

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

December 20, 2005

TO: Internal File

THRU: Karl R. Houskeeper, Environmental Specialist III/Engineer, Team Lead

FROM: Jerriann Ernstsens, Ph.D., Environmental Specialist/Biologist

RE: Revised Appendix X and GVH #5A, 7, 8, 9, Andalex Resources, Inc., Centennial Mine, C/007/0019, Task ID #2359

### **SUMMARY:**

The Division received an amendment from the Centennial Mine for the "Ventilation Assistance Program" or the GOB hole project (GOB). This memo refers to holes drilled or planned for drilling starting in 2006. To date, these include holes 5A, 7, 8, and 9.

### **TECHNICAL ANALYSIS:**

## **GENERAL CONTENTS**

### **PERMIT APPLICATION FORMAT AND CONTENTS**

Regulatory Reference: 30 CFR 777.11; R645-301-120.

#### **Analysis:**

The Mine and Reclamation Plan (MRP) does not meet the requirements of R645-301-121.100 or R645-301-121.200 for the Biology Chapter or Archeology Section because the Permittee does not present current, clear, or concise information. The Permittee must address the issues listed in Findings for this section.

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**Findings:**

Information provided in the plan does not meet the minimum Permit Application Format and Contents in General Contents requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

**R645-301-121.200**, The Permittee must clarify all references to drill hole #2 in all of Appendix X. There are references to drill hole 2 rather than the replaced drill hole 3 throughout Appendix X. Drill hole 3 was drilled, but not 2. • The Permittee must clarify the updated agreement in Appendix X related to using the reference area method rather than the Range Site method for all holes, including #1, 3, 5, and 6. Furthermore, the Permittee must clarify what is meant by the "Range site method is considered a Class III survey...". • The Permittee should provide a citation in section 321.200 for the location of the pictures for the GOB sites. • Clarify the statement made in Section 333.330 related to habitat. As far as the Division understands, all areas are habitat of one kind or another.

## **ENVIRONMENTAL RESOURCE INFORMATION**

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

## **HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION**<sub>[Sheila Mo1]</sub>

Regulatory Reference: 30 CFR 783.12; R645-301-411.

**Analysis:**

For the GOB hole project, Senco-Phenix conducted a Class III survey for holes 5A, 7, 8, and 9. The results showed that there were no historic resources within the project area.

The Permittee does not meet R645-300-124.330 regulations pertaining to confidentiality of historic resources.

**Findings:**

Information provided in the plan does not meet the minimum Environmental - Historic and Archeological Resource Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

**R645-300-124.330**, The Permittee must resubmit all historic resource surveys as "Confidential" and direct the Division to locate such documents in the MRP Confidential Binder upon approval (SLC, Division PIC).

## **VEGETATION RESOURCE INFORMATION**[Sheila Mo2]

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

### **Analysis:**

For the 2005/2006 GOB hole project, the Permittee provided minimal vegetation information prior to drilling in the spring and summer. Plate 19A (Vol. 4) illustrates the community types for the project sites. The Permittee provides productivity values, ecological site descriptions (ESD), and determinations that the sites are fair to better condition as estimated from ESD (NRCS).

In 2005, the Division first agreed that the Permittee could use the Range Site method (Division's Vegetation Guidelines) for the standard of success. This agreement was made because the sites were under snow when they needed to drill, therefore, the Permittee could not collect baseline data for GOB 1, 3, 5, and 6. This agreement was discussed, however, during the review process for GOB #4. The Permittee and Division agreed that it would be easier to have all holes (even 1, 3, 5, and 6) meet the standards set by reference area method rather than by the Range Site method. The Permittee must clarify this agreement in Appendix X. Furthermore, the Permittee must clarify what is meant by the "Range site method is considered a Class III survey...". (R645-301-121.200).

Dr. Patrick Collins conducted a vegetation survey for the GOB hole project during the summer of 2005. The Permittee will submit the report upon completion - still pending as of the #2359 review (R645-301-321). The report will include analysis of the drill hole and reference area sites, as well as, include pictures taken at identified and repeatable photo locations of the project sites prior to disturbance (except 1, 3, 5, and 6).

### **Findings:**

Information provided in the plan does not meet the minimum Environmental - Vegetation Resource Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

**R645-301-321**, The Permittee must provide the missing vegetation survey report. Make sure to remove comments that the reports "will be" provided and to include the photos for the sites in the report. • The Permittee must complete the table in Section 321.200.

## **FISH AND WILDLIFE RESOURCE INFORMATION**[Sheila Mo3]

Regulatory Reference: 30 CFR 784.21; R645-301-322.

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**Analysis:**

GENERAL WILDLIFE

*Ungulates*

The Permittee states that there is elk and deer habitat within the GOB hole project area in the Mathis lease, but that the habitat is not designated as critical or crucial.

*Fish or other aquatics*

There are no known fisheries close to the GOB hole sites within the Mathis lease.

