



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Kathleen Clarke  
Executive Director

Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

801-538-5340

801-359-3940 (Fax)

801-538-7223 (TDD)

**TECHNICAL FIELD VISIT**

**DATE:** May 13, 1999  
**DOGM STAFF:** Robert Davidson, Pam Grubaugh-Littig, and Wayne Western  
**ATTENDANTS:** Dennis Oakley, Energy West Mining Co., and Henry Austin, OSM.  
**RE:** Cottonwood Waste Rock Phase 1 Bond Release, Cottonwood/Wilberg Mine, ACT/015/019, Emery County, Utah

File #2

**Purpose:**

- Phase 1 bond release on-site visit to the Cottonwood Waste Rock facility.

**Background:**

- On December 17, 1998, Energy West requested Phase I bond release for the Old Cottonwood/Wilberg waste rock site. The Old Cottonwood/Wilberg waste rock site is located alongside Highway 57 and is 1.8 miles from the Cottonwood Mine (Township 17 S Range 7 E Section 34, NE1/4 SE1/4). The waste rock site consists of seven cells. Waste rock was placed in the first cell in 1983 and the last cell was reclaimed in 1993.
- On October 14, 1998, Robert Davidson and Dennis Oakley visited the site. The site was observed from the northwest corner of the site, standing on top of the rock storage pile. The best vegetation was observed on the berms. Cells 1, 2, 6, and 3 appeared to have better vegetation establishment when compared to cells 5, 4 and 7. Cell 7 has the least amount of vegetation establishment. Discussion focused on soil quality for supporting vegetation in terms of salinity and SAR (Sodium Adsorption Ratio). Visual observation seem to indicate that in areas where salts were allowed to leach, vegetation establishment is the best (e.g., berms, upper drainage areas, etc.). The average cover depth for the 15 acre Waste Rock Site equals 3.3 ft. An auger core was taken from Cell 7 to check on soil replacement depth. The depth of the core was approximately 3 ft., which is consistent with the average depth of the entire site.

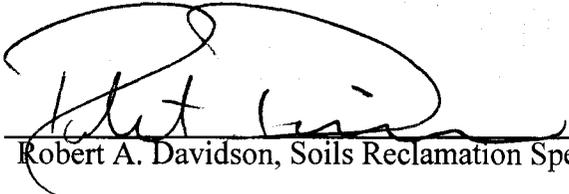
**Field Observations:**

- Observed the site from the northwest corner near the rock storage piles.
- Walked down through the central and western edge of the site and then back along the eastern edge.
- No exposed refuse was observed in any of the cells.
- Observed the auger hole location in Cell 7.

**Recommendations and Conclusions:**

- Based on site visit and review of Phase 1 documents, the team agreed to grant Phase 1 bond release.

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

  
Robert A. Davidson, Soils Reclamation Specialist

on May 19, 1999