

September 17, 2003

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor

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

RE: Technical Field Visit, Horse Canyon Post-mine Land Use Change and Lila Canyon for Reassignment of Reference Area and Survey, UtahAmerican Energy, Inc., Horse Canyon Mine, C/007/013

Other Attendees: Jay Marshall, UEI, and Dr. Mike King (consultant).

Date & Time: July 2, 2003, morning and early afternoon and July 9, 2003 all day.

PURPOSE:

July 2, 2003

The Division biologist, Jay Marshall and Mike King visited Horse Canyon and the proposed Lila mine sites on July 2, 2003. The primary goal for the visit to Horse Canyon was to examine the plant communities located on the sloped areas planned for the postmine land use change. UtahAmerican Energy, Inc. is donating the mine site to the University of Utah for research purposes. The College of Eastern Utah (Price, Utah) will conduct classes and workshops as well as serve as the primary land steward.

The primary goal for the visit to Lila was to reassign the reference area.

July 9, 2003

The Division biologist and Mike King visited the proposed Lila mine site on July 9, 2003. The primary goal for the visit to Lila was to assist the consultant with the vegetation cover survey of the reference area.

TECHNICAL FIELD VISIT

FIELD OBSERVATIONS: SEE IMAGES 07022003 IN DATABASE.

HORSE CANYON

The primary goal for the visit to Horse Canyon was to examine the plant communities located on the sloped areas planned for the postmine landuse change. Regulations require that disturbed areas must be stable from erosion. Jay Marshall questions whether the sloped areas are large enough to warrant a percent cover survey and the application of the Russell equation. We visited each of the sloped areas included in the postmine landuse change amendment to determine the need for these applications.

All sloped areas except one warrant a percent cover survey and the application of the Russell equation. The Division may want to consider whether the area near the water tank requires the same level of scrutiny as the other sloped areas.

Building site:

There is a sloped area behind the furthest east building of the main complex. Slope stability studies were run on this site in years 1990, 1996, and 1998. Results showed that the area is stable (Marshall). Preliminary vegetation survey results show that the cover is about 70-80% (King).

The sloped area is wide and fairly steep. The slope appears relatively stable with only a few patches of barren soil. There were no noted areas of sloughing soil.

Portal site:

There is a sloped area behind a portal located approximately one mile east of the main complex. The Permittee plans to remove the portal wings and recontour the hillside, but leave the pad area flat. The new landowner requests the pad site be left as flat as possible for class-related purposes.

The sloped area is wide and very steep. The slope extends from west of the portal site to the road cut. The slope appears relatively unstable as indicated by sloughing and patches of barren soil.

Powder and cap building pad:

The new landowner plans to use the powder and cap buildings for research-related work. The Permittee, therefore, will not reclaim the building site. There are two sloped areas surrounding the powder and cap building pad. One sloped area is behind the building pads and the other is from the pad parking edge down to the wash.

The sloped area behind the building pad has approximately 30% cover. The slope is moderately steep to the west of the pad and very steep and double pitched to the east of the pad. This sloped area is basically part of a road cut. The road could contribute to eroding the sloped area below. The soil, however, appears fairly compacted and stable. Various sized shrubs appear to help stabilize this area.

The sloped area from the pad parking edge down to the wash appears more stable than behind the buildings. There are very few patches of barren soil. The wash area is vegetated with grasses and adult shrubs. It was moderately tricky to select a path through this plant community.

Water tank:

The tank will remain on site. The pad for the tank is flat, but is surrounded by a 1-2 foot high berm. It does not seem like this berm would constitute a sloped area. The area outside the berm is gently sloped and is not part of the stability assessment (Marshall). The soil inside the berm is compacted. This area is vegetated with medium sized shrubs, and small forbs and grasses.

Sediment pond:

There is a berm surrounding the pond. The berm is gently sloped with significant plant cover. The berm is compacted and apparently stable.

LILA CANYON

July 2, 2003

The primary goal for the visit to Lila on July 2, 2003 was to reassign the reference area. One week later (July 9, 2003) Mike King and Jerriann Ernsten (DOGM) returned to Lila to conduct the vegetation cover survey of the reference area.

The previously selected reference area was located west of the proposed junction for the new road and the mine entrance. The site was about 50 feet west from the existing road. The Division believed there was a high probability that the reference area was susceptible to disturbance from traffic and coal fines blowing off trucks. The Permittee agreed to relocating the reference area to a less susceptible area.

The newly proposed reference area is located about 500 feet below the existing road and south-southwest from the northern corner of the proposed sediment pond. This area appears similar in community composition. This lower level of the bench, however, was most likely burned years ago. Tree numbers are few in the burned area. The Division recommended adjusting the site perimeter to include a few trees.

TECHNICAL FIELD VISIT

Mike King will conduct a sample adequacy test before the Division approves this site.

July 9, 2003

Mike King conducted the percent cover survey and the Division biologist assisted Mike by transcribing data. Mike used the *point method* for the cover survey. The survey included 15 sample transects each 100 feet long with points at 2-foot intervals.

RECOMMENDATIONS/CONCLUSIONS:

All sloped areas except one warrant a percent cover survey and the application of the Russell equation. The Division may want to consider whether the area near the water tank requires the same level of scrutiny as the other sloped areas.