



**PACIFICORP**  
ELECTRIC OPERATIONS

**ONE UTAH CENTER**

201 SOUTH MAIN • SUITE 2100 • SALT LAKE CITY, UTAH 84140-0021 • (801) 220-2000

October 7, 1991

Ms. Pamela Grubaugh-Littig  
Permit Supervisor  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

**RE: NOV 91-20-2-1 MODIFICATION ABATEMENT PLAN, PACIFICORP ELECTRIC OPERATIONS, DES BEE DOVE MINE, ACT/015/017 #2**

Dear Pamela:

I am enclosing the runoff volume calculations and installation summary of the proposed waterbar containment of the Des Bee Dove haul road pad. Your timely response is appreciated in order to complete the abatement prior to the November 8, 1991 deadline.

If there are any questions, please call Guy Davis at 653-2312 or me at 220-4584.

Sincerely,

*Guy Davis (for)*

J. Blake Webster  
Permitting Administrator

GD/dw  
Enclosure

cc: Larry LaFrentz

**RECEIVED**

OCT 11 1991

DIVISION OF  
OIL GAS & MINING

## DES BEE DOVE HAUL ROAD PAD CALCULATIONS

**RAINFALL TOTAL:** 2.0 INCHES (10 YR/24 HR EVENT)  
FROM US DEPARTMENT OF COMMERCE, NOAA  
ATLAS 2, 1973

**CN:** 98  
FROM SCS NATIONAL ENGINEERING HANDBOOK,  
1972, SECTION 4, HYDROLOGY

**RAINFALL RUNOFF VOLUME:**  $Q = \frac{(P - 0.2S)^2}{P + 0.8S}$

**WHERE:**

P = 2.0 INCHES

$S = \frac{1000}{CN} - 10 = .204$

Q = 1.90 INCH/FT<sup>2</sup>

PAD AREA = 1.94 ACRES = 84,506 FT<sup>2</sup>

TOTAL RUNOFF = 13,380 CU.FT.

6.31 FT<sup>2</sup> OF PAD AREA = 1 CU. FT. RUNOFF  
VOLUME

**WATERBAR SPACING:**

**FOR WIDER 1.43 ACRES**

AVERAGE WATERBAR LENGTH - 125 FT.

125 FT. WATERBAR WILL HANDLE RUNOFF OF  
1712 FT<sup>2</sup> OF AREA

SPACING OF WATERBARS APPROXIMATELY  
EVERY 14 FT.

**FOR NARROW .51 ACRES**

AVERAGE WATERBAR LENGTH - 25 FT.

25 FT. WATERBAR WILL HANDLE 342 FT<sup>2</sup> OF AREA

SPACING OF WATERBARS APPROXIMATELY  
EVERY 14'

## **INSTALLATION SUMMARY:**

### **WATERBAR INSTALLATION:**

**Waterbars will be cut to a 1.0 ft. depth at 14 ft. spacing. The cut material will be bermed on the west edge of the cut. (See Typical Cross-Section.) Waterbars will be cut with no slope to contain the 10 yr/24 hr event. Waterbars will begin near the outside edge berm and extend to near the guardrail.**

