104 Davey Laboratory
The Penn. State University
University Park
Pa,, 16802

50-341

13 July 1981

Director, Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C.
20555

Dear Director:

Attached are my comments on the Draft Environmental Statement on the operation of the Enrico Fermi Unit 2, (NUREG-0769). Please note that the opinions and calculations are my own, and not necessarily those of The Pennsylvania State University, which affiliation si given for identification purposes only.

1 should note that I requested a copy of the draft from Document Control on 23 June, but did not receive it until 10 July. It is particularly distressing to see the "Rebaselining" that is done in this Draft without the kind of Peer Review that the NRC recognized was necessary for WASH-1400 in its January 18, 1979 "NRC Statement on Risk Assessment and the Reactor Safety Study Report in light of the Risk Assessment Review Group Report". (P. 3).

I hope these comments are useful in developing the Final EIS required by NEPA.

Sincerely,
William A. Lochstet
W.A. Lochstet, Ph.D.

C0025
1/1

The Long Term Health Consequences of Enrico Fermi, Unit 2

by

William A. Lochstet

The Pennsylvania State University*

July 1981

The Nuclear Regulatory Commission(NRC) has attempted to evaluate the health consequences of the operation of the Enrico Fermi Atomic Power Plant, Unit 2, in its draft Environmental Statement NUREG-0769. The health consequences of the radon-222 released from the mill tailings and the open pit mines are evaluated for the first 1000 years from now in Appendix C. This evaluation suggests (Page C-8) that the radon emissions increase after the first 500 years have elapsed. There is no suggestion that there is any reason to believe that these emissions will stop at that time, or after 1000 years.

The fact is that these radon emissions are governed by the 80,000 year half life of thorium-230 and the 4.5 billion year half life of uranium-238. The thorium situation has been adequately discussed by Pohl (Search, 7(5),345-350, August 1976). The impact of the uranium-238 as a source of radon was recognized in GESMO (NUREG-0002)(1976) and is discussed in the Final Environmental Statement for the Split Rock Mill (NUREG- 0639 Pages A-57 to A-60). The result is that the uranium in the mill tailings is estimated to cause 200,000 deaths, for the amount of activity to generate the fuel for one 1000 Mwe plant operating at 80 % capacity factor. This is the generic case taken in the Draft, NUREG-0769.

* The opinions and calculations presented here are my own. and not necessarily those of the Pennsylvania State University. My affiliation is given here for identification purposes only.