

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

July 8, 1961

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

Subject: REPORT ON SAXTON NUCLEAR EXPERIMENTAL PROGRAM

Dear Dr. Seaborg:

At its thirty-fifth meeting on July 6-8, 1961, the Advisory Committee on Reactor Safeguards considered the Saxton Reactor Facility on the basis of the documents referenced below, and discussion with representatives of Westinghouse Electric Corporation, Pennsylvania Electric Company, Metropolitan Edison Company, Jersey Central Power and Light Company, Gilbert Associates Inc., and the staff of the AEC. Prior to this an ACRS Subcommittee visited the site of the Saxton Reactor Facility on June 23, 1961. The Saxton Reactor Facility was also the subject of letters from the Committee dated September 14, 1959, and September 26, 1960.

The Saxton Reactor is a relatively small light-water moderated and cooled pressurized water reactor located on an acceptable site. In many respects the Saxton Reactor is similar to the Yankee and Belgian reactors, also designed by Westinghouse. At this time, an initial operating license is requested covering only the start-up program including operation up to the rated power level of 20 MW(t), but not covering the planned five-year post-construction research and development program.

The Committee notes that the minimum calculated burn-out safety factor for steady-state condition is somewhat above two and for all transients likely to occur is not significantly below two.

Since a large amount of reactivity has to be controlled by a small number of control rods, each rod has to be of high worth and there is the possibility that the reactor can be made critical by complete

Honorable Glenn T. Seaborg

-2-

July 8, 1961

withdrawal of a single control rod. A system involving manually set limit switches is provided to prevent excessive rod withdrawal and to provide an adequate shutdown margin.

The Committee concluded that the Saxton Reactor Facility can be operated, through its start-up program delineated above, without undue hazard to the health and safety of the public.

Dr. Leslie Silverman did not participate in the reviews or discussions of this project.

Sincerely yours,

/s/

T. J. Thompson  
Chairman

References:

Final Safeguards Report, undated, received April 26, 1961.

Answers to Questions asked by ACRS July 7, 1961, on Saxton Reactor Plant, undated, received July 7, 1961.

Amendment #6 to License Application, dated June 9, 1961.

Amendment #7 to License Application, dated June 30, 1961.