*Migratory Birds, Game Birds, and Raptors*

There are 22 raptor nests within the permit and adjacent areas. The results of the 2004 survey show that two golden eagle nests were active, with one containing young.

There are sage-grouse leks in the "Park" area and somewhat near the GOB hole project. DWR may provide the information for those leks. This type of information is considered protected under the Division's formatting regulation.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL/PLANT SPECIES

The Division, in consultation with USFWS and Utah Heritage Group (DWR), does not consider that the GOB hole project will impact TES species or their habitat. The USFWS was concerned about possible bald eagles in the area. DWR, however, did not report of any occurrence data for TES species within a 2.5-mile radius of the drilling sites located within T12S, R11E, S31.

*Plants*

The MRP provides a letter from Patrick Collins stating that he considered there is little probability that there are federally listed TE species within or near the holes drilled in spring 2005. Mr. Collins conducted a survey for GOB 4 (June 2005) and did not observe TES species. Mr. Collins will conduct a more expansive vegetation and TE survey in summer of 2005.

*Mexican Spotted Owl (MSO)*

Mel Coonrod (EIS) provided documentation stating that the models and other criteria do not support that there is suitable habitat for MSO within the GOB hole area in the Mathis lease. The Utah Heritage Group supports that there are no known observations of MSO within the project area.

**Findings:**

Information provided in the plan does not meet the minimum Environmental - Fish and Wildlife Resource Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

**R645-301-322**, The Permittee must provide the missing TE and raptor survey reports. Make sure the raptor survey is marked confidential.

**R645-301-322**, The Permittee should provide a follow-up letter concerning MSO. The Division recommends that Mr. Coonrod ground-truth the area of proposed holes (if he has not done so before) and resubmit another statement of whether there is possible habitat for all holes proposed within the Mathis lease. The Permittee must provide this letter in Attachment 3-2 of Appendix X. The Division cautions the Permittee, that we are NOT requesting a calling survey, which takes considerable time and money.

**MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION** [Sheila Mo4]

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

**Analysis:**

**Archeological Site Maps** [Sheila Mo5]

The amendment meets R645-301-411.141 because there are archeological maps showing known resource locations within the permit area. These maps are in the Confidential Files (Division PIC room after December 2005).

**Vegetation Reference Area Maps** [Sheila Mo6]

The Permittee will use reference areas for the standard of success for the GOB hole project. The Permittee must provide a map that details the locations of the reference areas.

**Findings:**

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Information provided in the plan does not meet the minimum Environmental - Maps, Plans, and Cross Section Resource Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

**R645-301-323.100**, The Permittee must provide a map that details the locations of the reference areas for the main facilities site, GOB holes, and all other projects areas. The Division requests that the Permittee illustrate the reference areas on a single map if possible. The most important criteria is to make sure locations are clearly defined.

## **OPERATION PLAN**

### **PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES [Sheila Mo7]**

Regulatory Reference: 30 CFR784.17; R645-301-411.

#### **Analysis:**

The amendment meets the requirements of R645-301-411.144 because the Permittee identifies parks or historic resources that mining operations may adversely affect. The Permittee provides an adequate protection plan.

#### **Findings:**

Information provided in the plan meet the minimum Operations - Protection of Public Parks and Historic Places requirements of the regulations.

## **FISH AND WILDLIFE INFORMATION**

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

#### **Analysis:**

### GENERAL WILDLIFE

#### **Protection and Enhancement Plan [Sheila Mo8]**

*Ungulates*

The Division, in consultation with DWR, does not consider that traffic or construction will impact the ungulates during the GOB hole project in the Mathis lease.

*Fish or other aquatics*

The Division has no concerns that the project will impact fisheries or their habitat during the GOB hole project in the Mathis lease.

*Migratory Birds, Game Birds, and Raptors*

The Permittee will conduct fly-over raptor surveys during the years the GOB hole project is active (Appendix X, Sec. 322.200). Currently, the Division has no concerns that the project will impact nesting raptors or their nests because there are no nests within a 0.5-mile buffer zone of GOB hole sites within the Mathis lease.

Currently, the Permittee will access the drill hole sites within the Mathis lease using a dirt road starting near the mine facilities area. This southern access route will prevent impacting strutting grouse from mining operation-related traffic.

**THREATENED, ENDANGERED, AND SENSITIVE ANIMAL/PLANT SPECIES**

The Division, in consultation with USFWS and Utah Heritage Group (DWR), does not consider that the 2005 GOB hole project will impact TES species or their habitat. The Division extends the same finding of no impact for the nearby 2006 drill hole project.

The Permittee will provide the results of a plant and animal TE survey for the 2005/2006 GOB project. The Division will coordinate with the Permittee to prevent taking if any known report shows that there are TE species within the area.

**Endangered and Threatened Species [Sheila Mo9]**

*Plants*

The Permittee will submit the plant-related TE results with the vegetation survey for the GOB hole project.

