

1

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
UNITED STATES ATOMIC ENERGY COMMISSION  
WASHINGTON 25, D.C.

December 10, 1960

Honorable John A. McCone  
Chairman  
U. S. Atomic Energy Commission  
Washington, D. C.

Subject: PEACH BOTTOM ATOMIC POWER STATION -  
PHILADELPHIA ELECTRIC COMPANY

Dear Mr. McCone:

At its thirtieth meeting on December 7-10, 1960, the Advisory Committee on Reactor Safeguards reviewed the status of the research and development program on the advanced gas-cooled reactor as related to current design and construction plans for the Peach Bottom Reactor. Present at the discussions on December 8 were representatives of General Atomics Corporation, Bechtel Company, Philadelphia Electric Company and the AEC Division of Licensing and Regulation. The reference material listed herein had previously been made available to the Committee.

The Committee continues to be optimistic that a reactor of the general type proposed in the advanced gas-cooled concept can be constructed and operated at the Peach Bottom site without undue risk to the health and safety of the public. General Atomics has embarked on an extensive research and development program related to this reactor. The initial results from this program appear to be favorable.

However, there are many questions that remain to be answered by the research and development program which is still in its early stages. Several of these questions are in areas which could require major changes in the present design concepts and could conceivably change our early optimism. For example, the long-term integrity of the graphite under the proposed design conditions, which lie far outside past experience with graphite, has yet to be established. Also, the experimental data required to determine that the fission products

December 10, 1960

emitted continuously from the homogeneous fuel components can be collected, stored and disposed of safely have yet to be developed. A novel design is proposed for the control rod system, but the development is not yet sufficiently advanced to permit adequate evaluation of its reliability. The applicant has not provided either a secondary back-up safety system or an emergency coolant system but has not yet established to the satisfaction of the Committee that these systems are unnecessary. The relatively large assumed Doppler coefficient has yet to be confirmed.

In view of the foregoing, the Advisory Committee on Reactor Safeguards is not now prepared to go beyond its original conclusion reached in our letter to you under date of March 14, 1960, that the Peach Bottom site is suitable for a reactor of this general design and power level.

Sincerely yours,

/s/

Leslie Silverman  
Chairman

References:

Application of Philadelphia Electric Company, Part A General Information, Peach Bottom Atomic Power Station, undated, received July 28, 1960.

Application of Philadelphia Electric Company, Part B Preliminary Hazards Summary Report, Peach Bottom Atomic Power Station, Vol. I - Plant Description and Safeguards Analysis, and Vol. II - Site and Environmental Information, undated, received July 28, 1960.

Amendment #1 to the application of Philadelphia Electric Company, dated September 27, 1960.

Supplement to Site Evaluation Report - Peach Bottom Atomic Power Station, undated, received March 8, 1960.

cc: A. R. Luedecke, GM  
W. F. Finan, AGMRS  
H. L. Price, DL&R