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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

August 30, 1989

Mr. David R. Smaldone  
324 South State Street  
P.O. Box 26128  
Salt Lake City, Utah 84126-0218

Dear Mr. Smaldone:

Re: Review of Stipulation Responses to UMC 817.24-(1)-(HS) and UMC 817.48(1)-(HS), Five-Year Permit Renewal, Utah Power and Light Company, Cottonwood/Wilberg Mine, ACT/015/019, Folder #2, Emery County, Utah

Attached is a Technical Memorandum that reviews the above-referenced stipulation responses for the Five-Year Permit Renewal, Cottonwood/Wilberg Mine. Please provide 12 copies, suitable for insertion into the approved Permit Application Package, of appropriately revised test and plates by no later than September 30, 1989.

Sincerely,

A handwritten signature in cursive script that reads "Richard V. Smith".

Richard V. Smith  
Permit Supervisor

cl  
cc: W. Malencik, PFO  
H. Sauer  
BT40/48



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August 29, 1989

TO: Richard V. Smith, Permit Supervisor

FROM: Henry Sauer, Reclamation Soils Specialist *H.S.*

RE: Stipulation Responses: UMC 817.24-(1)-(HS), UMC 817.48-(1)-(HS), Utah Power and Light Company, Cottonwood/Wilberg Mine, ACT/015/019, Folder #2, Emery County, Utah

## Synopsis

Stipulation UMC 817.24-(1)-(HS) addressed on replacement pages 4-4.1, 4-4.2, 4-7, 4-21, 4-21.1, 4-27, 4-28 and 4-29, Maps CM-1040-6-CP and CM-10813-CP, is insufficient to satisfy the above stipulation. The following issues must be more clearly stated and/or revised.

## Analysis and Recommendation

Insufficient volumes of topsoil exist for the final reclamation of the Cottonwood Fan Portal. The volume of stockpiled subsoil and topsoil (8,950 yds<sup>3</sup>) will not cover the entire surface disturbance (7 acres) with 12 inches of soil. If particular areas within the surface disturbance are not projected to have topsoil redistributed, then the applicant must accomplish the following:

1. Substantiate the lack of soil redistribution;
2. Prove the suitability of the material which will act as a plant growth medium; and
3. Delineate the areas where topsoil will be redistributed.

## Synopsis

Stipulation UMC 817.48-(1)-(HS) addressed in Appendix VII, replacement pages 2-6, 4-6, 4-6.1, 4-18.3, and 4-18.3.0 is insufficient to satisfy the above stipulation. The following issues must be resolved before the above stipulation is approved.

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### (Part I) Analysis

Part I of the above stipulation, submission of previously collected data from the completed waste rock cells #1-6, has been submitted. Data indicate unacceptable levels for the following constituents: sodium adsorption ratio (SAR), boron and selenium.

Analysis of waste rock cells #2 and #5 indicate unacceptable SAR (i.e., greater than 12 fine textured soils, greater than 15 coarse textured soils).

Analysis of waste rock cells #4 and #5 (sample sites 4-A-2 and 5-C-4) indicate unacceptable boron concentrations (greater than 5 mg/Kg).

Analysis of waste rock cell #4 (sample site 4-A-2), indicates unacceptable selenium concentrations (greater than 0.10 mg/Kg). Topsoil redistribution and revegetation procedures have already occurred for waste rock cells #1-#6. The applicant has committed to covering all acid and/or toxic-forming material with four feet of suitable cover (Appendix VII, page 7). The unacceptable levels of SAR, Boron and Selenium are within and below four feet of the surface.

### Recommendations

The operator must commit to monitoring each waste rock cell mentioned above (#2, 4 and 5) every five years to coincide with the five-year permit renewal.

Monitoring will consist of collection of soils and waste rock samples in accordance with the laboratory and sampling methodologies previously employed on the waste rock cells. The following constituents must be analyzed: pH, SAR, electrical conductivity, selenium and boron.

Data must be presented in tabular form, to include the previously collected data from each sample site.

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Roof and floor samples should be collected and lab results interpreted so as to determine the potential for encountering acid- and/or toxic-forming waste rock. This will then facilitate the plan for disposal of such material within the Waste Rock Storage Facilities.

Recommendations

The applicant must identify the projected locations of annually collected roof, floor and mid-seam samples. The sample locations should be depicted on Maps CM-10808-WB and CM-10807-WB.

(Part IV) Analysis

The applicant has committed to properly bury or otherwise treat all acid- and/or toxic-forming materials within 30 days of initial exposure at the mine site (page 4-28).

Recommendations

None.

djh  
AT23/15-18