

United States Senate

WASHINGTON, DC 20510

February 17, 1988

Mr. Lando W. Zec, Jr.
Chairman
Nuclear Regulatory Commission
1717 H Street, N.W.
Washington, D.C. 20555

Dear Mr. Chairman:

I am sure that Commission staff have brought to your attention the highlights of our recent Senate Labor Committee hearing in Plymouth, Massachusetts, concerning the problems involved with the proposed re-start of the Pilgrim I nuclear power plant.

You are also probably aware of the investigation which has been launched by the National Institutes of Health concerning the possible relationship between cancer and radiation from nuclear power plants. As NIH Director James B. Wyngaarden pointed out in the attached response to my request for such a study, the NIH inquiry was prompted in part by the reports of increased incidence of leukemia around the Pilgrim plant. These reports were part of the testimony at our hearings.

I am concerned that the Commission may be considering a timetable for deciding whether the Pilgrim plant should be allowed to re-start which does not give adequate consideration to the large number of relevant factors involved. I previously urged you to use your discretionary authority to provide an adjudicatory hearing at which all of these issues could be appropriately aired. Unfortunately, you rejected this approach, leaving the people of Massachusetts, who would stand the most to lose if Pilgrim is permitted to re-start, and their elected state officials, without a formal and meaningful contribution into the re-start decision-making process.

In view of the urgency of this situation, and in light of my responsibilities as Chairman of the Senate Committee responsible for matters relating to the public health and safety, I want to stress the following points for your consideration:

1. Until we receive satisfactory answers to the question whether there is a link between cancer and nuclear power, the Pilgrim plant should not be permitted to re-start.

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2. Until there is an evacuation plan which is approved by the Federal Emergency Management Agency and is acceptable to the Commonwealth of Massachusetts, the plant should not be permitted to re-start.

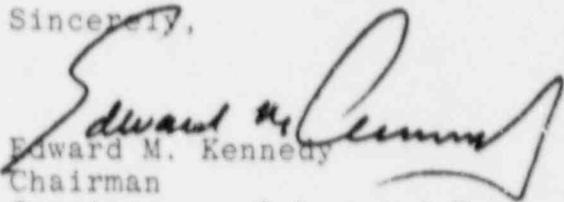
3. Members of the Commission should make an on-site visit to the Pilgrim plant to assess for themselves the merits of the serious health and safety problems which have been raised.

4. Prior to any consideration of whether the Pilgrim plant should be permitted to re-start, Commission members should convene a public meeting to receive first-hand testimony from state and local officials and experts from the Plymouth area.

5. Finally, I request that in my capacity as Chairman of the Senate Committee on Labor and Human Resources, with experience concerning, and responsibility for, the health and safety issues involved, I be given the opportunity to appear before the Commission to present information on this issue, prior to any Commission deliberation on the question whether the Pilgrim plant should be permitted to re-start.

I would appreciate hearing from you at your earliest convenience concerning the Commission's position with respect to these requests.

Sincerely,


Edward M. Kennedy
Chairman
Committee on Labor and Human Resources



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health
National Cancer Institute
Bethesda, Maryland 20892

The Honorable Edward M. Kennedy
United States Senate
Washington, D.C. 20510

Dear Senator Kennedy:

I am pleased to respond to your letter of January 7, 1988 regarding potential health risks associated with low-level radiation. Specifically, you raised concerns about the health consequences of nuclear power plant accidents, adverse effects related to nuclear power plant operations, and cancer risks linked to radioactive fallout from nuclear weapons testing.

The National Institutes of Health is actively involved in studying the adverse effects of ionizing radiation, and we concur with your view that the risks at low levels need further clarification. We know, of course, that radiation can cause cancer, but the biological effects of quite low levels are a subject of current scientific conjecture. Because new information relevant to the assessment of low-level risks will be available within the next one or two years, we do not believe public discussions at this time would be as fruitful as they might be in the future. Our reasoning is discussed below.

