

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

August 16, 1966

Honorable Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C.

Subject: REPORT ON ESADA VALLECITOS EXPERIMENTAL SUPERHEAT REACTOR (EVESR)

Dear Dr. Seaborg:

At its seventy-sixth meeting, on August 11-13, 1966, the Advisory Committee on Reactor Safeguards reviewed Proposed Change No. 17 for the ESADA Vallecitos Experimental Superheat Reactor (EVESR). The Committee had the benefit of discussion with representatives of the General Electric Company and the AEC Regulatory Staff, of a Subcommittee meeting on August 3, 1966, and of the documents listed.

The principal proposed changes in Technical Specifications include:

1. Increase in maximum allowable specific power from 33 to 50 watts/gram UO_2 .
2. Increase in allowable non-standard fuel, changed criteria regarding the amount permitted, and use of BWR-type fuel.
3. Increase in maximum allowable clad temperatures.
4. Changes in control-rod materials, worth, and withdrawal pattern.

Item 4 above and proposed modifications in piping supports will decrease the already low probability and the potential consequences of a severe reactivity accident, and thus result in enhanced public safety.

Items 1-3 will permit the use of fuel elements of more advanced design than those previously used. These changes may increase the probability of fuel failures during normal operation, but experience with similar fuel at EVESR and elsewhere indicates that the failure rate should not be excessive. Moreover, EVESR has been operated successfully with intentionally as well as unintentionally defected fuel. Some problems have been encountered with the efficiency of the off-gas charcoal filter under service conditions. Accordingly the licensee has pursued a vigorous program of filter system improvement and performance surveillance. The Committee recommends that the AEC Regulatory Staff continue to follow this program closely.

August 16, 1966

The allowable number of "experimental" and/or "new" fuel bundles, or combinations, and the technical basis for the limits, need to be clarified. The Committee recommends that this be resolved by the Regulatory Staff and the licensee.

The Committee believes that the EVESR facility can be operated as proposed without undue hazard to the health and safety of the public.

Sincerely yours,

/s/

David Okrent
Chairman

References:

1. Proposed Change No. 17, with attachments, dated June 3, 1966.
2. Letter dated June 30, 1966 from B. D. Wilson, General Electric Company, to Dr. R. L. Doan, AEC, with enclosed "Supplement to Proposed Change No. 17".
3. Letter dated July 21, 1966 from B. D. Wilson, General Electric Company, to Dr. R. L. Doan, AEC, with attachment.
4. Letter dated August 4, 1966 from L. H. McEwen, General Electric Company, to Dr. R. L. Doan, AEC, with attachments.