

Subject Files

50-302

DEC 15 1972

R. S. Boyd, Assistant Director for Boiling Water Reactors, L

REACTOR PLANT INFORMATION REGARDING COMMISSIONER RAMEY'S MEMO TO L. M. MUNTZING

Attached is the pertinent information which you requested with respect to Aguirre, Crystal River Unit 3 and Indian Point Unit 2 in regard to Commissioner Ramey's memo to L. M. Muntzing regarding burden of proof.

Original signed by
R. C. DeYoung

R. C. DeYoung, Assistant Director
for Pressurized Water Reactors
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Aguirre

Commissioner Ramey's statement that "Regulatory consultants (U.S. Geological Survey) interpreted the criteria (seismic) to require the applicant to prove 'beyond a reasonable doubt' geologic inactivity at the Aguirre site in Puerto Rico" is an accurate quote of a statement made by USGS in their report to the Regulatory staff (submitted by letter from H. Coulter to W. Gammill, dated July 18, 1972). However, this was not the main thrust of the USGS report. The principal point made was that the data and information presented by the applicant could be interpreted to indicate recency of movement of a fault near the site. The Regulatory staff did not use the 'beyond a reasonable doubt' wording in its subsequent report to the ACRS.

Commission Ramey's statement concerning the commitment in Mr. Muntzing's letter of September 11, 1972, that the staff would clarify the intent of the proposed seismic criteria as requiring the applicant to make a "reasonable investigation" is an accurate quote. I discussed the status of the clarification work with W. Morrison of Regulatory Standards who informed me that RS had planned to do this in November, but that more pressing work had prevented doing so. RS still intends to change this criteria to make the clarification.

See attached letters for background.

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Crystal River Unit 3

In the Crystal River Unit 3 steam system design there are no isolation valves in the main steam piping between the steam generator and the turbine stop valves. The turbine stop valves also act as main steam stop and containment isolation valves. Most other pressurized water reactor plants have isolation valves outside and close to the reactor containment building. A few plants such as the Oconee Units and Rancho Seco have the same valve arrangement as Crystal River Unit 3, but their steam lines from the reactor building to the reactor stop valve are designed to Category I (seismic) requirements. Such is not the case for Crystal River. In comparison to all other recent generation plants, the Crystal River system is unique.

The safety concern is that ground accelerations of the Category I (seismic) magnitude could possibly result in the failure of all four main steam lines without means of isolation resulting in blowdown of the entire secondary steam system with the consequent release of secondary radioactivity. Of even greater concern is that a rapid cooldown of the primary system would occur possibly leading to a return to power of the reactor core with the further possibility of substantial fuel damage and direct release of primary radioactivity to the atmosphere. This concern was further amplified because of recent piping failures in steam systems at Turkey Point and Surry.

The steam system as described above for Crystal River Unit 3 was reviewed and accepted during the CP review in 1968. Consequently, any design changes required in this system would be backfit items subject to the requirements of 10 CFR 50.109. Up to now, we have not attempted to process a formal backfit recommendation through the Commission. There is some doubt that the staff can demonstrate that backfitting will provide a substantial, additional protection which is required for the public health and safety.

On September 21, 1972, we forwarded a letter to the applicant with respect to our position on this matter. We stated that the applicant "may proceed with the design and procurement of suitable steamline isolation valves for subsequent installation in appropriately designed Class 1 portions of the steam lines during the first refueling outage of Unit 3 . . . Alternatively, you may attempt to demonstrate that such backfit modifications to the steam system are not necessary".

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Indian Point Unit 2

With respect to Indian Point 2, the Final Environmental statement discusses at length the Staff analysis and conclusions that long-term operations as proposed by the Applicant has a high potential for serious irreversible damage to the aquatic biota of the Hudson River and other areas which depend upon it for recruitment of their biota. This position is not in accord with that of the Applicant, and the Staff has accepted the burden of defending its position. A hearing is now in progress before an Atomic Safety and Licensing Board on these issues, with the Staff giving direct testimony on its analyses and evaluations.

The major staff recommendation on the licensing of this plant is that operation with once-through cooling can be authorized for a limited period (5 years) because there is an acute need for the plant's power and the environmental damage from such operation for this limited time is believed to be susceptible to recovery, but that long-term operation would be acceptable only with a closed-cycle cooling system. The Staff discussion notes that these assessments can not be made with complete assurance as to the environmental impacts, but that the risks are real and have a high probability. It is not the Staff position that there be closed-cycle cooling unless the Applicant can show it is not needed; rather, it is that operation of the plant requires closed-cycle cooling (for the long term), based on a positive assessment of the situation and not just a presumption that closed-cycle has not been shown to be unnecessary. Any Applicant has the right to ask for a new review based on new information, and it is noted in the Staff summary that it will appropriately consider any new data the Applicant has to offer.

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