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007/019 #2

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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TO: Daron Haddock, Permit Supervisor

FROM: Steven M. Johnson, Reclamation Hydrologist SMJ

RE: Draft Review, Reformatted Plan, Centennial Project, Andalex Resources, ACT/007/019, Working File, Carbon County, Utah

SYNOPSIS

The mining and reclamation plan (MRP) for Andalex's Centennial Project mine was reformatted and submitted to the Division in August 1994. The MRP was reformatted to the current coal mining rules as part of the mid-term review. A review was made by the Division to confirm that all parts were transferred into the new plan format accurately. This memorandum is specific to the hydrology review and supersedes the memorandum dated November 14, 1994.

ANALYSIS

OPERATIONAL PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: R645-301-730, 740, 750

Analysis:

General information on operational hydrology is included in the MRP in section R645-301-510. Section R645-301-730 and 731 refer to section 511.100 which then refer to section 510. This section states that Andalex is the only surface water user in the immediate area of the mine. Water rights are listed in Appendix L, Tables 1 and 5.

Groundwater and Surface-water monitoring is found in section R645-301-711.300. The locations of monitoring sites are found on Figure IV-11. There is not underground flow monitored, because the mines are relatively dry. There are no flows greater that 3 gpm. Andalex commits to prioritize monitoring storm runoff events. Quarterly surface-water samples will be

taken and the parameter analyzed can be found on page 342 of the MRP. Information on acid and toxic forming materials is referred from section R645-301-731.300 to section R645-301-711.300.

Chapter 7 says that there have been no well transfers, and there are no discharges into the mine. Gravitational discharges from mines workings will be sampled when they occur and portal sealing details are in Figures IV-1 and IV-2. Section R645-301-751 says that all discharges from disturbed areas will be made in compliance with all Utah and federal effluent limitations and with those set in 40 CFR 434.

Sediment pond and diversion designs are found in section R645-301-512.240. Diversion information begins on page 161 of the MRP and Plate 8 shows the locations of the ditches. Disturbed diversions DD-1 and DD-8 through DD-11 are designed to carry the 2-year, 6-hour storm event, while the remaining diversions are designed for the 10-year, 24-hour storm runoff event. The 2-year, 6-hour event was used for area that qualified as miscellaneous flows. Peak flows were calculated using the SCS TR55 flow model.

Sediment pond design information begins on page 133 of the MRP. The designs for two sediment ponds (Ponds C and E) and a settling basin (Basin B) are found on Plates 11, 12, and 13. Pond E is designed to hold the 10-year, 24-hour storm runoff while Pond C is designed for both the 10-year, 24-hour and the 100-year, 6-hour storm volumes. Settling Basin B is a secondary sediment control measure rather that a primary pond. Spillway designs for ponds C and E begin on page 148 of the MRP. Pond E has a open notch spillway and a culverted spillway. The two are designed to convey the 25-year, 6-hour and 10-year, 24-hour storms peaks, respectively. Pond C has only a 36 inch pipe spillway which will discharge the 100-year, 6-hour event. A decant plan is located in this section of the MRP and Pond C is exempt from the need to have an open spillway. This section of the MRP includes engineers' certifications for pond and spillway designs.

Findings:

The hydrologic operational plan for Andalex Resources is complete and accurate except for the following deficiency. Information concerning acid and toxic forming materials could not be found in the referenced sections of the Mining and Reclamation plan. This may be an error that occurred in the reformatting of the MRP.

Requirements:

Based on the findings, the operational hydrology will be complete and accurate when Andalex changes the sections of the MRP that are improperly referenced regarding acid and toxic forming materials.

RECLAMATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: R645-301-760

Analysis:

Information on hydrologic reclamation can be found throughout the MRP. Information on structure removal is found in sections R645-301-240. This section includes information on the reclamation time table, and reclamation cost and bonding for the proposed reclamation work. The MRP refers to section R645-301-512.250 where Andalex commits to remove roads that will not be retained as part of the post mining land use. The restoration of natural drainage section, R645-301-762.100, discusses the processes that will be used in reclaiming natural drainages and refers to Part F, Section 3 for the structure removal and earthwork reclamation plan. This section says that water monitoring will continue as described in Sections 3.1-1.1 and 3.1-1.2. The regrading plan is located in R645-301-532.200, and removal of siltation structures is in R645-301-512.240. All water wells are sealed with cement and cased.

Findings:

The hydrologic reclamation information is complete and accurate except Part F, Section 3 and Sections 3.1-1.1 and 3.1-1.2 are not found in this version of the MRP. These references may be left over from previous versions of the MRP.

Requirements:

Based on the findings, the reclamation hydrology will be complete and accurate when Andalex includes Part F, Section 3 and Sections 3.1-1.1 and 3.1-1.2 in the MRP.

RECOMMENDATION

Sections in the Centennial Mines MRP that pertain to hydrology have been properly reformatted to the current Utah Coal Mining Rules with two exceptions. First, section R645-301-731.300 refers the reader to another part of the MRP for information on acid and toxic forming materials. This referenced section did not contain that information. Second, the reclamation part of the hydrology section (R645-301-760) has references to Part F, Section 3 and Sections 3.1-1.1 and 3.1-1.2; however, these sections are not found in the reformatted MRP. Both errors are most likely oversights that occurred in editing the MRP. This plan can be approved when these deficiencies are corrected.

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