

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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June 23, 2009

TO: Internal File

THRU: Daron Haddock, Program Supervisor *DRH*

FROM: April Abate, Environmental Scientist II/Lead/Hydrologist *QAA 7/8/2009*

RE: Midterm Permit Review, Andalex Resources, Centennial Project, 007/0019 Task #3276

### SUMMARY:

The Division notified Andalex Resources of the commencement of the midterm permit review on May 7, 2009. Several items and deficiencies have been identified during this review and are outlined below:

- **[R645-301-515.320 thru 322]** The Division needs clarification as to whether or not the Permittee is in a temporary cessation status or permanent closure. If a mine's status is considered in a temporary cessation for over 30 days, then a notice to the Division is required. According to these regulations, the Permittee is required to submit a notice to the Division for a temporary cessation that extends beyond 30 days. This notice shall address all the points outlined in these regulations.
- **[R645-301-731.200;765;800]** Groundwater monitoring is one component of the water-monitoring plan in the MRP. The Permittee is presently acting to ensure that a groundwater source is monitored and that the water rights of any potential affected user are replaced or restored. If groundwater cannot be found, the Permittee would be required to submit an amendment to abandon the one active monitoring well in accordance with **R645-301-765** along with a proposal to find alternative methods of monitoring groundwater and collecting samples.

- **[R645-301.412 thru 414]:** Appendix X, Section 4, Page 4-2 of the MRP designates the post-mining land use for the gob gas vent wells as “livestock and wildlife grazing and other uses indicated by the landowner i.e.hunting”. Page 4-3 of Appendix X states that no alternative land use was proposed. The R645 coal rules do allow for an alternative post mining land use option under **R645-301.413.300** after consultation with the landowner and/or the land management agency with jurisdiction. If upon notice to the Division, some of the gob gas vent wells are to remain in the permit area, Andalex will be required to update their post mining land use section of the MRP.
- **[R645-301.731.400]:** Appendix X, Section 731.400 dealing with the transfer of wells does not specify any particular party or entity to transfer ownership and control over the gob gas vent wells. Any wells remaining in the permit area that are transferred to another entity will require the Permittee to transfer the use and control of the wells over in accordance with the above-cited regulation and state and local laws. Please be aware that even after a transfer is applied for, the Permittee will remain responsible for the proper management of the wells until bond release or until such time that the wells are permitted under the Utah Oil and Gas regulatory program.
- **Update on baseline climate data:** Although the regulation requires only baseline climate data be submitted during the initial permitting phase (R645-301-724-420), given that these climate data are over 30 years old, the Division requests (at the Permittee’s option) that updated climate data be provided.

#### TECHNICAL ANALYSIS:

## OPERATION PLAN

### MINING OPERATIONS AND FACILITIES

Regulatory Reference: R645-301-515.320-322

#### **Analysis:**

Andalex Resources sent a Notification of the Aberdeen Mine Closure to the Division on April 1, 2008 indicating that the mine plans for sealing and equipment removal would be finalized by June 2008. However, based on the review of correspondence to DOGM and the review of confidential documents issued to the mine from the BLM, their appears to be a discrepancy as to whether or not the mine is being permanently sealed or is in a temporary cessation. The Division needs clarification as to whether or not the Permittee is in a temporary

cessation status. If a mine's status is considered in a temporary cessation for over 30 days, then a notice to the Division is required.

**Findings:**

**[R645-301-515.320 thru 322]:** According to these regulations, the Permittee is required to submit a notice to the Division for a temporary cessation that extends beyond 30 days. This notice shall address all the points outlined in these regulations.

**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:**

**Groundwater Monitoring**

At the present time, there is only one groundwater monitoring well that is being monitored in the permit area. Well #1 is one of the original wells drilled in the late 1970s reportedly, to provide a source of water for mining operations. The well was later converted to a water-monitoring well to provide water quality data in accordance with the permit performance standards. This well had maintained a relatively steady water level of approximately 75 feet up until 2006 when it suddenly went dry. One possible reason for the well drying up is that a ventilation fan was drilled approximately 400 feet from Well #1, which could have intercepted groundwater in the area.

The Permittee is presently in the process of conducting a performance evaluation on this well in an attempt to find the water table at a lower elevation. If groundwater cannot be found, this well would be required to be abandoned in accordance with R645-301-765 and alternative methods of monitoring groundwater and collecting samples will need to be evaluated.

