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BMBP:RAD

September 24, 1954

Mr. John E. Rose, Director
Radiological Physics Division
Argonne National Laboratory
P. O. Box 299
Lemont, Ill.

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Dear Mr. Rose:

I am writing to amplify my phone discussion with you on the question of I-131 in the September 21 rain at Argonne.

As you probably surmised, it appears from the best information available to us in Washington that this is debris from the recent Russian shot. It was expected to reach the West Coast on September 22, but it is not surprising to find the prediction a little inaccurate. This gives us fresh debris to work with, from which we are hoping to get further information on the importance of I-131 to our Project Gabriel.

You saw in Neutronics, and have perhaps heard through other sources, that considerable I-131 was taken up by animal and maybe human thyroids following Castle. While the quantities were not appreciable as a hazard in themselves, they were high compared with the Sr-90 uptake expected from the same fallout. For Gabriel estimates, I-131 may be a greater hazard than Sr-90 even at many thousands of miles. Therefore, we are giving more serious thoughts to I-131 and are planning a fairly extensive set of measurements to give us insight into route of uptake during the next Nevada tests. Whatever information we get in advance will greatly aid the planning. For example, if most of the I-131 is in solution rather than in particles, pertinent experiments can be carried out in greenhouses during the winter; if particles predominate, more reliance must be placed on field tests with actual debris.

Yours very truly,

Robert A. Dudley
Biophysics Branch
Division of Biology and Medicine

CLASSIFICATION CANCELLED
BY AUTHORITY OF DOE/OC
Jose Diaz 6/2/81
REVIEWED BY DATE
Wilbur A. Strauser 6/3/81
REVIEWED BY DATE

BY: W. Tench 6/11/87

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