STATE OF NEW YORK
DEPARTMENT OF HEALTH

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COMMISSIONER

EXECUTIVE DIVISION
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SPECIAL ASSISTANT TO THE COMMISSIONER
FOR RADIOLOGICAL HEALTH

JAMES H. LADE M.D.

May 2, 1961

Mr. W. F. McCool,
Secretary,
U. S. Atomic Energy Commission,
Washington 25, D. C.

Att: Director, Division of
Licensing and Regulation

Dear Mr. McCool:

We have reviewed the "Notice of Proposed Guides" relating to evaluation of proposed sites for nuclear power and test reactors. We feel that establishing some guide for reactor sites is desirable.

It appears desirable to clarify the 300 rem emergency dose to the thyroid from iodine and to consider modification of the factors in evaluating reactor sites.

The proposed guide considers a 300 rem thyroidal dose from iodine as a conservative value for accidental or emergency conditions. The British Medical Research Council has given consideration to biological effects of different levels of exposure. The Council has recommended that the maximum daily intake of I^{131} attributable to an accident and in the period following it should not exceed a total thyroid irradiation of 25 rads. Reference to a conservative value implies that this may be an emergency acceptable dose with little risk of any somatic effect on the exposed group.

The National Academy of Sciences Summary Reports of 1960 "The Biological Effects of Atomic Radiation" suggests a high sensitivity of the child's thyroid to carcinogenesis. This guide indicates that the 300 rem value is related to an atmospheric exposure of an individual. Would this same value be considered applicable where ground deposition of radioiodine may occur and the uptake of this radionuclide is via milk, food or water?

It is suggested that the proposed guide include an evaluation of land usage such as industrial, agriculture and public watershed areas. Such factors would be of public health importance affecting larger areas and other population groups due to ground deposition of radioactive materials.

Very truly yours,

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James H. Lade M.D.

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