

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

---

March 15, 2005

TO: Internal File

THRU: Wayne Hedberg, Coal Mine Permit Supervisor

THRU: Wayne Western, Environmental Scientist, Team Lead

FROM: James D. Smith, Environmental Scientist

RE: Gob Gas Vent Hole, Andalex Resources, Centennial Project, Permit C007/0019, Tasks # 2161 and 2166

## **SUMMARY:**

On February 27, 2005, the Division received an amendment to the Centennial Project MRP for installation of ventilation holes GVH # 1 through # 6: this was assigned Task # 2161. On March 10, 2005 the Division granted emergency approval for GVH # 1 and assigned Task # 2166 to this single ventilation hole. If approved by the Division, the proposed amendment will become Appendix X of the current MRP.

---

TECHNICAL MEMO

---

**TECHNICAL ANALYSIS:**

## **GENERAL CONTENTS**

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

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

**Analysis:**

The proposed amendment is in the form of an appendix to the current MRP. If approved by the Division, the proposed amendment will become Appendix X of the current MRP.

**Findings:**

Permit application format and contents are adequate to meet the requirements of the R645 Coal Rules.

## **ENVIRONMENTAL RESOURCE INFORMATION**

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

### **GENERAL**

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

**Analysis:**

If approved by the Division, the proposed amendment will be Appendix X of the current MRP. For Chapters 6 and 7 of Appendix X, most sections of the R645 Coal Rules are covered through reference to the existing MRP or other sections of Appendix X

**Findings:**

General Environmental Resource Information in the proposed amendment is adequate to meet the requirements of this section of the Coal Mining Rules.

## **GEOLOGIC RESOURCE INFORMATION**

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

### **Analysis:**

There is no new geologic information in the proposed Appendix X. This appendix refers to the current MRP for most geologic and hydrologic resource information. No acid- or toxic-forming materials will originate at the ventilation hole sites. These ventilation holes will not be drilled as exploration holes or test borings, and there will be no samples or cores collected.

Performance standards for casing and sealing the boreholes are in Section 542.700. Performance standards for reclamation of subsidence survey monuments and markers are in Section 525.

### **Findings:**

Geologic Resource Information in the proposed amendment is adequate to meet the requirements of this section of the Coal Mining Rules.

## **HYDROLOGIC RESOURCE INFORMATION**

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

### **Analysis:**

Section 7 contains information on the potential impacts of the proposed operations on the hydrologic balance; methods of compliance; design criteria; and hydrologic performance standards. At the time the proposed amendment was prepared, there was no access to the sites, so much of the information in Appendix X is general in nature. Attachment 7-1, Hydrology Calculations is included, but there are no pages in that section.

There is no new hydrologic information submitted with the proposed Appendix X. This appendix refers to the current MRP for most hydrologic resource information.

---

TECHNICAL MEMO

---

### **Sampling and Analysis**

These ventilation holes will not be drilled as exploration holes or test borings, and there will be no samples or cores collected. Surface- and ground-water sampling and analysis will be follow the plan in the current MRP.

### **Baseline Information**

Reference is made to information in the current MRP. No additional baseline information is provided for the ventilation holes or adjacent areas.

### **Baseline Cumulative Impact Area Information**

The proposed ventilation holes are within the permit area and CIA. This proposed amendment does not require a revision or update of the current CHIA.

### **Modeling**

No modeling was done for this amendment.

### **Probable Hydrologic Consequences Determination**

Most of the discussion of the Probable Hydrologic Consequences for the Centennial Project is in the current MRP. In addition:

- No acid- or toxic-forming materials have been identified in the soils or rocks of the Centennial Project.
- Ground water encountered during drilling of the vent holes will be affected, but drilling mud should effectively seal any ground-water aquifers encountered during drilling and casing will be grouted into the boreholes after drilling is done, both minimizing migration of ground water via the boreholes
- Absorbent materials will be used at the drill sites to collect spilled or leaked hydrocarbons. The absorbent materials will be disposed at an appropriate landfill.

### **Groundwater Monitoring Plan**

The ventilation holes will not be suitable for ground-water monitoring. Installation and operation of the boreholes will not require additional ground-water monitoring.

### **Surface-Water Monitoring Plan**

Installation and operation of the boreholes will not require additional surface-water monitoring.

**Findings:**

Hydrologic Resource Information in the proposed amendment is adequate to meet the requirements of this section of the Coal Mining Rules.

## 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, -300-147, -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:**

**General**

The proposed amendment describes:

- The proposed operations and potential impacts on the hydrologic balance;
- Methods of compliance and design criteria (Attachment 7-1, Hydrology Calculations is included, but there are no pages in that section.); and
- Hydrologic performance standards.

At the time the proposed amendment was prepared, there was no access to the sites, so much of the information in Appendix X is general in nature.

**Groundwater Monitoring**

The ventilation holes will not be suitable for ground-water monitoring. Installation and operation of the boreholes will not require additional ground-water monitoring.

**Surface Water Monitoring**

Installation and operation of the boreholes will not require additional surface-water monitoring.

---

**TECHNICAL MEMO**

---

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

No acid- or toxic-forming materials have been identified in the soils or rocks of the Centennial Project - reference is made to Section 728.300 of the current MRP. During construction, maintenance, and reclamation, earth materials and runoff will be handled in a manner that prevents, to the extent possible, additional contributions of suspended solids to stream flow outside the permit area.

**Discharges Into An Underground Mine**

Casing will be grouted into the boreholes after drilling is done. There will be no discharge into underground workings.

**Gravity Discharges From Underground Mines**

This is not addressed, but these ventilation holes are situated so that discharge from the underground workings will not occur.

**Water-Quality Standards And Effluent Limitations**

Silt fence or straw bales will treat water encountered during drilling of the Gob Gas Vent Holes before it leaves the disturbed area, and if necessary, the water will be hauled off-site for disposal at a licensed facility.

**Diversions: General**

There will be no diversions associated with these ventilation holes.

**Stream Buffer Zones**

None of the ventilation holes are adjacent to a stream.

**Sediment Control Measures**

During drilling and construction, grading and berms will direct flow within the disturbed area to silt fence or straw-bale dikes for treatment, and keep flow from undisturbed areas from entering the pad. After drilling is completed, the pad size will be reduced and silt fence, straw bales, and dikes will be used to control runoff and sediment. Sediment trapped by the silt fence and bales will be used for fill during reclamation of the ventilation hole sites.

**Transfer of Wells**

Refer to section 731.400 of the current MRP.

### **Discharge Structures**

No discharge structures are planned.

### **Impoundments**

No impoundments are planned.

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

The plan does not call for ponds, banks, dams, or impoundments.

### **Findings:**

Operations Hydrologic Information in the proposed amendment is adequate to meet the requirements of this section of the Coal Mining Rules.

## **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**

A detailed reclamation plan is given in Section 540. After the degassing of the mine is done, all siltation structures will be removed, and the land regraded and revegetated. Natural drainage patterns will be restored and cut-and-fill slopes reshaped.

### **Findings:**

Hydrologic Reclamation Information in the proposed amendment is adequate to meet the requirements of this section of the Coal Mining Rules.

---

**TECHNICAL MEMO**

---

**RECOMMENDATIONS:**

The amendment should be approved.

O:\007019.CEN\FINAL\WG2166\WG2166Mjds.doc