

2

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 7, 2010

TO: Internal File

THRU: James D. Smith, Permit Supervisor *JDS 8/29/10*

FROM: April A. Abate, Environmental Scientist II *AAA 9-7-2010*

RE: Water Monitoring Amendment, Bear Canyon Mine, C/015/0025 Task ID #3611

SUMMARY

An updated version of the water-monitoring plan was submitted to the Division of Oil, Gas and Mining (the Division) by Norwest Corporation, the consultant for the Trustee of the Bear Canyon mine initially on July 15, 2010. The plan was returned with deficiencies on August 10, 2010. Norwest has resubmitted the water monitoring amendment with responses and corrections to the deficiency list.

The applicant has satisfied all deficiencies. Conditional approval is recommended pending the receipt of the appropriate number of clean copies.

TECHNICAL MEMO

Initial Deficiencies Identified were as follows:

[R645-301-120]: The narrative section of the Mine Reclamation Plan discussing the water monitoring plan begins on page 7-48 and ends on page 7-60. The applicant did not submit any text revisions for the narrative section of the plan. This section will need to be updated to reflect the approved revisions. In addition, the applicant submitted Tables 1, 2 and 3 as supplemental material that were intended to show rationale for proposing deactivating and reactivating sampling sites and statistical evaluations of the sample locations. The applicant did not appear to intend to include them as part of the final MRP; however the Division would like that they incorporate them into the mine plan such that the rationale for reactivating the sampling locations is clearly illustrated.

The narrative section of the MRP has been updated to reflect the new water monitoring plan. The updated plan is included in Appendix 7-J of the MRP and it is referenced throughout the text on pages 7-5 through 7-59. Appendix 7-J has now been renamed "2010 Characterization of Groundwater and Surface Water Monitoring" and the Probable Hydrologic Consequences (PHC) dated 1993 has been relocated to Appendix 7-N. All of which is referenced in the section of the MRP pertaining to water monitoring. In addition, the Division requested that Tables 1, 2, and 3 which were a statistical analysis of the water sampling locations and the parameters historically analyzed be incorporated into the plan. The applicant has complied with that request and has incorporated Tables 1, 2, and 3 into Appendix 7-J.

[R645-301-731.210]: Monitoring well MW-117 was proposed for deactivation until such time that mining resumes/begins in the area. Based on the recent trend in water level data showing a significant rise in water levels, continued gauging MW-117 for water levels is necessary.

According to Table 14 (page 53) in the MRP, monitoring well MW-117 has been reinstated as an active well per the request of the Division.

[R645-301-731.210]: SBC-3 is set in the alluvium in a creek adjacent to stream sample BC-3 at the margin of the disturbed area. Because the well is set in the alluvium, the groundwater system has the potential for contact with the disturbed area. Therefore, it is important that this site continue to be sampled for operational water quality parameters.

According to Table 14 (page 53) in the MRP, creek well SBC-3 has been reinstated as an active well for quarterly sampling per the request of the Division.

[R645-301-731.210]: The applicant has structured their plan to reactive the sampling locations when it is determined that mining in these specific areas either begins or resumes. The best way to track this is for the applicant to provide a commitment to the Division in Bear Canyon Annual Report to evaluate the mine plan each year and notify the Division of which water monitoring points will be activated based on the forecast for underground mining. It is suggested that the applicant commit to re-establish monitoring of the sites a minimum of one year prior to mining activity resuming in the area.

The applicant has indicated that they will commit to assessing which sites to activate monitoring for based on the forecast of underground mining activities. This commitment will be updated in the Bear Canyon Annual Report.

[R645-301-731.210]: The Division recommends re-evaluating the monitoring of two spring samples SBC-4 and SBC-9A quarterly for dissolved and total lead. There were no statistical data to justify the reason for lead sampling at either of these sites.

The applicant has responded that they will elect to continue to monitor these sites for total lead given that the springs may be used as a domestic water supply.

[R645-301-731]: The applicant did not submit a revised map of the water monitoring locations. Please submit a current version of Plate 7-4 showing spring SBC-23 as historical monitoring site as well as any other relevant updates to the map. The Division also recommends that updated mine plans shown in Plates 5-1A, 5-1B, and 5-1C be submitted also – these maps can be submitted separately and not necessarily need to be submitted concurrent with this water monitoring plan amendment.

Norwest has submitted the up-to-date Plate 7-4 depicting the water monitoring locations and has demarcated SBC-23 as a historical monitoring point on the map.

RECOMMENDATIONS:

The applicant has satisfied all deficiencies. Conditional approval is recommended pending the receipt of the appropriate number of clean copies.