

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

July 12, 1958

Dr. Willard F. Libby
Acting Chairman
U. S. Atomic Energy Commission
Washington 25, D. C.

Subject: GENERAL ELECTRIC TEST REACTOR (GETR)

Dear Dr. Libby:

The Advisory Committee on Reactor Safeguards reviewed, at its Eighth Meeting, July 10-12, 1958, the proposal of the General Electric Company to operate the General Electric Test Reactor. The Committee had previously offered advice on this reactor at its Second Meeting, November 1-3, 1957, in connection with the General Electric request for a construction permit. In its current review, the Committee had access to the reports referenced below and discussed the proposal with representatives from both the General Electric Company and the Hazards Evaluation Branch.

The GETR is a pressurized water reactor operating at 33 Mw (Thermal) located at the General Electric Vallecitos Atomic Laboratory, Pleasanton, California. A large body of information and experience exists on the nuclear, hydraulic, and mechanical behavior of the components of pressurized water reactor systems. The primary area of uncertainty, with regard to reactor safety, now concerns the transient response of this type of reactor to rapid additions of excess reactivity. Pertinent information is now being obtained as part of the SPERT program. However, in this interim period, considerable guidance as to reactor dynamics can be obtained from existing Borax and SPERT data. The ACRS believes that operation of this reactor, considered separately from the intended experimental program, presents no greater hazard than many other reactors now approved for operation.

A judgment as to the continuous safe operation of this reactor including its testing function presents an additional problem because of the inability to define precisely the specific characteristics of the future experimental program. Relatively more dependence must be placed upon the sound judgment of the operators of test reactors than

July 12, 1958

upon that of operators of reactors for which less flexibility is required. While it is hoped that in the future more flexible definitions of the areas for the independent action on the part of operators for testing reactors will be developed, the ACRS believes that the General Electric Company has proposed reasonably acceptable limitations within which the GETR staff may take action independent of prior AEC approval.

The Advisory Committee on Reactor Safeguards thus advises that the GETR may be operated as a testing reactor as proposed by the General Electric Company without undue hazard to the public.

Sincerely yours,

/s/

C. Rogers McCullough
Chairman

cc: Paul F. Foster, GM
H. L. Price, DL&R

References:

Amendment No. 3 to License Application
for GETR, 2/26/58

Amendment No. 4 to License Application
for GETR for: Experimental Facilities
5/15/58

Amendment No. 5 to License Application
for GETR, 6/18/58

HEB Staff Report on GETR, 6/27/58