*Colorado River Fish*

The Permittee must update the values according to the requirements listed in the Findings section of this memo. (R645-301-333, R645-301-121.100, R645-301-121.200).

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**Bald and Golden Eagles** [Sheila Mo10]

There are no known bald eagle or golden nests within a 0.5-mile buffer zone of GOB sites in the Mathis lease area.

**Wetlands and Habitats of Unusually High Value for Fish and Wildlife** [Sheila Mo11]

There are no known wetlands within the GOB sites in the Mathis lease area.

Section 333 should include examples of how the Permittee plans to implement the commitment to protect habitat (R645-301-333).

**Findings:**

Information provided in the plan does not meet the minimum Operations - Fish and Wildlife Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

**R645-301-333**, The Permittee must update the values according to the requirements listed below. Furthermore, the Permittee must include water "appropriated and hauled and or pumped to the sites by a licensed contractor" (p. 3-6) i.e., include all water consumed by operations related to the removal of coal. The Permittee will want to remove this related paragraph in Section 333 (p. 3-6). • The MRP must include a subsection in the PHC that presents equation sets with subtotals for all consumptive uses and contributions as well as the water balance total for the entire mining operations - not just the GOB project. All equation sets (e.g., Postmine Inflows) must include citations directing the reader to chapters, sections, and page numbers within the MRP for supporting evidence. • The MRP must include a discussion in the Biology Section that addresses possible adverse affects to the four fish species. This Section will also need to include the water balance total (e.g., Contribution of 1000 acre-foot or Depletion of 105 acre-foot) and a citation to the PHC for calculations and evidence. The Division highly recommends that the Permittee contact the Division prior to submitting the updated values. We are in the process of updating our requirements, which should be completed by middle of January 2006. • Equation sets with subtotals for all consumptive uses and contributions as well as supporting evidence must at least cover the following: Mining consumption (usually where all dust suppression calculations are included), Ventilation consumption, Coal producing consumption, Ventilation evaporation, Sediment pond evaporation, Springs and seep effects from subsidence, Alluvial aquifer abstractions into mines, Alluvial well pumpage (usually where discharge calculations are included), Deep aquifer pumpage, Postmining inflow to workings, Coal moisture loss, and Direct diversions.

**R645-301-333**, The Permittee mentions that they will protect all species and habitat. Section 333 should include examples of how the Permittee plans to implement this commitment. For example, include raptor surveys, routes of travel, protection plans for the transportation and storage of water, plans for dust control and other road erosion controls, and yearly coordination, and planning with the interdisciplinary wildlife team (USFWS, DWR, BLM, USFS, and Division).

## **VEGETATION**<sub>[Sheila Mo12]</sub>

Regulatory Reference: R645-301-330, -301-331, -301-332.

### **Analysis:**

The amendment meets R645-301-330, R645-301-331, and R645-301-332 because the Permittee provides measures to disturb the smallest area possible and to apply interim reclamation practices when applicable.

For the GOB hole project, the Permittee will revegetate topsoil piles with an interim seed mix. The Permittee will use the adjusted final seed mix for the contemporaneous and final reclamation of the drill sites.

### **Findings:**

Information provided in the plan meets the minimum Operations - Vegetation requirements of the regulations.

## **RECLAMATION PLAN**

### **GENERAL REQUIREMENTS**<sub>[Sheila Mo13]</sub>

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

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**Analysis:**

For the GOB hole project, the plan includes to remove all structures, recontour the site to approximate premining contours, rip the soil, and replace salvaged/stored topsoil. The reclamation plan does not include irrigation.

**Findings:**

Information provided in the plan meets the minimum Reclamation - General Requirements of the regulations.

**PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES**<sub>[Sheila Mo14]</sub>

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

**Analysis:**

The amendment meets R645-301-342 and R645-301-358 because the Permittee provides enhancement and protection measures during the reclamation phase of operations. For the GOB hole project, enhancement measures include to apply a seed mix that is suitable for fish and wildlife habitat.

**Findings:**

Information provided in the plan meets the minimum Reclamation - Protection of Fish, Wildlife, and Related Environmental Values requirements of the regulations.

**REVEGETATION**

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

**Analysis:**

**Revegetation: General Requirements**<sub>[Sheila Mo15]</sub>

The amendment meets R645-301-353 through R645-301-356 because the Permittee provided a reclamation plan and discussion of how the reclamation measures will meet the performance standards.

For the GOB hole project, the Permittee plans to use seed and apply mulch. The seed mixes for interim and final reclamation are not the same. The interim seed mix will include a blend of native grasses. For final reclamation, the Permittee will use the final seed mix. The Permittee will apply wood fiber mulch at 2,000 pounds per acre. The Permittee will use the "reference area method" for measuring the standard of success. The NRCS will assign range site Ecological Site Descriptions and productivity values for the drill sites.

**Findings:**

Information provided in the plan meets the minimum Reclamation - Revegetation requirements of the regulations.

**RECOMMENDATIONS:**

Do not approve the amendment.