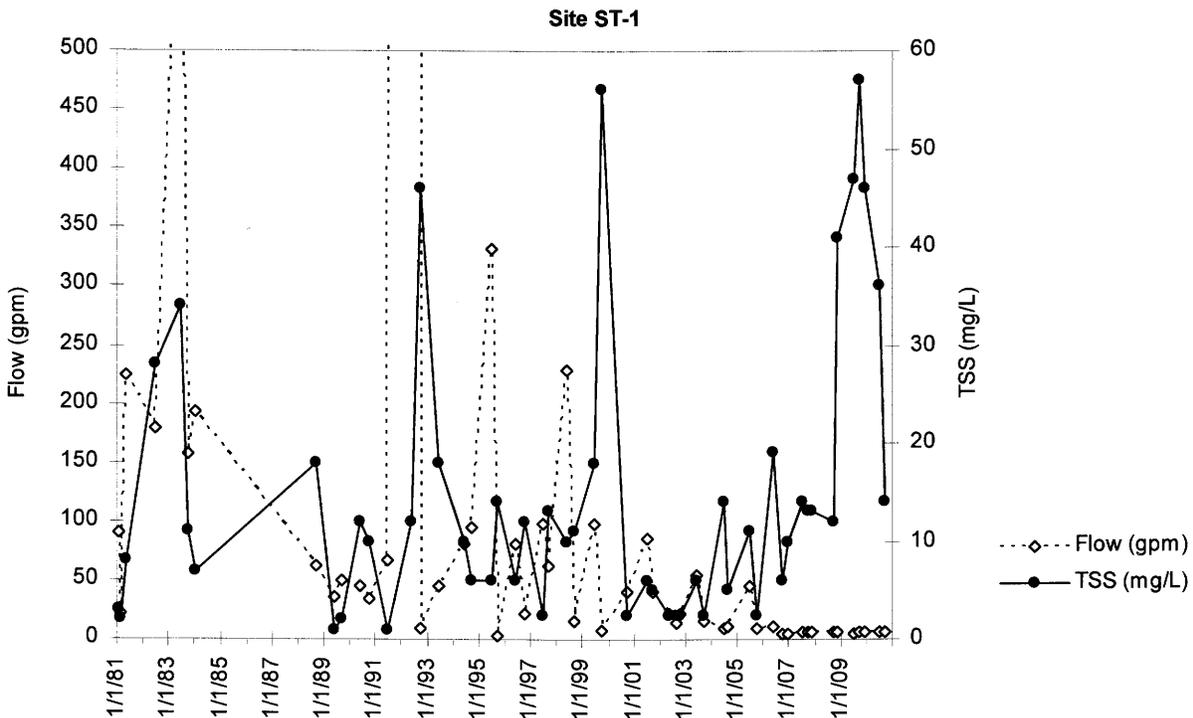
Surface water monitoring site ST-1 has been monitored since 1980. Continued monitoring at site ST-1 was required in order to allow the Division to monitor any effects of reclamation activities on the surface water system (C/007/0006-AM02A). Monitoring data summarized in Exhibit 728i show that current water quality at site ST-1 are consistent with historic quality and that the water is suitable for the approved postmining land use.

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A review by the Division of monitoring data for site ST-1 revealed two potential areas of concern (see graph below):

- 1) Discharge in North Fork Right Fork Miller Creek is reduced compared to pre-mining conditions; and
- 2) The total suspended solids (TSS) concentrations were elevated recently, as evidenced by in samples collected between November 2008 and December 2009

PMC opined that the elevated TSS concentrations were a result of either logging or grazing activities in the watershed. The most recent result for ST-1 (September 2010) showed that the TS concentration has returned to a more typical level.



The apparent lower discharge measurements at ST-1 during the postmining period appear to be somewhat correlated with generally drier climatic conditions illustrated by the plot of discharge and Palmer Hydrologic Drought Index values included in Exhibit 728i. Neither the elevated TSS concentrations nor the potentially lower discharge measurements at site ST-1 appear to be related to subsidence. The Division approved the discontinuation of subsidence monitoring in 2003 after finding that “there has been no impact to surface water or groundwater and that the area is stable” (C/007/0006-AM03B).

**Findings:**

Information submitted by PMC has made the demonstration necessary for approving a reduction in water monitoring requirements under Utah Coal Mining Rules R645-301-731.214 and R645-301-731.224. The proposed amendment meets the minimum Hydrologic Information requirements under the Utah R645 Coal Mining Rules and should be approved.

**RECOMMENDATIONS:**

The proposed amendment should be approved at this time.