

0058

FILE
ACT 015/08B
#3

UTAH POWER & LIGHT COMPANY

1407 WEST NORTH TEMPLE STREET

P. O. BOX 899

SALT LAKE CITY, UTAH 84110

February 23, 1983

RECEIVED
FEB 23 1983

DIVISION OF
OIL, GAS & MINING

Ms. Mary Boucek
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Dear Mary:

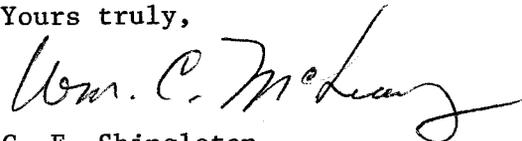
In response to Tom Munson's request, we have refigured the runoff calculations for the diversion ditch around the Wilberg waste rock disposal site No. 2 using the 25 year, 24 hour precipitation event. As this exceeds the requirements of UMC 817.43(b) we request a letter from the Division stating that you specify the larger event.

The attached drawing shows the approximate location of the 4.5 acres to be diverted.

The N.O.A.A. data shows the 25 year, 24 hour precipitation to be 2.0 inches at this location which is about 39°17'30" latitude and 111°07' departure (Section 35, T17S, R7E SLM).

Should you require further information please call me.

Yours truly,



C. E. Shingleton
Director of Services
Mining and Exploration

for

CES:BMcQ:bb:3770

Encl.

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RUNOFF CALCULATION

DIVISION OF
OIL GAS & MINING

Given:

1. Area 4.5 acres
2. 25 year, 24 hour event - 2.0 inches
3. SCS runoff curve number - 79

$$Q = \frac{(P-0.2 S)^2}{P + 0.8 S} = \frac{2.0-0.2 \cdot 2.65}{2.0+0.8 \cdot 2.65} = \frac{2.16}{4.12} = .524''$$

$$Q = .52'' = \text{runoff}$$

$$q_p = \frac{0.681 \cdot A \cdot Q}{L = .13} = \frac{0.681 \cdot 4.5 \cdot .52}{.13} = \frac{1.59}{.13} = 12.26 \text{ CFS}$$

L = 7% slope 1000 feet distance

Temporary diversion to carry 12.26 second feet is sized at 1.0 foot deep and 2.0 feet wide.

Manning equation for channel capacity of the 1.0' deep, 2.0' wide ditch is:

$$Q = \frac{1.49}{n} AR^{2/3} S^{1/2} = \frac{1.49}{.023} \times 2 \times .63 \times .36$$

$$Q = 29.4 \text{ CFS}$$

= 16.87 cfs

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2-23-83