104 Davey Laboratory
The Penn1 State Univ.
University Park
Pa., 16802

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 Comanche Peak Station, Units 1 and 2, NUREG-0775. Please note that the opinions and claculations are my own, and not necessarily those of the Pennsylvania State University, which affiliation is given for identification purposes only.

I 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 inconsistant to see the discussion of accidents in section 5.8.2 without the kind of peer review that the NRC admitted was necessary as related to WASH-1400 in its January 18, 1979 statement: "NRC Statement on the Risk Assessment and the Reactor Safety Study Report in light of the Risk Assessment Review Rroup Report" (Page 3).

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

Sincerely,

William A. Lochstet

W.A. Lochstet, Ph.D.

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The Long Term Health Consequences of Comanche Peak, Units 1 and 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 Comanche Peak Steam Electric Station, Units 1 and 2, in its Draft EIS, NUREG-0775. 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 the present in section 5.8.3. This evaluation suggests that the radon releases will increase with time, and gives no suggestion that they will decrease or stop after 1000 years. There is no reason to stop at 1000 years.

In fact, these radon releases 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 discussed by Pohl (Search, 7(5), 345-350, August 1976). The impact of radon from the uranium-238 was recognized in GESMO (NUREG-0002), (1976) and is discussed in the Final Environmental Statement for the Split Rock Mill (NUREG-0639, at pages A-57 to A-60). The result is that the activity necessary to supply one 1000 MWe plant at 80% capacity factor with fuel for one year, leaves behind uranium mill tailings that are estimated to cause 200,000 deaths due to radon-222 emissions. This is much more than the consequences listed in the Draft, NUREG-0775.

* 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.