The descriptive studies of leukemia clusters around the Pilgrim power plant in Massachusetts, and several plants in the United Kingdom, have led us to initiate a large-scale evaluation of cancer deaths occurring among persons living near the over 100 reactors operating in the United States. We are correlating county mortality data from the 1950s through early 1980s with reactor operations to determine whether the previous reports might be chance occurrences based on small numbers, or whether there might be valid reasons for concern. This evaluation should be completed within about one year.

One of the major radioactive isotopes emitted during nuclear power plant operations, and from nuclear weapons testing, is iodine-131. For the past three years we have been collaborating with Swedish colleagues on a study of 40,000 patients given low doses of iodine-131 for diagnostic reasons. This large study will be finished within one year and will prove invaluable in estimating the possible adverse effects from this environmental contaminant. We have also evaluated descriptive mortality data regarding possible cancer risks in the general population living downwind of the Nevada nuclear test site. While many reported associations are unsupported by these data, a small increase in leukemia in southwest Utah cannot be ruled out at this time. Our contract-supported study with the University of Utah should provide more definitive answers within the next year. Finally, staff members have conducted studies of the military personnel participating at nuclear weapons tests, and have confirmed that leukemia was increased above expectation, but apparently only for participants at one test series. No excess mortality from other malignancies was found among participants at any test series.

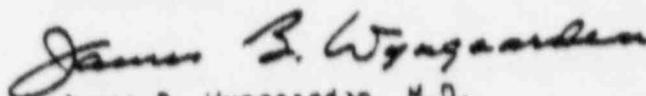
The most serious health impact of the Three Mile Island (TMI) accident that can be identified with certainty is mental stress to those living near the plant, particularly pregnant women and families with teenagers and young children. Although increased risks of cancer, birth defects and genetic abnormalities are potential long-term consequences of low-level irradiation, few if any such effects are likely. The average dose of radiation to the 36,000 people living within a five-mile radius of the plant was only 2-8 mrem, or approximately what might be received from natural background radiation within one or two weeks. There is no serious possibility that this dosage would result in any deleterious effects that could be detected epidemiologically. (In contrast, at Chernobyl in the USSR the average dose to the 24,000 people living near the reactor was estimated as 44,000 mrem.) The Pennsylvania Department of Public Health, in consultation with the Centers for Disease Control, however, is conducting periodic health and behavior surveys of the population living near TMI. Although psychological effects are temporary in most individuals, the ultimate impact of these effects remains to be fully assessed, as does the degree to which they may differ from those caused by other accidents or disasters. The mental stress following TMI, of course, has been aggravated by the fear that a larger release of radiation might take place, with consequences that could be disastrous as now exemplified by the Chernobyl accident. While we are thankful that such an event has not occurred in the United States, we should profit from these experiences by taking steps to minimize the risks of such accidents in the future.

Finally, within two years the National Academy of Sciences and the United Nations will complete their next reports on the biological effects of low-level radiation. We are also awaiting the publication of these scientific documents before embarking upon our next revision of the Radioepidemiological Tables mandated by Congress.

It is important to stress that useful information about very small health effects, like those associated with very low levels of radiation, is extremely difficult and expensive to obtain. An indirect approach, such as studying populations with higher-level exposures and extrapolating the results to lower levels, tends to be far more productive. For example, studies of the workers at nuclear power plants would be particularly informative because the doses, though low, would be higher than to the general population, and cumulative doses could reach levels where radiation effects might be detectable. By law, radiation doses are recorded on individual workers, and we have contacted the Nuclear Regulatory Commission about the value of creating a registry of the almost 100,000 workers they monitor each year in the United States. Your encouragement and support for the development of such a registry would be invaluable and greatly appreciated.

In closing, I appreciate your continued support for our medical research program, and I will keep you informed on developments in the area of radiation studies as results from our investigations become available.

Sincerely,


James B. Wyngaarden, M.D.
Director