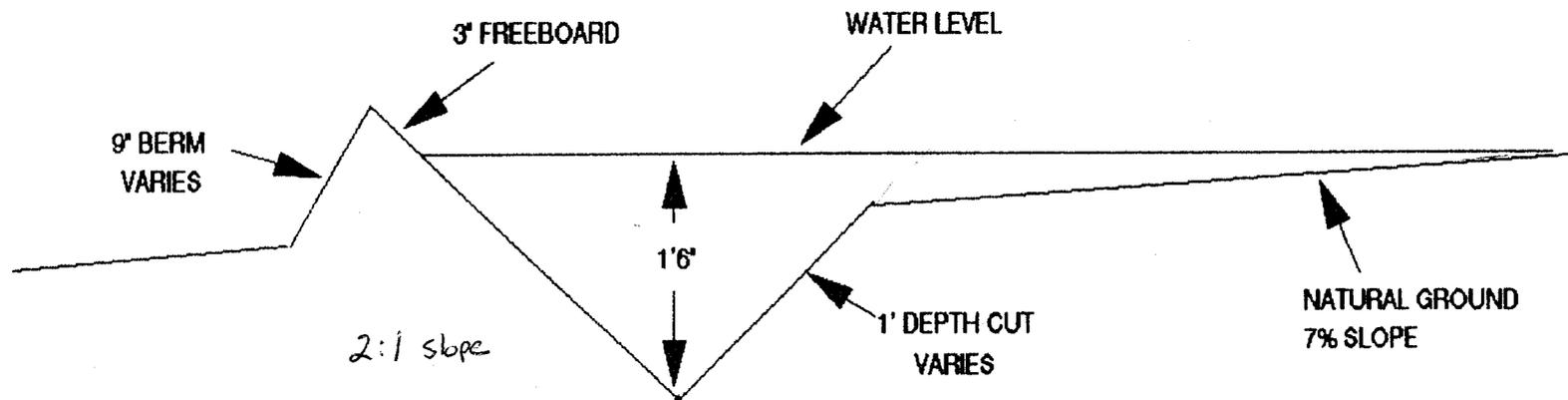
### **BERM INSTALLATION:**

**The berm will be installed approximately 6 ft. from the outslope. Equipment can not safely work closer to the outslope than this distance. Berm will be approximately 2 ft. high. (See Typical Cross-Section.)**

### **SEEDING:**

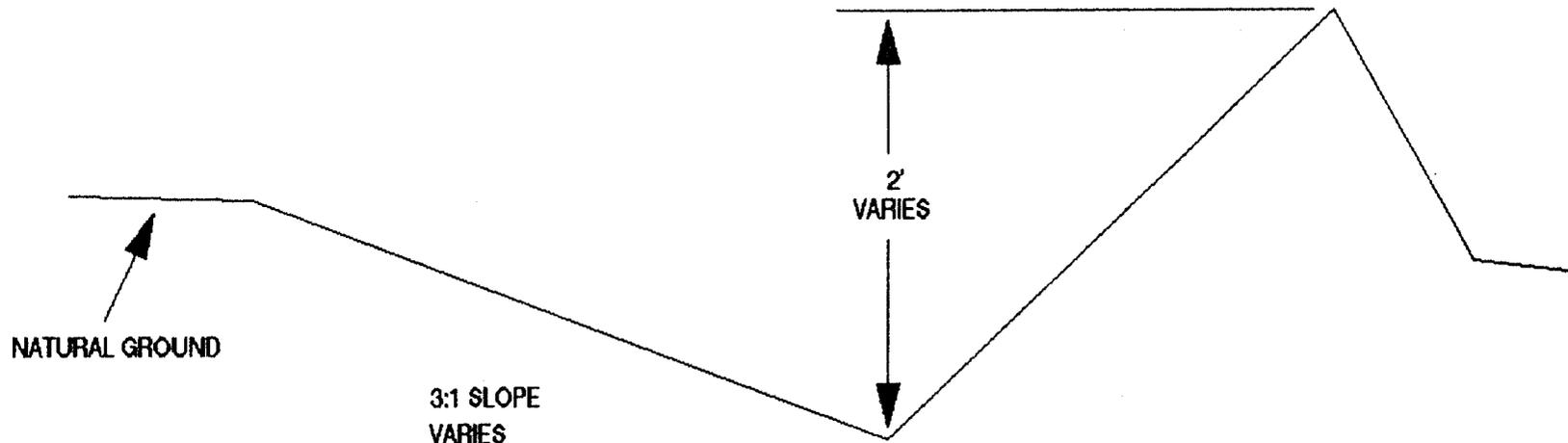
**The berm and waterbars will be seeded with the approved seedmix and seeding method.**

DES-BEE-DOVE HAUL ROAD PAD  
WATERBAR - TYPICAL CROSS SECTION



\* NO SCALE

DES-BEE-DOVE HAUL ROAD PAD  
BERM - TYPICAL CROSS SECTION



\* NO SCALE