

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

United States Atomic Energy Commission

Washington 25, 1959

July 25, 1959

Honorable John A. McCone

~~Chairman~~

U. S. Atomic Energy Commission

Washington 25, D. C.

Subject: SPERT-II REACTOR

Dear Mr. McCone:

At its Seventeenth Meeting, July 23-25, 1959, the Advisory Committee on Reactor Safeguards reviewed the design of the SPERT-II Reactor. In addition to the information referenced below, a summary of SPERT-I test results was presented by a representative of the National Reactor Testing Station.

SPERT-II is an experimental heterogeneous, water cooled and moderated reactor designed for operation at a pressure of 375 psig at 400°F. The facility may use either light or heavy water coolant or moderator. SPERT-II will be used as a transient test facility and will involve reactivity insertions above prompt critical.

Due to the nature of the test program SPERT-II will be operated closer to failure conditions than conventional power reactors. Safe operation with this type of program depends largely on the competence of the operating personnel. In the opinion of the Advisory Committee on Reactor Safeguards the SPERT staff has demonstrated its competence in this regard by satisfactory performance of similar experiments on SPERT-I.

The SPERT staff has proposed that experiments of even moderate hazard be suspended under adverse weather conditions so that exposure of persons off site to harmful doses of radiation is extremely unlikely. The Committee concurs in this proposal.

The Advisory Committee on Reactor Safeguards concludes that the SPERT-II reactor can be operated without undue hazard to the health and safety of the public. The Committee notes that information being developed from the SPERT tests is extremely valuable to the safe design of reactors throughout the reactor program.

Honorable John A. McCone

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Dr. Richard L. Doan did not participate in the discussion and recommendation in this case.

Sincerely yours,

C. Rogers McCullough  
Chairman

cc: A.R.Luedecke, GM  
H.L.Price, DI&R

References:

- 1) IDO-16491 - SPERT-II Hazards Summary Report, February 17, 1959.
- 2) Division of Licensing and Regulation Report to the ACRS on the SPERT-II Reactor, April 28, 1959.
- 3) Comments on Meteorological aspects of SPERT-II Hazards Summary Report prepared by Special Projects Section, Office of Meteorological Research, U. S. Weather Bureau, May 4, 1959.
- 4) Office Memorandum from G. Victor Beard, Division of Biology and Medicine on SPERT-II, May 12, 1959.