



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TEXT

JAN 16 1980

Miss Michele Pacilio
c/o Setauket School
Main Street
Setauket, NY 11733

Dear Michele,

I am writing in response to your letter to Commissioner Hendrie regarding the accident at Three Mile Island. I regret that this answer to your letter has been delayed. The accident and its consequences have created a substantial increase in the agency's workload, which has prevented me from responding to you as promptly as I would have liked to.

The very small dose of radiation that was received by people in the area came from radioactive gases that escaped from the auxiliary building. The average dose of radioactivity received by the population within 50 miles of Three Mile Island was approximately 4 millirems. The maximum exposure to any individual was less than 100 millirems, which is less than the yearly dose each person receives as a result of natural background radiation. Doses at these levels result in less than one health effect over the lifetime of all people in this area. Natural background radiation received by people in the Harrisburg, Pennsylvania, area is approximately 125 millirems per year. To put these doses into perspective, it should be noted that a traveler flying round trip in a jet between New York City and Los Angeles receives 5 millirems from cosmic rays in the natural background.

The radioactive materials that were released were primarily radioactive gases. The radioactivity was almost entirely from xenon, which is a chemically inactive gas. As the gases leaked out, the winds diluted them. To determine if food grown in the area was contaminated, the Department of Energy measured the amounts of radioactivity present in the samples of soil, water, air, and vegetation.

Based on these samples and on other information, it was concluded that the principal isotopes in the escaped gases were xenon-133 and xenon-135. Although radioactive iodine was found in samples of some milk, the concentration was

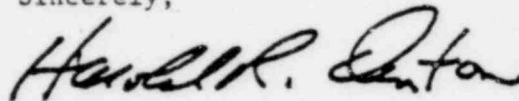
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less than 1% of the concentration permitted by NRC regulations. Other food samples were tested by the U.S. Food and Drug Administration, and none of the 377 food samples tested contained reactor-produced radioactivity.

I appreciate your concerns and assure you that every effort is being made to ensure the continued protection of the health and safety of the public, not only at the Three Mile Island Station, but also at all nuclear power plants.

Sincerely,

A handwritten signature in cursive script, reading "Harold R. Denton". The signature is written in dark ink and is positioned above the typed name and title.

Harold R. Denton, Director
Office of Nuclear Reactor Regulation