

November 24, 1987

TO: File

FROM: Lynn Kunzler, REclamation Biologist 

RE: Review of Permit Renewal Application, Andalex Resources Inc., Centennial Project, ACT/007/019, Folder #2, Carbon Co. Utah

I have reviewed ARI's submittal for permit renewal dated September 22, 1987. As with the past reviews, several comments were either incompletely addressed, or not addressed at all. The following comments must be addressed before the plan can be considered complete and adequate.

UMC 783.19 Vegetation Information - LK

The Division received a memo dated November 3, 1987 from ARI which discusses the establishment of reference areas for the site and provides productivity estimates and current range condition of the four reference areas as determined by the U.S. Soil Conservation Service. The following comments are specific to the referenced memo and an adequate response will complete the vegetation section.

While the Division understands that four reference areas were established (one for each vegetation type), the operator needs to correlate the reference areas with the revegetation plan, i.e. which reference area will be used with each seed mix? Will more than one reference area be used for any one seed mix, and if so, what area will each reference area represent?

The size (acreage) of each reference area needs to be provided in the MRP.

The map should be identified as a reference area map (currently labelled "Centennial Project Watershed & Culvert Sizing" and "Plate 9").

Sufficient copies of the map and text, marked for easy insertion into the MRP, needs to be provided.

The Division reserves final approval of the reference areas selected pending an on-site review of the reference area locations and conditions.

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UMC 783.22 Land Use Information - LK

The operator has mis-understood previous comments under this section. While past wildlife mitigation has been noted for surface facilities and associated disturbances, comments specific to this section require mitigation for renewable resource lands that are impacted due to subsidence related activities. Grazing lands and wildlife habitat are considered renewable resource lands. Impacts due to subsidence will require mitigation. Section 2.1 (page 36) must be corrected to identify these as renewable resources.

UMC 784.23 Reclamation Plan: General Requirements - LK

(B)(5)

Information regarding timing of seeding and planting in Appendix K is adequate. However, this needs to be incorporated into Sections 5.1 and 5.5 of the MRP (page 213).

From the discussions in Appendix K and from map 20, it appears that ARI is planning to plant shrubs on 2.17 acres (in clumps). However, there is no discussion on planting rates (plants per acre), what species will be used, the type of plant material (bare root or containerized) or planting methodology. It is suggested that the areas for the shrub clumps also be seeded with the appropriate seed mix as well. This needs to be incorporated into Section 5.3 of the MRP (page 214).

The type of mulch (i.e. straw, hay, wood fiber, etc.) needs to be identified. Also, the rate identified in App. K is too low. A minimum of 1 ton per acre should be used. App. K identifies only 29.35 acres of the 32.52 acres of disturbance will be mulched. What type of soil stabilization/moisture retention is planned for the remaining 2.17 acres? This needs to be incorporated into Section 5.5 of the MRP (page 214).

The monitoring plan is insufficient. Monitoring should also occur during year 5, 9 and 10. Monitoring during years 9 and 10 must include cover, woody plant density, productivity and species composition on both the reclaimed area as well as the reference areas. Range condition of the reference areas needs to be re-evaluated every 5 years (during field season prior to repermit application) for the life of the mine. This needs to be incorporated into Section 5.7 of the MRP (page 214).

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UMC 784.21 Fish and Wildlife Plan - LK

The response in Appendix K needs to be incorporated into the MRP. The employee wildlife education sessions should be an annual event. Finally, ARI needs to identify specific mitigation recommendations from the DWR recommendations that they will adhere to (or do not accept).

cc: S. Linner
D. Darby
1255R/43