



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

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TO: Internal File

FROM: Gregg A. Galecki, Reclamation Specialist/Hydrologist III *GA*

RE: Mathis Tract Incidental Boundary Change (IBC), Andalex Resources Inc. Centennial Project Mine, C/007/019-IB02A-1

SUMMARY:

On March 13, 2002, the Division received an application to include the 240-acre Mathis tract as an Incidental Boundary Change (IBC) to the currently approved Centennial Project Permit Area. The application was returned to the Applicant with deficiencies on April 22, 2002, and resubmitted to the Division on April 24, 2002. The 240-acre Mathis tract amounts to a 4.64 percent increase in the Centennial Project permit area, lies within the current Cumulative Hydrologic Impact Assessment (CHIA) area, and does not include operations in hydrologic basins other than currently approved. The permit change qualifies as an IBC. The following technical memo addresses only the portions of the application found deficient during the initial review. The application can be approved in its current form.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Current compliance information for Andalex Resources, Inc. and affiliate operations has been updated. The information is found in the MRP Appendix B, Attachment I-1. The time period of the information is from 1997 through April 10, 2002.

TECHNICAL MEMO

Findings:

The information provided is adequate to meet the minimum requirements of the General Contents - Violation Information section of the regulations.

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

Errors in Plate 3 and Plate 4 have been modified for the current submittal. State ownership is now clearly defined on the two plates. Figure 7 of the Mayo and Associates report also has been modified to correctly identify the Mathis tract as containing 240-acres.

Findings:

The information provided in the application is adequate to meet the minimum requirements of the General Contents – Maps and Plans section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

The Vegetation Resource map currently in the MRP addresses only the vegetation in the Disturbed Area and three reference areas. This is referenced in a survey and report submitted as required for State Regulations R645-301-321. The provided information does an adequate job of classifying the vegetation in the disturbed area. However, a vegetation map of the entire permit area and adjacent areas on a scale of 1:6,000 or larger is not included in the MRP, nor has it been otherwise exempted by the Division.

The applicant has made a commitment to create a current vegetation map for the permit area in Section R645-301-310 on page 64 of the current MRP. The map will be created using new and/or currently available aerial photography with fieldwork conducted as a means of ground-truthing. Field verification will be conducted during the 2002, growing season. The final vegetation map will be provided to the State of Utah no later than December 2002.

Findings:

The information provided in the application is adequate to meet the minimum requirements of the Vegetation Resource Information section of the regulations. The commitment to provide a revised vegetation map for the entire permit area by the end of the 2002 calendar year will be stated as a stipulation in the permit.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

Plate 21 (Surface Geology) has been modified for the current application by including the IBC area boundary and changing the scale to 1:24,000. Plate 21 has been modified in the current submittal to include surface geology coverage the entire IBC area or extend to adjacent areas to the north.

Findings:

The information provided in the application is adequate to meet the minimum requirements of the Geologic Resource Information section of the regulations.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Baseline Information

Adequate baseline information has been collected for both groundwater and surface water characterization and is included in the March 2002 Mayo and Associates, LC, report. Data from the four springs, two streams and stock watering ponds has been submitted to the Division in electronic-form and incorporated into the Division Water database. The water monitoring sites had been previously monitored as part of the Willow Creek Mine permit. The entire history of the sites will be available in the Andalex Centennial Mine.

Findings:

The information provided in the application is adequate to meet the minimum requirements of the Hydrologic Resource Information section of the regulations.

TECHNICAL MEMO

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Monitoring Sampling Location Maps

As part of the current submittal, Figure 6 of Appendix N and Figure IV-11 (Groundwater / Surface water monitoring Location maps) have been modified to include monitoring locations added to the plan due to the addition of the Mathis IBC (see Operation Plan – Hydrologic Information section of technical analysis.

Findings:

The information provided in the application is adequate to meet the minimum requirements of the Maps, Plans, and Cross Sections of Resource Information section of the regulations.

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:

General

Ground-water monitoring

Included in the Mathis Lease IBC, additional groundwater monitoring was recommended in the Probable Hydrologic Consequence report (PHC) conducted by Mayo and Associates, LC. A total of four springs were monitored. The report recommends continued monitoring of Springs B352 and B361. Both springs/seeps issue from the North Horn Formation. Spring B352 has demonstrated periodic flow with four samples being collected from 5/97 through 10/01 (six No Flows were recorded during the same time interval). Spring B361 has not produced any flow during the same time interval with nine visits to the site.

The Division recommended replacing the monitoring of Spring B361 with B351 and the applicant has agreed to this modification. Although Spring B351 is not within the IBC, it is along strike, within the Price River Formation, has demonstrated flow four of 12 visits, and has similar water quality to Spring B352. The Division also recommended including flow and dissolved Magnesium to the operational water quality parameter list (Table 6, Mayo and Associates report), which the applicant has also implemented.

In the current submittal, the applicant is no longer requesting a reduction of water monitoring after two years of operational solute data to field parameters-only. Monitoring at all sites will continue at a quarterly frequency sampling for operational parameters.

Findings:

The information provided in the application is adequate to meet the minimum requirements of the Operation Plan - Hydrologic Information section of the regulations.

RECOMENDATION:

The application in its current form meets the minimum requirements of the regulations. Approval is recommended.