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DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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May 1, 2002

TO: Internal File

THRU: Daron R. Haddock, Permit Supervisor *ROR74*

FROM: Peter H. Hess, Sr. Reclamation Specialist/Engineering, Team Lead *PHH by an*

RE: Midterm Review, Andalex Resources Inc., Wildcat Loadout, C/007/033-MT01-2

**SUMMARY:**

The Division initiated a midterm review of the mining and reclamation plan for the Wildcat loadout facility by conducting a site visit on November 8, 2001. As a result of that visit, three deficiencies were identified within the currently approved plan; these included a deficiency relative to the missing, required parameters for the surface and ground water monitoring regimes, a deficiency relative to the several alternate sediment controls areas for the site, and a deficiency relative to maps needing revision.

The permittee responded to the Division's initial review on January 15, 2002. The Division determined that the deficiency with the surface and ground water monitoring regimes had been adequately addressed, but the new maps that had been submitted to address the other deficiencies remained inadequate.

The permittee submitted a second response on April 5, 2002, which included a revised Plate 2, Wildcat Loadout, Surface Facilities Topography (Watershed & Drainage); a revised Plate 1, Wildcat Loadout, Surface Facilities As Constructed; and a revised Plate 13, Top Soil Storage Piles, Wildcat Loadout. Plates 1 and 13 were reviewed and felt to be adequate. However, Plate 2 was still felt to be deficient in that the in-place drainage controls for the alternate sediment control areas, as well as other required map details had been made indistinguishable during the process of the second revision.

The permittee submitted a newly revised Plate 2, along with one page of revised text, and a revised Table IV-15, description of the Site's ASCA areas on April 25, 2002.

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The following document records analyses and findings relative to the permittee's response(s) to the three deficiencies initially found on November 8, 2001.

**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, -300-147, -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:**

**Surface-Water Monitoring**

During the review of water monitoring information from the third and fourth quarter of 2000, and the first quarter of 2001, it was noted that several minor problems existed with the surface and ground water monitoring regimes. The currently approved surface water-monitoring plan includes a required parameter to analyze for total manganese, but an analysis for total iron is not indicated as being required. The analysis for total iron is a parameter required by the Coal Mining Rules. Table IV-10 is unclear, in that the analyses for metals and ions (cation/anion balance) is not specifically stated as being determined using the concentrations of **dissolved** metals. The required surface water monitoring parameter list needed clarification, such that **both total and dissolved concentrations for both iron and manganese** are performed for each submitted water sample.

On January 15, 2002, the permittee submitted a response to the Division's November 23, 2001 midterm review deficiency document. That submittal contained a revised TABLE IV-4 Surface Water Baseline and Operational Water Quality Parameter List that includes the following changes:

- 1) The analysis for **total** iron has been added for both baseline and operational parameters.
- 2) The analysis for **dissolved** manganese has been added for both baseline and operational parameters.
- 3) The revised TABLE IV-10 specifically requires that **"IONS AND METALS ANALYSES ARE DISSOLVED, EXCEPT AS NOTED"**.

The revisions made to TABLE IV-10 clarify and adequately address the deficiencies aired in the Division's November 23, 2001 technical analysis.

### Other Treatment Facilities

Five items were identified within the Division's February 25, 2002 deficiency response that are relative to the alternate sediment control areas within the Wildcat permit area. Each will be discussed.

