

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 27, 2005

TO: Internal File

THRU: Wayne Western, Team Lead

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

RE: GOB Gas Vent Hole, Andalex Resources, Inc., Centennial Mine, C/007/0019, Task ID # 2273

SUMMARY:

The Division received amendments from the Centennial Mine to drill degas holes. This memo refers to holes drilled in 2005 starting in April - these include holes 1, 2, 4, 5, and 6.

The Division requires the Permittee to provide/do the following:

- Relocate all maps illustrating archeology resource locations and all narrative providing details on the nature of archeology resources from the MRP to the Confidential File.
- Relocate all maps illustrating raptor nest locations or other maps illustrating wildlife dens, mittens, etc..
- Select reference areas for all the holes instead of using the Range Site methods for the standard of success.
- Take pictures at identified and repeatable photo locations of the project sites prior to disturbance. Add these pictures to the MRP by August 2005.
- Provide a map that will detail the locations of the reference areas for the main facilities site, GOB holes, and all other projects areas (refer to R645-301-323.100). The Division requests that the Permittee illustrate the reference areas on a single map if possible. The most important point is to make sure locations are clearly defined.

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.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION_[Sheila Mo1]

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

Analysis:

The MRP meets R645-301-411 regulations pertaining to historic resources. The MRP (see Confidential Files in Division PIC) includes an evaluation of historic resources that focus on the permit area in Deadman Canyon (1976).

For the 2005 GOB hole project, Senco-Phenix states that cultural resources are unlikely within the project area. The area was under snow for the holes drilled in April and May (GVH 1, 2, 5, and 6). The Permittee, therefore, will conduct a Class III survey for future hole projects and will conduct the monitoring evaluation for the holes drilled in April and May 2005.

It is important that employees avoid all historic properties during the life of the project. In the event that construction or operations uncover historic properties, Section 106 of the National Historic Preservation Act and 36 CFR 800.13 require that the Permittee stop all work in the vicinity and notify the Division. The Permittee, Division, and other appropriate parties will develop a strategy to avoid the site or mitigate the impacts at that time.

Findings:

Information provided in the plan meets the minimum Environmental -Historic and Archeological Resource Information requirements of the regulations.

VEGETATION RESOURCE INFORMATION_[Sheila Mo2]

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

Analysis:

The MRP meets R645-301-321 because there is adequate information of plant communities observed within the permit area. The MRP contains supporting documents on

TECHNICAL MEMO

vegetation for permit area. Volume 1 (Chap. 3) provides a brief discussion of plant communities within the permit and adjacent area, which is supported by community vegetation maps (Vol. 4, Plates 19, 19A, and 20). The plant communities within the permit area include: sagebrush-grass, conifer, quaking aspen, oak brush, mountain brush, and pinyon-juniper. Volume 2 contains vegetation surveys for the main mine facilities and adjacent areas (App. M) and for the left fork fan project (App. V).

For the 2005 GOB hole project, the Permittee provides minimal vegetation information. 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).

For the 2005 GOB hole project, the Division agreed that the Permittee would use the Range Site method (Division's Vegetation Guidelines) for the standard of success. This agreement was because the sites were under snow and the Permittee could not collect baseline data for GOB 1, 2, 5, and 6. The Permittee, however, has now requested for an additional hole (GOB 4). The Division now considers that, even though baseline was not collected for the holes drilled in spring 2005, the Permittee must adequately select reference areas for all the holes and not use the Range Site methods for the standard of success for any of the holes.

Patrick Collins surveyed GVH 4 hole and the associated reference area. Mr. Collins will also evaluate the vegetation near the holes drilled in spring 2005 as well as any additional reference areas in the summer of 2005. For the 2005 GOB hole project, the Permittee will take pictures at identified and repeatable photo locations of the project sites prior to disturbance. These picture will be added to the MRP by July 2005.

Findings:

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

FISH AND WILDLIFE RESOURCE INFORMATION_[Sheila Mo3]

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

Analysis:

GENERAL WILDLIFE

The MRP meets R645-301-322 because there is discussion, supporting documentation, and maps on fish and wildlife resource for the permit and adjacent areas. There is information to design the protection and enhancement plan. The MRP provides narrative, supporting documentation, or maps.

