



Pacific Northwest Laboratories
P.O. Box 999
Richland, Washington U.S.A. 99352
Telephone (509)

Telex 15-2874 375-3764

November 10, 1987

Paul Goldberg
Nuclear Regulatory Commission
MS-623-SS
Washington DC 20555

Dear Mr. Goldberg:

We have been working on a computer code for the past several years in support of the Basalt Waste Isolation Project (BWIP) at Hanford. We would like to use this experience in the areas that fit your needs, i.e., application to the design of waste packages for disposal in geological formations.

The GEOTHER/VT4 code is being used by Westinghouse Hanford Company for BWIP designs. The code is a derivative of GEOTHER as originally developed by the U. S. Geological Survey. Considerable modifications were made to it for BWIP use. The attached abstract gives a brief description of the type of analysis performed using the code. The code can model both 2-D and 3-D geometries.

In addition to BWIP applications, we are creating a new version suitable for broader applications. Non-condensable gas is being added to the code. It will be able to simulate a near-field environment with liquid and vapor water, air and/or methane. The development work is being completed.

If the above described work can be of any use to you, we would like to talk with you in more detail.

Sincerely,

A handwritten signature in cursive script that reads "S. H. Bian".

S. H. Bian, Ph.D.
Senior Research Engineer
Fluid and Thermal Science Section

SHB:bjn

Enclosures

8712030115 871110
PDR WASTE
WM-10
PDR