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19 August 1982

Uranium Recovery Licensing Branch
U.S. Nuclear Regulatory Commission
Washington, D.C., 20555



Dear NRC:

Enclosed are my comments on the Draft Environmental Statement related to the operation of the Teton Project, NUREG-0925.

Please note that the information presented here are my own, and not necessarily those of the Pennsylvania State University.

I hope that these comments are useful in developing the Final Environmental Statement. Would you please also send me a copy of that Final EIS when it is available.

Sincerely,

William A. Lochstet

Wm. A. Lochstet, Ph.D.



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Some Long Term Health Consequences of
Teton Project
by
William A. Lochstet
The Pennsylvania State University*
August 1982

The Nuclear Regulatory Commission has attempted to evaluate the health consequences of operation of the Teton Project solution mining operation in its Draft, NUREG-0925.

In section 2.2.1.5 there is a comparison of the coal and nuclear fuel cycles based on NUREG-0332. NUREG-0332 was issued as a draft for public comment in September 1977. A final version, reflecting public comments was never prepared. Furthermore, this report (Draft) is based on a mixture of deep mines and pit mines. This is inappropriate for a solution mining operation.

The analysis presented in these drafts (NUREG-0332 and NUREG-0925) is incorrect because they ignore the long term effects from radon generated by the radioactive decay of uranium-238 thru several steps to radon-222. This impact was recognized by the NRC in GESMO (NUREG-0002), and can also be found in the final NUREG-0564 at pages B-33 to B-38. The result is that the major environmental impact arises from the depleted uranium from the enrichment process. The decay of this uranium-238 thru several steps, to radon-222 is the largest and most important health impact. The impact of the fuel cycle to support one 1000 Mwe plant for one year is 400,000 deaths.

It is noted that the radon emissions for solution mining are less than for either open pit or shaft mining.

* The information presented here does not necessarily reflect the position of the Pennsylvania State University, which affiliation is given here for identification purposes only.

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