

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

August 9, 2011

TO: Internal File

THRU: Daron Haddock, Permit Supervisor *DH*

FROM: April A. Abate, Environmental Scientist III *AAA*
8/9/2011

RE: Water Monitoring Revisions, Utah American Energy, Inc., Horse Canyon - Lila Canyon Mine, Permit #C/007/0013, Task ID #3867

SUMMARY:

On May 3, 2011, the Division initially received an amendment to temporarily cease monitoring at most surface and ground water sites, with the commitment to resume monitoring two years before anticipated second mining applying to several groundwater and surface water monitoring locations listed in their approved Mining and Reclamation Plan (MRP).

The amendment is not recommended for approval based on the following discrepancies:

[R645-301-731.200]: The technical memo issued by Jim Smith on June 7, 2011 indicated that L-19-S will remain active to monitor Little Park Wash at the permit boundary. The resubmitted Table 7-3 indicates that L-19-S will be temporarily suspended from the monitoring plan. The Permittee needs to resolve this discrepancy and confirm whether or not L-19-S is intended for temporary suspension from the water monitoring plan. Plate 7-4 also shows this monitoring location as inactive.

[R645-301-731.200]: Another discrepancy was identified on page 58 of the MRP text states that L-15-S is a permanently suspended location as of 1st quarter 2003 on Table 7-3. However, the Division water database shows that a no flow monitoring event was recorded in 2009. Furthermore, the language on page 58 implies that baseline parameters were collected for two years at this location along with L-13-S, L-14-S, and L-18-S and each of these locations are to be temporarily suspended. The Permittee needs to clarify the status of L-15-S and update table 7-3 if necessary.

TECHNICAL MEMO

The Division reviewed the amendment on June 7, 2011. The following deficiencies were issued and the Permittee responses are addressed herein:

[R645-301-731.220]: Monitoring on a monthly schedule at sites L-1-S, L-2-S, and L-3-S is perhaps excessive, but monitoring on a quarterly schedule with no regard to in-stream conditions could be pointless. As these three sites are readily accessible from the mine office, a suggested monitoring schedule would be to report flow volume and duration whenever flow occurs at these sites and to measure field parameters and collect samples for lab analysis from the first flow – if any – to occur each quarter.

Division Response: The Permittee has updated Section 731.224.2 in their MRP and Table 7-3 to reduce the sampling frequency of L-1-S, L-2-S, and L-3-S from monthly to quarterly (see page 61 of the MRP). No further action necessary.

R645-301-731.200, Table 7-3 indicates that the Permittee has already implemented this reduced data collection plan without approval from the Division. The soonest this plan can be implemented, if approved, is the third quarter 2011. Furthermore, Table 3 does not indicate that this suspension is temporary – the same language is used for springs L-6-G and L-10-G, where monitoring was permanently suspended in 2003. The Permittee needs to distinguish between temporary and permanent cessation in Table 7-3.

Division Response: Table 7-3 has been clarified to show that sampling sites: L-7-G, L-8-G, L-9-G, L-11-G, L-12-G, L-13-G, L-14-G, L-18-S have been corrected to show that sampling is listed to show that sampling has been permanently suspended as of 1st Quarter 2003. A memo authored by Division hydrologist Jim Smith indicated “as already approved in the current MRP, these sites can be removed from the monitoring plan because they have served the purpose of confirming the ephemeral nature of the drainages” and concurred that these sites could be eliminated with no detriment to the water monitoring plan. However, the memo did indicate that L-19-S will remain to monitor Little Park Wash at the permit boundary. The resubmitted Table 7-3 indicates that L-19-S will be temporarily suspended from the monitoring plan. The Permittee needs to resolve this discrepancy and confirm whether or not L-19-S is intended for temporary suspension from the water monitoring plan.

Another discrepancy was identified on page 58 of the MRP text states that L-15-S is a permanently suspended location as of 1st quarter 2003 on Table 7-3. However, the Division water database shows that a no flow monitoring event was recorded in 2009. Furthermore, the language on page 58 implies that baseline parameters were collected for two years at this location along with L-13-S, L-14-S, and L-18-S and each of these locations are to be temporarily suspended. The Permittee needs to clarify the status of L-15-S and update table 7-3 if necessary.

R645-301-731.200, The Division expects the commitment in Section 731.200 to monitor for baseline parameters every five years to still apply, including all sites that are in temporary suspension; the Permittee needs to clarify this in the proposed changes.

Division Response: The Permittee has clarified the commitment to sample baseline parameters in Section 731.200 indicating that surface and groundwater sample locations will be sampled for operational baseline parameters even if the monitoring location has been temporarily suspended. No further action necessary.

R645-301-731.200, Water monitored by the IPA wells is probably in contact with the coal seam. Suspension of monitoring of these wells while the mine is not encountering water is understandable, but once the mine encounters water, water levels in these wells should be monitored. The Permittee needs to include a commitment to resume monitoring of these wells during mine development when water is encountered in the mine or when the mine workings cross the projected intercept of the coal seam and piezometric surface, as it is shown on Plate 7-1.

Division Response: The Permittee has included a commitment to resume gauging the IPA wells once mining intercept the piezometric groundwater surface (see Section 731.214.2 of the MRP. No further action necessary.

R645-301-731.200, Because of the importance of L-16-G and L-17-G to wildlife, the Division does not accept the proposed suspension of monitoring at these two sites. The Permittee needs to retain the monitoring of these two seeps as currently described in the MRP.

Division Response: The Permittee has committed to continue quarterly monitoring at spring sites L-16-G and L-17-G to satisfy the concerns the Division has regarding wildlife usage (see Section 731.214.2). No further action necessary.

R645-301-521.141, -729.100, The Permittee proposes to temporarily cease monitoring at several sites, with resumption of monitoring two years before second mining is anticipated. Plate 5-5 shows the dates and locations for mining as they were projected in June 2010. When compared to the Coal Production map in the 2010 Annual Report, Plate 5-5 is already out of date and totally inadequate to determine the location and timing of mining. Plate 5-5 must be updated and the Permittee must commit in the MRP to updating this plate on a regular basis, annually at a minimum and whenever there is a substantial change in the layout or timing of mining, and to provide to Division inspectors a copy of the most recent map when they are on-site for inspections.

Division Response: Plate 5-5 – Mine Map has been updated to show mining projections up through 2025. No further action necessary.

TECHNICAL MEMO

RECOMMENDATIONS:

The amendment is not recommended for approval based on some discrepancies found within the resubmitted water monitoring plan.

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