



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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## TECHNICAL FIELD VISIT

**DATE:** September 9, 1997, 2 p.m. to 3:30 p.m.  
**DOGM STAFF:** Robert Davidson, Soils Reclamation Specialist  
**ATTENDANTS:** Vicky S. Bailey, EarthFax Engineering Inc.  
**RE:** Topsoil Issues - Culvert Expansion, Contemporaneous Reclamation Areas, and Topsoil Stockpile Disturbance, Horizon Coal Corporation, Horizon Mine, ACT/007/020, Carbon County, Utah

### Purpose:

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To visually inspect the topsoil resources relative to the culvert expansion project, contemporaneous reclamation areas, and topsoil stockpile disturbance.

### Background:

- The MRP was originally approved 10/10/96 and construction commenced in the fall of 1996.
- Mine ownership was transferred on 7/11/97.
- A section of crushed culvert beneath the upper pad of portal canyon resulted in a Notice of Violation (NOV 97-26-5-1).

### Field Observations:

#### Culvert Expansion

- Soil Salvage - The riparian area, flood plain, stream embankments and hillsides on both sides of Jewkes Creek contain suitable soils for salvage.
- Soils on the northwest embankment and hill located between the county road and Jewkes Creek appear to be at least four feet thick as evidenced by the road cut and eroded banks above the creek bottom.

#### Contemporaneous Reclamation Areas

- Contemporaneous reclamation has taken place within the disturbance area for selected slopes within Portal Canyon and for flat lying areas at the lower end of Jewkes creek. (See modified Plate 3-1. Plate 3-1 was modified and supplied by Vicky Bailey to Bob Davidson during this visit.)
- Soils for the north facing slopes within Portal Canyon and for the lower end of Jewkes Creek were supplied and brought on site from the County road realignment.
- Soil for the steep cut slope above the supply, office and bath house area was taken from the topsoil stockpile.

#### Topsoil Stockpile Disturbance

- The lower half of the topsoil stockpile has been disturbed relative to repairing the crushed culvert. Approximately 1/3 to 1/2 of the soil volume from the disturbed stockpile was removed and placed on the south facing slope above the facility areas of Portal Canyon.
- The repaired culvert was being buried using the topsoil resource as backfill.
- Some contamination from old coal refuse occurred when the trackhoe operator was using the exposed refuse embankment as backfill. Vicky Bailey immediately stopped the operator from using the refuse as backfill. However, some contamination has already occurred to the stockpile surface immediately below the refuse embankment.
- The surface of the lower topsoil stockpile was being regraded by a cat. The soil was being pushed down the pile, and was being used as fill above the culvert and alongside the portal entry.

**Recommendations and Conclusions:**

Culvert Expansion

- Salvage soils within the riparian area, flood plain, stream embankments and hillsides on both sides of Jewkes Creek. As committed in the MRP, a professional soil scientist will be on site during topsoil and subsoil removal operations for optimizing soil salvage.

Contemporaneous Reclamation Areas

The structural integrity of the MRP has been challenged by reclaiming the slopes within Portal Canyon for the following reasons:

- Soils were brought and used on site from unauthorized soil sources.
- Within Jewkes Creek and Portal Canyon, construction fills used to build pad areas were slated for use as backfill for cutslopes and hillsides during reclamation. Reestablishment of drainage areas within Portal Canyon and Jewkes Creek will require that construction fills be removed and handled for final reclamation. Since a portion of these cutslopes and hillsides have been reclaimed, the approved reclamation plan may no longer apply for handling and disposal of the construction fills during final reclamation. It should be noted, that a major portion of the fills in Portal Canyon consist of coal waste and refuse and will require burial under four feet of fill and soil.
- The steep cutslope on the south facing hillside above the office area was reclaimed using the stockpiled topsoil. The MRP calls for 11 inches of topsoil for reclamation. It is unknown the volume of soil or soil thickness used to reclaim the slope. In addition, was the slope backfilled and regraded prior to topsoil placement in accordance to the MRP, and how will the slope and soil resource be protected during operations?

Topsoil Stockpile Disturbance

- Regulation R645-301-234.240 specifies that the soil stockpile will not be moved until required for redistribution unless approved by the Division.
- Judging from Vicky Bailey's comments and visual observation of the stockpile, considerable soil resource was moved from the lower half of the pile. Does enough soil now remain in the stockpile to adequately reclaim the site during reclamation as specified in the MRP?
- Regulation R645-301-234.220 states that the stockpiled soil will be protected from unnecessary compaction. Topsoil from the stockpile was being graded and used as culvert backfill and surface fill adjacent to the portal entry.

Signature: \_\_\_\_\_

Robert A. Davidson, Soils Reclamation Specialist

on September 15, 1997

cc: Mary Ann Wright  
Daron Haddock  
Joe Helfrich  
Bill Malencik

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