

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Ground Water Branch
P.O. Box 4217
Albuquerque, New Mexico
Feb. 9, 1962

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Mr. Dean Meyers
H-1 LASL
P.O. Box 1668
Los Alamos, New Mexico

Dear Sir:

The following information is in reply to our telephone conversation on February 6, 1962, concerning the burial of radioactive wastes at a maximum depth of 60 feet at waste pit Area C, near 10-site. The information was compiled by William D. Partymun.

The soil cover on the surface of the mesa prevents most of the water on the surface from infiltrating the underlying tuff. Where the soil has been removed or disturbed, water might infiltrate the underlying tuff and open joints in the tuff. Beneath the soil there is about 850 feet of the Bandelier tuff which consists of a series of ash fall and ash flows of a friable to welded rhyolite tuff. This tuff is underlain by about 575 feet of volcanic debris of the Puye Conglomerate. The main zone of saturation occurs in the Puye at a depth of about 1,300 feet. Perched water may occur above the main zone of saturation, although none was encountered in test well 8 located 1.5 miles northeast of Area C.

There is no serious objection to the burial of radioactive wastes in holes 60 feet deep at Area C, although several precautions should be taken. They are:

- 1) Solid wastes should be packaged for normal underground burial;
- 2) Liquids and sludges should be contained so no leakage occurs;
- 3) The soil zone on the mesa should be disturbed as little as possible near present and future waste disposal areas. After the holes are filled, the surface should be sealed with 2 to 3 feet of packed clayey soil;
- 4) Adequate erosion and drainage maintenance should be provided;
- 5) The holes should be drilled at least 100 feet from the edge of the mesa at Area C.



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The principal concern is to prevent water from carrying the radioactive materials to the underlying bodies of ground water.

A letter containing geologic and hydrologic information of a proposed reactor site location in 10-site Canyon, just east of water pit Area C was sent to C. W. Christenson on August 18, 1961.

WIP/mvm

Yours very truly,

cc: C. W. Christenson

John H. Abrahams
John H. Abrahams
Soil Scientist