

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

December 9, 2009

TO: Internal File

THRU: James D. Smith, Permit Supervisor *JS 12/14/09*

FROM: April A. Abate, Environmental Scientist II *AA*
Kevin Lundmark, Environmental Scientist II *KL*

SUBJECT: 2007 First Quarter Water Monitoring, Andalex Resources, Centennial Mine, C/007/0019, WQ07-1, Task ID #3171

The Centennial Mine is currently in temporary cessation. No mining or coal processing activities currently take place there, nor is the site in active reclamation. The Permittee (Andalex Resources) is required to continue with the requirements for water monitoring up until bond release in accordance with R645.731.214.

This report is being prepared retroactively and all water monitoring requirements listed herein are under the previously-approved plan. The new water monitoring plan has been in effect since March 26, 2009. Sections 711.300 pages 7-2 through 7-10 and Appendix L of the MRP pertain to water monitoring. Water sampling locations are shown on Figure IV-11.

1. Were data submitted for all of the MRP required sites?

Springs

YES NO

Four out of the six spring sample sites were monitored during this quarter. Water quality monitoring/sampling was performed only at site S18-1. Two sites were inaccessible due to snow: B351 – undeveloped spring below stock pond and B352 – undeveloped seep on tributary to Mathis Creek. No flow was observed at location 362 (undeveloped seep at head of Antone Creek). Saturated ground but no flow was observed at location S25-1 and B-261 (Pace Spring with developed stock pond) was frozen with no flow downstream.

Streams

YES NO

None of the streams reported flow except for the following: Intermediate Reach of Buck/Deep Canyon (B263) and the Left Fork of Deadman Wash (18-3). The two stream sampling points that were inaccessible due to snow were: Summit Creek (SC-1) and Antone Creek (AC-1). All the remaining points reported no flow conditions.

Streams

YES NO

The flow rate at sample location 18-3 was reported as 1,300 gallons per minute on March 19, 2007. This stream location has been reported with no flow or flow less than 400 gallons per minute previously. The sampler reported that this was mine discharge water.

Dissolved calcium, dissolved magnesium, hardness and alkalinity appeared below average in the first quarter 2007 sample at location B263.

Wells

YES NO

Not applicable this quarter.

UPDES

YES NO

Conductivity readings were reported below average at UPDES sample D004 during the months of January and February of 2007. Conductivity typically averages about 2,365 μ mhos/cm at this sampling location.

Location D004 had TDS of 1,397 to 1,508 mg/L during first quarter 2007, which exceed the discharge limitation of 500 mg/L average 30-day TDS. The UPDES permit provides an alternate limitation of 1 ton (2,000 pounds) per day TDS loading as a sum from all outfalls if the 30-day average of 500 mg/L cannot be met. TDS loading calculated from flow and TDS measurements during first quarter 2007 were 5.9 to 8.1 tons per day at location 004. The measured TDS at location 004 are below the Site Specific Standard for TDS for the Price River and tributaries from the confluence of Coal Creek to Carbon Canal Diversion (1,700 mg/L, UAC R317-2-14). As this report was prepared retroactively and discharge from the mine ceased when mining operations ceased, additional action does not appear warranted for the elevated TDS.

4. Did the Permittee make a timely submittal of all data, including initially missing data, and satisfactorily explain irregular data?

YES NO

Permittee indicated that the elevated flow data for spring sample S18-1 were due to mine water discharge. Conductivity readings below average levels were reportedly due to possible issues with the conductivity instrument.

5. Does the Mine Permittee need to submit more information to fulfill this quarter's monitoring requirements?

YES NO

6. Based on your review, what further actions, if any, do you recommend?

None

Wells YES NO

Well #1 was reported as dry to pump elevation.

UPDES YES NO

All UPDES locations were monitored monthly in accordance with the permit. The only location that discharged was the Aberdeen Mine Discharge outfall (D004).

Pond YES NO

The stock watering pond, 31-1 sampling location was reported as not flowing during the first quarter of 2007.

2. Were all required parameters reported for each site?

Springs YES NO

Streams YES NO

Well YES NO

Not applicable this quarter.

UPDES YES NO

Pond YES NO

Not applicable this quarter.

3. Were any irregularities found in the data?

Springs YES NO

Carbonate was slightly elevated at spring sample S18-1.

7. Follow-up from last quarter, if necessary.

None, report was prepared retroactively.

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