

Food and Drug Administration
Rockville MD 20857

APR 12 1982

50-184

Mr. James H. Wilson
Licensing Project Manager
Office of Nuclear Reactor Regulations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Wilson:

The Bureau of Radiological Health staff has reviewed the Draft Environmental Statement (DES) related to license renewal and power increase for the National Bureau of Standards Reactor, NUREG-0877, dated January 1982. We have the following comments to offer:

It is recognized that the NBS reactor has been operating at 10-MW since June 1970, and during this time has maintained the individual radiation doses as low as reasonably achievable (ALARA). Increasing the power level to 20-MW operation would be within the original design of this facility. At this power level, it is anticipated that there would be some increase in radiation levels for maintenance personnel, but any radiation doses would remain within the current radiation protection standards.

The impact of plant accidents is presented in Section 4.3 and summarized in Section 4.3.9. In the summary, it is stated that the most severe accident was a loss of coolant with resultant release of tritium into the confinement building basement. Using conservative assumptions such an accident would result in a tritium concentration at the nearest site boundary of 6.2×10^{-7} uCi/ml during the first two hours. This concentration is about three times the (MPC)^a of Appendix B, Table II, Column 1. In our view, Section 4.3 should be expanded by adding a discussion on emergency preparedness which would include the facility's emergency radiation plan as well as actions that have been taken to coordinate the plan with State and local officials.

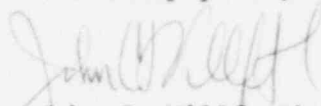
Section 4.1.4 describes the typical gaseous and liquid releases at 20-MW operations. It states that the liquid releases would meet the 10 CFR 20 regulations (1977). The regulations for disposal by release into a sanitary sewerage system have been updated and are set forth in 10 CFR 20.303, dated March 27, 1981. This regulation states that no licensee shall discharge licensed material into a sanitary sewerage system unless it meets the provisions of 10 CFR 20.303(a), (b), (c) and (d). It would be helpful if this section and Section 3.8.2 (Control) could be modified to clearly state that they meet current 10 CFR 20 regulations.

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The radiological monitoring program presented in Section 4.5 appears to provide adequate sampling frequency in expected exposure pathways. The analyses for specific radionuclides are considered sufficiently inclusive to verify that the liquid and gaseous emissions meet applicable radiation protection standards.

Thank you for the opportunity to review and comment on this Draft Environmental Statement.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "John C. Villforth". The signature is fluid and cursive, with the first name "John" being more prominent.

John C. Villforth
Director
Bureau of Radiological Health