

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

---

OK

August 6, 2004

TO: Internal File

THRU: *CB* Priscilla Burton, Team Lead

FROM: James D. Smith, Environmental Specialist *JS*

RE: MRP Rewrite, Andalex Resources Inc., Wildcat Loadout, C/007/0033, Task # 1911

## SUMMARY:

Andalex originally applied for a mining permit for the Wildcat Loadout in 1988. The currently approved permit is formatted and organized to match the Coal Mining Rules that were in effect at that time.

The Division received this proposed amendment April 8, 2004. The amendment mainly reorganizes information in the Wildcat Loadout MRP so that it more closely matches the format and organization of the current R645 Coal Mining Rules. No changes have been made to the appendices, figures, or maps.

There are some deficiencies resulting from this reorganization. Although there are some comments on items not related to the reorganization of the mine plan in this Tech Memo, the Findings do not include deficiencies other than those relating to the reorganization.

TECHNICAL MEMO

---

**TECHNICAL ANALYSIS:**

**ENVIRONMENTAL RESOURCE INFORMATION**

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

**CLIMATOLOGICAL RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.18; R645-301-724.

**Analysis:**

Information in 724.400 was taken from UMC 7873.18 Climatological Information in the current MRP. The reformatted MRP has no figure equivalent to Figure III-3, which shows temperature information, in the current MRP. Space has been left in the revised MRP for Tables VII-3, VII- 4, and VII-6 but the tables need to be inserted.

Section R645-301-724.412 of the proposed amendment indicates wind data are included in the information under R645-301-724.400, but there are no data on prevailing wind speed and direction: the information in the current MRP was not included in the proposed amendment.

Other than the missing figure and tables, Section R645-301-724.400 of the revised MRP contains baseline data on seasonal precipitation and temperature. Data appear not to have been updated since the original permit application in 1988.

**Findings:**

**R645-301-724.412**, The Permittee needs to provide data on the direction and velocity of prevailing winds.

**R645-301-724.413**, The Permittee needs to include a figure equivalent to Figure III-3 in the current MRP, which shows temperature information.

**R645-301-724.400**, Tables VII-3, VII- 4, and VII-6 need to be included in the reformatted MRP.

**GEOLOGIC RESOURCE INFORMATION**

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

**Analysis:**

It appears geologic information under R645-301-611.100. GEOLOGY WITHIN AND ADJACENT TO THE PERMIT AREA is taken verbatim from section UMC 783.14 Geology Description of the current MRP.

**Findings:**

Geologic Resource Information in the reformatted MRP is sufficient to meet the requirements of the Coal Mining Rules.

**HYDROLOGIC RESOURCE INFORMATION**

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

**Analysis:**

UMC 783.13 Description of Hydrology and Geology: General Requirements in Chapter III of the current MRP is under 711.100 in the reformatted MRP. The sedimentation and control plan, including impoundments, diversions and water monitoring plans are discussed in the Engineering Chapter 5 under 512.240: information in section 512.240 was taken from UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams, and Embankments.

Figures and tables are referenced throughout the MRP. Not all figures and tables have been included with the reformatted MRP. There is no Figure III-2, which should show the location of the Garley Canyon Spring, no Figure VII-1 to show the general stratigraphy, and no Figure VII-3, which should show temperature information. Figures showing details of diversion design, the culvert nomograph, pond outlet protection, emergency spillways, ditch configurations, and riprap sizing are not in the reformatted MRP. The Permittee needs to include all figures and tables in the reformatted MRP. Numbering of figures and tables in the new format is different from that in the existing MRP, so figures and tables need to be clearly numbered and identified.

*Alternative Water Supply Information*

The information in UMC 7873.17 Alternative Water Supply Information has not been included in the reformatted MRP under section 727. Rather, "N/A" has been entered.

