



Department of Energy
Washington, D.C. 20545

JAN 18 1979



Mrs. Madelyn Grant Brown
4357 W. Summit Street
Lakewood, NY 14750

Dear Mrs. Brown:

Thank you for your letter of January 4, 1979, regarding a possible method for correcting the defect in the high-level waste tank 8D2 pan which was recently detected at the Nuclear Fuel Services, Inc. site in West Valley.

By copy of this letter I am forwarding your letter to the U.S. Nuclear Regulatory Commission for their consideration, since assuring the safety of the tanks falls within their area of responsibility.

The Department of Energy study group is very pleased that you found the December 16, 1978, Public Informational Conference at West Valley to be enjoyable and informative. Thank you for your interest and willingness to help in finding solutions to the various aspects of the Western New York Nuclear Service Center.

Sincerely,

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G. K. Oertel, Acting Director
Division of Waste Products

cc: Lee Rouse, Acting Chief,
Fuel Reprocessing and
Recycle Branch, NRC

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4357 W. Summit Street
Lakewood, N.Y. 14750
January 4, 1979

Mr. Raues
Nuclear Regulatory Commission
c/o Dr. Goetz K. Oertel, Acting Director
Division of Waste Products
Office of Nuclear Waste Management
Mail Station B-107
U.S. Department of Energy
Washington, DC 20545

Dear Mr. Raues:

Remembering what you said about the leak in the "saucer", I read the Companion Report. On page 3-28, paragraph 3.3.2.1 it says "Each tank rests on a 30-cm layer of perlite blocks, which in turn is supported by a 7.6-cm layer of pea gravel contained in a carbon steel pan. The pan rests on a second 7.6-cm layer of pea gravel on the vault floor. Under the concrete vault is a 1.2-m layer of pea gravel that is kept saturated with water,.....".

With that in mind, and looking at the drawing on page 3-30, I can't understand how the leak in the saucer was detected by using water. However, since you said that that was how the leak was detected, I will have to accept it as stated.

You also said the location, size and shape of the hole were unknown. To those unknowns, for me I must add temperature and pressure. I am assuming that the temperature must be extremely high.

If there's any way to correct the leak I would like to help if I can. I have an idea; it's an outcome of looking at TV commercials for unplugging stopped drains that show a clog of grease and hair. That, it seems to me, in reverse, is what is needed.

Here's what I've been thinking: the leak that was discovered indicates a flow, and that in turn denotes the effect of gravity. To that add very high temperature, and here's how I thought a clog might be created: using a heavy (gravity) viscous liquid (like the grease) and adding to it particles (like the hair), I wonder if a mixture of mercury and un-uniformly crushed industrial diamonds might flow to the hole and seal it.

I surely hope it would work.

I enjoyed the meeting at West Valley December 16, 1978. It was very informative.

I wish you the best of good luck.

Yours truly,

Madelene Grant Brown

Madelene Grant Brown
(Mrs. Warren F. Brown)