

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

August 17, 1967

Honorable Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C.

Subject: REPORT ON SAXTON REACTOR

Dear Dr. Seaborg:

At its eighty-eighth meeting, August 10-12, 1967, the Advisory Committee on Reactor Safeguards considered the application by Saxton Nuclear Experimental Corporation for authorization to increase the maximum power level of the Saxton reactor from 23.5 MWt to 35 MWt for a limited time during Core II operation. Operation of Core II at 23.5 MWt was reviewed by the ACRS at its sixty-fourth meeting, July 8-10, 1965, and discussed in a Committee letter dated July 19, 1965. During consideration of the proposed power increase, the Committee has had the benefit of discussions with representatives of Saxton Nuclear Experimental Corporation, Westinghouse Electric Corporation and the AEC Regulatory Staff, and of the documents listed below. A Subcommittee of the ACRS met to review the power increase on August 9, 1967.

The higher power level will permit operation of fuel elements at linear power ratings similar to those of large scale pressurized water reactors now in the design and construction stages. The higher power level operation under consideration is to be limited to the remaining life of Core II. It is estimated that there will be sufficient reactivity to operate about 10 weeks at the 35 MWt level.

The power increase will be accomplished in a number of separate steps, allowing sufficient time between steps to evaluate reactor performance in comparison with predictions for each step. A local linear heat generation rate of 19.1 KW/ft of fuel rod will not be exceeded.

Honorable Glenn T. Seaborg

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The ACRS believes there is reasonable assurance that the Saxton reactor can be operated at the increased power level, as proposed, without undue hazard to the health and safety of the public.

Mr. N. J. Palladino did not participate in the review of this project.

Sincerely yours,

/s/

C. W. Zabel
Acting Chairman

References:

1. Letter from Saxton Nuclear Experimental Corporation, dated January 18, 1967; Change Request No. 25 to the Saxton Technical Specifications; Application for Amendment No. 3 to Operating License; and Safeguards Report for the Saxton Reactor Operating at 35 MWt, dated December, 1966.
2. Letter from Saxton Nuclear Experimental Corporation, dated June 27, 1967, and Amendment No. 1 to Change Request No. 25.