

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 BROOKHAVEN HIGH FLUX BEAM RESEARCH REACTOR

Dear Dr. Seaborg:

At its thirty-fifth meeting on July 6-8, 1961, the Advisory Committee on Reactor Safeguards considered the proposed construction of a 40 MW(t) High Flux Beam Research Reactor at Brookhaven National Laboratory. The Committee had the benefit of discussions with representatives of Brookhaven National Laboratory, AEC staff and others.

In September of 1960, the ACRS concluded that the location at Brookhaven National Laboratory of a reactor of the general type proposed would not create an undue hazard to the health and safety of the public if suitable containment of the pressure resulting from a maximum energy release is provided.

At this time, designs are further advanced although incomplete in several important areas. Brookhaven plans to initiate construction this summer.

The containment design is predicated on confining all radioactive material resulting from the release of all energy available in the system though no accident which would be of this severity has been postulated. Although BNL is still investigating possible accidents, the above containment design is clearly adequate. BNL has indicated that the containment design can be built for approximately the same cost as a conventional building. On this basis, it appears desirable to take advantage of the additional safety provided by full containment.

Further studies by the designers are continuing on fuel element design, control rod mechanism design, coolant flow problems, beam tube structures and other components.

Honorable Glenn T. Seaborg

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The ACRS concludes that studies now in progress should result in designs which will provide reasonable assurance that construction and operation of the proposed reactor at Brookhaven National Laboratory will not present an undue hazard to the health and safety of the public, including site personnel.

Dr. David B. Hall did not participate in the reviews or discussions of this project.

Sincerely yours,

/s/

T. J. Thompson
Chairman

Reference:

Preliminary Hazards Summary Report on the Brookhaven High Flux Beam Research Reactor, dated May 1961.