**Surface Water Monitoring**

Surface water monitoring has been reduced to streams and springs located solely in the main canyon where the surface facilities are located. All of the monitoring points located on the top of the ridge where the Oso wells are located and beyond near the north/northwest and the southeast sections of the permit area have been eliminated from

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the monitoring plan as a result of mining activities ceasing underground in those areas. The new water-monitoring plan was approved on March 26, 2009 with the condition that if any mining were reactivated, the sampling points in those areas would be reinstated.

**Diversions: General**

An undisturbed bypass culvert runs underneath the length of the main road that bisects the surface facilities of the mine. Secondary culverts originating from the side canyons direct undisturbed drainage and tie into the main culvert. Road drainage is directed to a diversion ditch that runs alongside the main road and ties into the sedimentation ponds.

**Siltation Structures: Sedimentation Ponds**

A series of sediment ponds are located adjacent to the surface facilities of the mine. Pond C and Pond E are the largest sediment ponds with Pond E representing the most downstream structure. A series of catchment cells run downstream and are separated by earthen berm structures to control the flow. According to the UPDES database, no discharge has ever been reported from either of the ponds. A visual observation during the midterm inspection indicated that the sedimentation ponds were in good condition and a minimal amount of water and sediment were contained within them.

**Findings:**

[R645-301-731.200; 731.800] Groundwater monitoring is one component of the water monitoring plan in the MRP. The Permittee is presently acting to ensure that a groundwater source is monitored and that the water rights of any potential affected user are replaced or restored. If groundwater cannot be found, the Permittee would be required to submit an amendment to abandon the well in accordance with R645-301-765 along with a proposal to find alternative methods of monitoring groundwater and collecting samples.

## RECLAMATION PLAN

### POST MINING LAND USES

**Analysis:**

Andalex is responsible for the operation, maintenance and reclamation of the gob gas vent wells that are located along the upper elevations of the permit area. A total of 15 wells were drilled congruent with the original mine plan to vent methane gas from the longwall panels as mining was to progress. However, due to the cessation of mining activities, the wells were no longer needed by Andalex to continue usage. Meanwhile, Oso Energy made separate agreements with Andalex to continue to capture methane from some of the better producing wells.

**Findings:**

**[R645-301.412 thru 414]:** Appendix X, Section 4, Page 4-2 of the MRP designates the post-mining land use for the gob gas vent wells as “livestock and wildlife grazing and other uses indicated by the landowner i.e. hunting”. Page 4-3 of Appendix X states that no alternative land use was proposed. The R645 coal rules do allow for an alternative post mining land use option under **R645-301.413.300** after consultation with the landowner and/or the land management agency with jurisdiction. If upon notice to the Division, some of the gob gas vent wells are to remain in the permit area, Andalex will be required to update their post mining land use section of the MRP.

## **TRANSFER OF WELLS**

**Analysis:**

Appendix X, Section 731.400 dealing with the transfer of wells does not specify any particular party or entity to transfer ownership and control over the gob gas vent wells.

**Findings:**

**[R645-301.731.400]:** If the wells are to remain in the permit area, the Permittee may apply to the Division to transfer the use and control of the wells over to another entity in accordance with state and local laws. The Permittee will remain responsible for the proper management of the wells until bond release or until such time that the wells are permitted under the Utah Oil and Gas regulations.

## **CLIMATOLOGICAL RESOURCE INFORMATION**

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**Analysis:**

Climate data such as precipitation, average temperatures are provided in Section 724.400 of the MRP. Table III-4 on page 7-17 lists the monthly maximum and minimum precipitation data and monthly precipitation totals for the years 1936 through 1976. Table III-9 lists average monthly temperatures from they years 1936-1976.

**Findings:**

Although the regulation requires only baseline climate data be submitted during the initial permitting phase (R645-301-724-420), given that these climate data are over 30 years old, the Division requests that updated climate data be provided. Updated climate data can be found on the Natural Resources Conservation Service website from SNOTEL stations within Utah: <http://www.wcc.nrcs.usda.gov/snotel/Utah/utah.html>.

**RECOMMENDATIONS:**

The midterm review is not recommended for approval until the deficiencies above are addressed.