



University of Pittsburgh

GRADUATE SCHOOL OF PUBLIC HEALTH
Department of Industrial Environmental Health Sciences

December 13, 1976

Dr. Roger J. Mattson, Director
Division of Siting, Health and
Safeguards Standards
Office of Standards Development
United States Nuclear Regulatory
Commission
Washington, D.C. 20555

Dear Dr. Mattson:

I have returned from my vacation leave and am taking care of my correspondence.

The purpose of this letter is to acknowledge the receipt of the material prepared by the staff of the Nuclear Regulatory Commission.

Since Dr. Alice Stewart and George Kneale prepared the technical report and are the principal consultants to the project, any conference or discussion without Dr. Stewart and George Kneale would be most inappropriate. I am sending copies of your letter report to Dr. Stewart and George Kneale.

In your letter report, reference was made to the Battelle Northwest Study by Gilbert.

The statement on page 5 refers to the Hanford analysis by Marks and Gilbert which "resulted in entirely different conclusions than those of the Mancuso paper."

I am enclosing copies of the July, 1975 report by Battelle Northwest which showed a positive association of cancer with radiation, which was not mentioned in your letter.

The second report by Battelle Northwest of July, 1976 referred to by Marks and Gilbert as cited on page 5, when subjected to further review, actually shows positive findings rather than negative findings.

The initial review of this second report by Dr. Alice Stewart and George Kneale and by Dr. Robert Elston, showing that the results are not negative as has been advanced, is enclosed.

I believe it is appropriate at this time to review with you the various steps which were taken by us, so that the chronological sequence of our efforts can be placed in proper perspective.

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On September 22, 1976 we advised ERDA of the positive findings and requested a meeting with their staff to review the findings, prior to presentation of the paper at the Health Physics Society Meeting in Saratoga, New York.

On September 27, 28 and 29, we called in experts for review and presented the data to Hanford representatives.

On October 4, Dr. Stewart and George Kneale presented the findings at ERDA headquarters to their staff. At that time, ERDA did not elect to bring in any of their technical experts for that meeting designed for that purpose.

On October 6, Dr. Stewart and George Kneale presented the findings in a seminar in the auditorium of the Bureau of Radiological Health, who had invited at our request representatives of other governmental agencies, including the National Cancer Institute, the Environmental Protection Agency, the National Institute of Occupational Safety and Health, as well as the staff of the Bureau of Radiological Health, and other interested scientists.

On October 11, Dr. Stewart presented the paper before the Health Physics Society. This was limited to 15 minutes. At that time, Battelle Northwest requested the privilege of presenting a rebuttal which was presented by Dr. Sidney Marks which referred to the Gilbert, July, 1976 report.

Between October 11 and October 20, we submitted the draft copy of the paper prepared for publication to scientists for further review.

So in essence, prior to the presentation by Dr. Stewart at the meeting October 11 and subsequently, we have proceeded to carry out those steps we thought were appropriate.

For your information, we are arranging a meeting at the University of Pittsburgh with ERDA representatives at the end of January (1977), when Dr. Stewart and George Kneale will be here to present our own analyses and review suggestions made.

In light of your letter report, we are now extending an invitation to you and your staff to meet with Dr. Stewart and George Kneale around the middle of February at the University of Pittsburgh to review the comments from your agency.

Sincerely,

Tom + Mamm...
Thomas F. Mancuso, M.D.
Research Professor

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cc: Dr. William A. Mills
Dr. Nathaniel Barr
Dr. Morris Shore
Dr. Thomas Mason
Dr. Sidney Marks
Dr. Lauriston Taylor
Dr. Irwin Bross
Dr. Victor Archer
Dr. Thomas Cochran
Dr. Brian MacMahon
Dr. George Hutchison
Dr. Charles Land
Dr. Seymour Jablon
Dr. Alice Stewart
Mr. George Kneale
Dr. Niel Wald
Mr. John Thompson

Enclosures

PROPORTIONAL MORTALITY ANALYSIS OF HANFORD DEATHS

Progress Report by E. S. Gilbert, July, 1976.

Critique by G.W. Kneale and A.M. Stewart

This paper is really concerned with two distinct albeit related questions, and this should be borne in mind when making comparisons with the paper by Mancuso, Stewart and Kneale. The two questions are, (i) is there a health hazard for Hanford workers (cause unspecified, and resulting diseases unspecified), and (ii) is low level radiation specifically carcinogenic.

These are related questions because, in the event of the second one being answered strongly in the affirmative there would certainly be a health hazard for Hanford workers, and it would certainly take the form of "extra" cancer deaths. However, a negative answer to the first question would not preclude a positive answer to the second one since the co-existence of a small radiation hazard with other hazards causing "extra" non-cancer deaths (and some of the chemicals used in the production of plutonium and other radiation products might have this effect) could easily make the cancer effects of the radiation hazard unrecognisable in a study of proportional mortality rates.

The methodology used in answering the first question cannot be faulted except for the usual caveats about proportional mortality analyses, e.g. (i) the comparability of the base population and the test population, and