**TECHNICAL MEMO**

---

**Sampling and Analysis**

Section R645-301-712.240 is given as the location for information on Sampling and Analysis. There is no Section R645-301-712.240 in the current or revised MRP, but some water-monitoring information is located in 512.240 - Impoundments. There is no commitment to follow either the "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Parts 136 and 434.

**Baseline Information**

Baseline information, such as it is, is in Appendix M. This site is very dry and other than "no flow" reports there has been very little additional water-quality or -quantity data collected in the intervening years.

The last paragraph of section 711.100 feebly addresses baseline water quality, but it is so out-of-date as to be almost nonsense. The paragraph is taken verbatim from the current MRP.

**Baseline Cumulative Impact Area Information**

The Division prepared a CHIA in 1989 and there has been no update. The proposed amendment makes no changes that require the CHIA be redone.

**Modeling**

No modeling was done for the Wildcat Loadout MRP.

**Probable Hydrologic Consequences Determination**

The PHC determination is in Appendix J. The effects of mine operation on surface and ground water are briefly discussed in section R645-301-711.100.

**Groundwater Monitoring Plan**

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. Ground-water monitoring is actually discussed in Section R645-301-711.100 on page 7-4. The monitoring plan there is the same as in the current MRP. Ground water is not monitored.

**Surface-Water Monitoring Plan**

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. The monitoring plan there is the same as in the current MRP.

**Findings:**

**R645-301- 727**, The information in UMC 7873.17 Alternative Water Supply Information needs to be included in the reformatted MRP under section 727.

**R645-301-121.200**, There is no Figure III-2, which should show the location of the Garley Canyon Spring, no Figure VII-1 to show the general stratigraphy, and no Figure VII-3, which should show temperature information. Figures showing details of diversion design, the culvert nomograph, pond outlet protection, emergency spillways, ditch configurations, and riprap sizing are not in the reformatted MRP. The Permittee needs to include all figures and tables in the reformatted MRP. Because numbering of figures and tables in the new format is different from that in the existing MRP, figures need to be clearly numbered and identified.

**R645-301-723**, The Permittee needs to clarify the location of information on Sampling and Analysis: there is no Section R645-301-712.240 in the current or revised MRP. There is some water-monitoring information in section 512.240 – Impoundments, but no discussion of either the "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Parts 136 and 434.

**R645-301-711.100**, The Permittee needs to update the last paragraph of section 711.100 - Surface Water Quality - which feebly addresses baseline water quality but it is so out-of-date as to be almost nonsense. The paragraph is taken verbatim from the current MRP, except the end, the statement on the monitoring plan, was replaced with "XX".

## 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, -300-148, -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.

**TECHNICAL MEMO**

---

**Analysis:**

**General**

The sedimentation and control plan, including impoundments, diversions and water monitoring plans are discussed in the Engineering Chapter 5 under Section R645-301-512.240. R645-301-731 refers to R645-301-511.100 for General Hydrologic Operation Information. The discussion of Reclamation Hydrology begins on page 5-65.

**Ground Groundwater Monitoring Plan**

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. Ground-water monitoring is actually discussed in Section R645-301-711.100 on page 7-4. The monitoring plan there is the same as in the current MRP: ground water is not monitored.

**Surface-Water Monitoring Plan**

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. The monitoring plan there is the same as in the current MRP.

**Acid- and Toxic-Forming Materials and Underground Development Waste**

There is no underground development waste at this site. The plan for dealing with potential acid- and toxic-forming materials is on page 7-6. Further information is found in 528.300 on page 5-113.

**Transfer of Wells**

No transfer of wells has taken place, nor is any transfer anticipated (page 7-27).

**Discharges Into An Underground Mine**

N/A

**Gravity Discharges From Underground Mines**

N/A

### **Water-Quality Standards And Effluent Limitations**

A copy of the NPDES permit is in Appendix K. This is not the current UPDES permit. A copy of the current permit should be added to this appendix.

#### **Diversions: General**

Section R645-301-742.310 refers to 512.240 as the location for general information on diversions. The discussion of diversions begins on page 7-38.