- 1) As noted during the November 8 inspection of the site, the berm at the east end of the south part of ASCA #1 needed to be rebuilt to establish the integrity of the sediment control for the area. This was performed by the permittee, and verified as completed during the December 20, 2001 complete inspection.
- 2) The Division's 02/25/2002 deficiency document noted, that based upon the 11/08/2001 field inspection, it appeared that some of the runoff from ASCA #1 was not treated by alternative methods but actually reported to a ditch which eventually reported to Sediment pond "E". **The revised Plate 2, as received on April 25, 2002 clearly shows that the pad runoff east of the Scalehouse Gate access road reports to two diversions; a full round 12-inch CMP and a half-round 12-inch CMP. These flows then report to a ditch that directs it toward Pond "E".** This deficiency has been adequately addressed.
- 3) The 02/25/2002 document indicated that straw bales and/or silt fences needed to be placed at several locations in the berm adjacent to the West side of the railroad right-of-way (ASCA#1) where small flows had breached the berm which is constructed of coal fines and other carbonaceous material. The permittee decided to repair this berm rather than install the aforementioned treatment methods.
- 4) The 02/25/2002 Division document indicated that although the field inspection revealed that all of ASCA#4 and part of ASCA #3 are treated with vegetation and straw bales, vegetation was not previously indicated as being part of the treatment in these areas. Plate 2, as submitted on April 25, has addressed this deficiency.
- 5) The 02/25/2002 Division document indicated that the permittee should consider changing the treatment method for that portion of ASCA #5 which is west of the two-bermed topsoil storage piles to vegetation only, thus the requirement for the permittee to maintain the large amount of straw bales in this area (current partial method of treatment) would no longer be needed. The permittee recently installed a second row of straw bales along the permit boundary (SW edge) prior to the September 25 complete inspection. No hydrologic evaluation verifying that the vegetation in the area is adequate, as sediment control has been submitted. The

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revised Plate 2, as submitted on April 25, 2002, indicates that the methods used to treat runoff in the area of ASCA #5 are berms, straw bales, and vegetation. This deficiency has been adequately addressed and no change has been submitted to the currently approved plan.

The revised Plate 2, as submitted on April 25, 2002, has had the intense cross-hatching that had previously been used to delineate the ASCA areas (but which made surface contours and treatment methods indistinguishable) removed. Berms are well defined in most areas, or are indicated under "CONTROL" in the ASCA Areas description. Mr. Dan Guy, Utah registered professional engineer, certified Plate 2 as being correct on 04/24/2002. Plate 2 adequately addresses the requirements of R645-301-742.200.

The permittee has submitted, as part of revised information received on April 25, 2002, a revised page of text (page 146) and a revised TABLE IV-15, ASCA, (page 147) which gives a detailed description of all seven of the alternate sediment control areas within the Wildcat disturbed area. This description includes the acreage for each of the seven areas, the calculated runoff volumes for the 10 year 24 hour event, and the methods used to treat this volume. This revised Table indicates that acreages of the seven ASCA areas combined summate to 17.51 acres. These acreages agree with the acreages depicted on Plate 2. The total acreage described on page 146 agrees with the acreage figures on TABLE IV-15, (page 147).

**Findings:**

The requirements of R645-301-731.211, -221, and -222.1 have been adequately addressed.

The requirements of the R645 coal rules, as they relate to alternate sediment control areas have been adequately addressed.

**MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

**Analysis:**

**Mining Facilities Maps**

The permittee has submitted revised and updated versions of Plate 1, Wildcat Loadout, Surface Facilities As Constructed; Plate 2, Wildcat Loadout, Surface Facilities Topography (Water shed & Drainage)(latest revision received 04/25/2002); and Plate 13, Topsoil Storage Piles, Wildcat Loadout. Plate 2 accurately describes the areas that report to sediment ponds, as well as the areas that utilize alternate sediment control methods. Areas which are designated

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ASCA's have the in-place treatments either depicted by the Plate 2 drawing, or are designated at the lower portion of same. Runoff volumes and acreages for the 10 year 24 hour event are included. These numbers correlate with those depicted within the text (revised as part of this midterm review process) and appear to be accurate.

The disturbed area boundary on Plates 1 and 2 has been revised to include the revegetation reference area on the southeast corner of the permit area. The roads that access numerous coal bed methane wells in the area have also been depicted.

All Plates have been P.E. certified by Mr. Dan Guy, Utah registered professional engineer.

Due to time constrictions and other workload, the remaining plates in the Wildcat mining and reclamation plan have not been reviewed for accuracy and completeness.

**Findings:**

Plates 1, 2, and 13 meet the requirements of the R645 coal rules for accuracy and certification.

**RECOMMENDATIONS:**

The permittee has adequately addressed the concerns aired by the Division during the initial review of the midterm permit process. It is recommended that this review process be accepted as complete and incorporate into the plan the revisions as they currently exist.