

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

February 8, 1960

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

Subject: GENERAL ELECTRIC VALLECITOS BOILING WATER REACTOR (GEVBWR)

Dear Mr. McCone:

At its twenty-third meeting on January 28-30, 1960, the Advisory Committee on Reactor Safeguards reviewed the General Electric Vallecitos Boiling Water Reactor Final Hazards Summary Report, SG-Val-2 up to and including the Third Edition; the Amendments to License Application for Vallecitos Boiling Water Reactor up to and including Amendment #43; the Division of Licensing and Regulation Reports to the ACRS on Reactor Safeguards on GEVBWR up to and including the one dated January 12, 1960; and the material presented at this meeting by representatives of the General Electric Company.

The reactor control rods have two features which might cause difficulties: 1) a pneumatic system for the rod motion and 2) sliding seals on the rod shafts. The Committee anticipates satisfactory operation of the control rods because of the applicant's past experience with this type of mechanism and because of his stated intent to:

- a) Use a separate pneumatic system for each set of two rods;
- b) Test initially, at operating temperature and pressure, at least one pair of the rods sufficient times to obtain reliable statistics on drop time, and the remaining rods sufficient times to show that all rods behave in a similar way;
- c) Eliminate conventional lubricating oil from the pneumatic scram system and to minimize the oil explosion hazard from this system.

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The multiple purpose nature of the plant inherently results in a somewhat unusual number of interlocks and administrative procedures to insure that each component fulfills at any given time its required function. This places a heavy responsibility on the operational management.

The Committee believes that the worth of the control rods for each substantially different core should be measured and evaluated during core loading in terms of the excess reactivity possibly available in that core loading, and in terms of any possible malfunction of the control rods to insure an adequate shutdown margin under foreseeable conditions. This may limit or preclude certain types of operation.

The exclusion area is being used for agricultural purposes. The problem of the use of a reactor exclusion area for purposes unrelated to reactor operation is obviously applicable to many other sites. The Committee believes that such use is compatible with the health and safety of the public in many cases, including the case of the Vallecitos Boiling Water Reactor, and recommends that the required monitoring rules for people, crops, livestock, and equipment be established.

The Committee believes the plant can be modified as proposed, and operated in accord with the above without undue hazard to the health and safety of the public.

Sincerely yours,

/s/ Leslie Silverman

Leslie Silverman
Chairman

cc: A. R. Luedecke, GM
H. L. Price, DL&R
W. F. Finan, OGM

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Subject: GEVBWR

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References:

- 1) SG-VAL-2, Third Edition - Final Hazards Summary Report, November 30, 1959.
- 2) Amendment No. 43 to License Application for Vallecitos Boiling Water Reactor, January 22, 1960.
- 3) Report to ACRS by Division of Licensing and Regulation dated January 12, 1960.
- 4) General Electric Company letter to H. L. Price dated November 7, 1959.
- 5) U. S. Weather Bureau Comments on SG-VAL-2, Third Edition, dated January 8, 1960.
- 6) Memorandum from J. E. Turner to E. R. Price, Subject - Vallecitos Boiling Water Reactor, Amendment #41 dated January 29, 1960.