TECHNICAL MEMO

The Fish and Wildlife resource information is addressed in Vol. 1, Chap. 3 and in Vol. 2, App. A, D and M of the application.

Volume 2, App. A is a DWR report (1981) for the Centennial mine that provides mitigation recommendations, habitat resources, and species specifics on vertebrates, aquatics, birds, that may inhabit the permit area. It also provides the "Vertebrate Species of Southeastern Utah" report and a recommended plant species list. Volume 2, App. D provides an old and undated raptor analysis and the 2004 raptor survey. Volume 4, Plates 34 (May 2002) and 34 (August 2004).

Ungulates

For the 2005 GOB hole project, the Division, in consultation with DWR, does not consider that traffic or construction will impact the ungulates.

Fish or other aquatics

For the 2005 GOB hole project, the Division has no concerns that the project will impact aquatic species because the hole sites or adjacent areas do not include stream channels.

Raptors

The Permittee will relocate the raptor data to the confidential files as of August 2005. There are 22-raptor nest within the permit and adjacent areas. The results of the 2004 survey show that two golden eagle nest were active, with one containing young.

For the 2005 GOB hole project, the Division has no concerns that the project will impact raptor nests because there are no nests within a 0.5-mile buffer zone of the sites.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL/PLANT SPECIES

The MRP meets R645-301-322 because there is discussion, supporting documentation, or maps on TES species that could occur within or adjacent to the permit area. The Permittee provides a current TES species list for Carbon County.

The Division, in consultation with USFWS and Utah Heritage Group (DWR), does not consider that the drill 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 threatened or endangered 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 survey in summer of 2005 for the future holes planned after the approval of GOB 4.

Mexican Spotted Owl (MSO)

For the 2005 GOB hole project, Mel Coonrod (EIS) provides documentation stating that the models and other criteria do not support that there is suitable habitat for MSO within the drill hole sites. The Utah Heritage Group supports that there are no known observations of MSO within the project area.

Findings:

Information provided in the plan meets the minimum Environmental - Fish and Wildlife Resource Information requirements of the regulations.

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 MRP 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 August 2005).

Vegetation Reference Area Maps [Sheila Mo6]

The MRP meets R645-301-323.100 because vegetation maps illustrate community types within the main facilities and adjacent areas. The Division typically requests two vegetation maps: one that shows the entire area (Plate 3-1 is adequate) and one that details the reference and disturbed areas.

TECHNICAL MEMO

The Permittee will use reference areas for the standard of success for the 2005 GOB hole project. The Permittee will provide a map that will detail the locations of the reference areas for the main facilities site, GOB holes, and all other projects areas (refer to R645-301-323.1001. The Division requests that the Permittee illustrates the reference areas on a single map if possible. The most important criteria are to make sure locations are clearly defined.

Findings:

Information provided in the plan meets the minimum Environmental - Maps, Plans, and Cross Section Resource Information requirements of the regulations.

OPERATION PLAN

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

The MRP meets R645-301-333, R645-301-342, and R645-301-358 because the Permittee will use the best technology available to minimize impacting wildlife and its critical habitat.

For the 2005 GOB hole project, the Permittee will access the drill hole sites using a dirt road starting near the mine facilities area. This choice will avoid any impact that construction and operations would have on sage grouse on the "Park" that will be strutting during operations of the holes drilled in spring 2005. There are no raptor nests within the 0.5-mile buffer zone for any of the 2005 drill hole sites.

The Division, in consultation with USFWS and Utah Heritage Group (DWR), does not consider that the 2005 drill hole project will impact TES species or their habitat. Additionally, the Permittee will report to the Division any TES observed during the Collins 2005 vegetation survey.

Findings:

Information provided in the plan meets the minimum Operations - Fish and Wildlife Information requirements of the regulations.

VEGETATION^[Sheila Mo7]

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

Analysis:

The MRP 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 2005 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^[Sheila Mo8]

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.

Analysis:

For the 2005 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 meet the minimum Reclamation - General Requirements of the regulations.

TECHNICAL MEMO

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES[Sheila Mo9]

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

Analysis:

The MRP 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 2005 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[Sheila Mo10]

The MRP 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 2005 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 a wood fiber mulch at 2,000 pounds per acre. The Permittee will use the "Range site 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:

Approve the amendment.

O:\007019.CEN\FINAL\WG2273\jae2273.doc