#### **Diversions: Perennial and Intermittent Streams**

All drainages within and adjacent to the permit area are ephemeral. There are no perennial or intermittent streams.

#### **Diversions: Miscellaneous Flows**

Under the definitions of the Coal Mining Rules, all flows at the Wildcat Loadout are miscellaneous. All impoundments and diversions are discussed in 512.240.

#### **Stream Buffer Zones**

As there are no perennial or intermittent streams, this section of the Coal Mining Rules does not apply to then Wildcat Loadout.

#### **Sediment Control Measures**

There are six sedimentation ponds and seven ASCAs at the Wildcat Loadout.

#### **Siltation Structures: General**

ASCAs are discussed on pages 5-8 and 5-62 of 512.240. Design and operation of the sedimentation ponds are discussed on pages 5-9 through 5-27.

#### **Siltation Structures: Sedimentation Ponds**

Design and operation of the sedimentation ponds are discussed on pages 5-9 through 5-27.

TECHNICAL MEMO

---

**Siltation Structures: Other Treatment Facilities**

There are no Other Treatment Facilities at the Wildcat Loadout.

**Siltation Structures: Exemptions**

There are no exemptions to the requirements for Siltation Structures in the Wildcat Loadout MRP.

**Discharge Structures**

Control of discharge from impoundments, sedimentation ponds, culverts, and diversions is discussed in section 512.240, particularly on pages 10 and 36 - 61. Sediment Pond Outlet Protection is supposed to be shown on Figure V-2A, but this figure in the new MRP has only the title Sediment Pond Outlet Protection at the top with no drawing or other information on the sheet: Figure IV-2A in the current MRP shows Sediment Pond Outlet Protection information. The Permittee needs to clarify the name and location of this figure in the MRP.

**Impoundments**

There is a 2-celled pond called the Permanent Impoundment. Design and construction are described on Plate 18 and in 512.240, particularly pages 5-8 through 5-9, 5-26 through 5-28, 5-35 through 5-36 and 5-65.

**Ponds, Impoundments, Banks, Dams, and Embankments**

There are no coal processing banks, dams, or embankments. Design, construction, and maintenance of embankments that were built as part of roads and sedimentation ponds are described in sections discussing those structures.

**Findings:**

**R645-301-731.211**, The Permittee needs to clarify the location of information on the ground-water monitoring plan. R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan, but ground-water monitoring is actually discussed in R645-301-711.100 on page 7-4 (there is no ground-water monitoring).

**R645-301-751**, A copy of the NPDES permit is in Appendix K: this is not the current UPDES permit. A copy of the current permit needs to be added to this appendix.

**R534-301-744**, Figure V-2A in the new MRP has only the title Sediment Pond Outlet Protection at the top with no drawing or other information on the sheet: Figure IV-2A in the current MRP shows Sediment Pond Outlet Protection information. The Permittee needs to include the Sediment Pond Outlet Protection drawing in the MRP.

## 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.

### Findings:

Maps, plans, and cross sections were not included in the reformatting of the MRP.

## RECLAMATION PLAN

### HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

### Analysis:

#### Hydrologic Reclamation Plan

The current MRP includes UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams, and Embankments: the reformatted MRP has the same information under 512.240. Impoundments, which begins on page 5-8. Information on Post-mining Hydrology, including reclamation hydrology, begins on page 5-64 in section 512.240: this information was taken from page 147A, 147B, and 147C in the current MRP. Reclamation water monitoring is discussed on page 5-65.

### Findings:

Hydrologic Reclamation Information is adequate to meet the requirements of the Coal Mining Rules.

**TECHNICAL MEMO**

---

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

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

**Findings:**

Maps, plans, and cross sections were not included in the reformatting of the MRP.

**RECOMMENDATIONS:**

The proposed amendment should not be approved until the Permittee has adequately addressed the deficiencies identified in this Technical Memo.

O:\007033.WCL\FINAL\jds1911.doc