

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
United States Atomic Energy Commission
Washington 25, D. C.

July 25, 1959

Honorable John A. McCone
Chairman
U.S. Atomic Energy Commission
Washington 25, D. C.

Subject: RADIATION EFFECTS REACTOR (RER)

Dear Mr. McCone:

At its Seventeenth Meeting, July 23-25, 1959, the Advisory Committee on Reactor Safeguards considered the Radiation Effects Reactor which is to be operated by Lockheed for the Air Force. Because of the nature of the planned experimental program this reactor is essentially uncontained and unshielded. The present facility design is such that in order to permit personnel access to the operating area the reactor must be stopped and started frequently thereby increasing the risk. Nevertheless, in the opinion of the Committee, operation of the reactor at this isolated site appears to be acceptable.

We find, however, that the controls and instrumentation are not yet suitable for a 10 megawatt reactor with the above characteristics. Power levels should be restricted to 1 megawatt until this situation is remedied.

The Committee is concerned with the problem of a new and inexperienced laboratory and feels that some months of experience should be accumulated at power levels not to exceed 3 megawatts thermal before routine operation at 10 megawatts. It would be very desirable that this restriction to reduced power operation should continue at least until inspections comparable in objectives to those of the Atomic Energy Commission have been arranged.

After the above conditions have been met, the Committee believes that the reactor may be operated at 10 megawatts thermal without undue risk to the health and safety of the public.

Sincerely yours,

C. Rogers McCullough
Chairman

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

July 25, 1959

References:

- 1) LAC 147 - Radiation Effects Reactor Safeguards (Hazards Summary Report, 15 January 1958)
 - 2) LAC Memorandum dated 5 April 1959 - "Result Summary of Air, Dust, and Soil Measurements made during One Megawatt Operation of the Radiation Effects Reactor".
 - 3) LAC Memorandum (ANP 59-596) with Enclosures "A" through "E" - received by ACRS 30 June 1959:
 - Enclosure A - Maximum Credible Accident Re-Evaluation
 - " B - Safety Features of the Lockheed Radiation Effects Reactor
 - " C - Consequences of a Power Overshoot in RER
 - " D - Operational Summary - Radiation Effects
 - " E - GNL Test Articles Reactor
- Note: Changes to Enclosure "B" received by ACRS 9 July 1959 - Reactivity Insertion Rate in RER.
- 4) LAC Memorandum of 1 July 1959 - "Transmittal of Safeguards Information on Lockheed Radiation Effects Reactor" received by ACRS 9 July 1959.
 - 5) DLR Report to ACRS on the Lockheed Radiation Effects Reactor, July 8, 1959.