JUL 20 1971

Docket No. 50-133

Pacific Gas and Electric Company
ATTN: Mr. Frederick T. Searls
Vice President and General
Counsel
77 Beale Street
San Francisco, California 94106

Gentlemen:

On June 19, 1971, the AEC adopted interim acceptance criteria for the performance of emergency core cooling systems (ECCS) for light-water nuclear power plants. A copy of the Commission's interim policy statement on this matter is enclosed for your information. In accordance with Section IV.C.1(b) of the policy statement, you are requested to submit analyses of the performance of the ECCS presently installed in Humboldt Bay Unit No. 3 using methods equivalent to the evaluation model in Appendix A, Part 2 of the policy statement as soon as practicable, but not later than January 1, 1972, to determine the extent of compliance with the criteria of Sections IV.A and B of the statement.

The information we need regarding these analyses is outlined below:

1. Provide curves of peak clad temperature and percent clad metal water reaction as a function of break size for the various combinations of ECC subsystems evaluated by applying the single failure criterion to the active components involved in the emergency cooling process. A discussion should be included showing the justification for the ECC subsystem combinations used in the evaluation.

2. For several breaks that typify small, intermediate and large breaks, provide curves of (a) peak fuel clad temperature for various fuel rod groups within a fuel bundle, (b) core coolant flow, (c) fuel channel inlet and outlet quality, (d) heat transfer coefficients, (e) reactor vessel water level, and (f) minimum critical heat flux ratio (MCHFR), all as functions of time. Indicate the time that rated core cooling flow is initiated, the time the fuel channel becomes wetted based upon item 4 of Appendix A, Part 2, and the time that the temperature transient is terminated.

3. For the analyses performed in 1 and 2 above, discuss the range of peaking factors studied and the basis for selecting the combination

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that resulted in the most severe thermal transient. Curves of peak clad temperature vs time for the range of peaking factors studied should be included.

4. Discuss in detail any deviations in the evaluation model used in the foregoing studies from that described in Appendix A, Part 2 of the Commission's interim policy statement.

In the event these analyses show that the Humboldt Bay Unit No. 3 facility is not in compliance with the criteria of Sections IV.A and B, you are requested to submit a program of improvements and a schedule for effecting them prior to July 1, 1974, together with anticipated performance information on the improved system as indicated in items 1-4 above, as soon as practicable but not later than July 1, 1972.

You are requested to make, as soon as practicable, such interim improvements in operating techniques as are practical and worthwhile in improving emergency core cooling system performance or reliability. Please inform us of any such actions taken. In addition, in accordance with Items IV.C.1(b)(3) and (4) of the statement, you are requested to submit a proposed augmented inservice inspection program to provide additional assurance of continued primary coolant system integrity, to propose appropriate additions to your primary system leakage detection system to provide at least two different methods of detection, and to propose technical specifications that reduce allowable rates of identified and unidentified leakage to the lowest practical values. These interim measures should be effected promptly and reported to the AEC not later than October 1, 1971.

When each of the information items requested has been prepared, please send us 60 copies. When we have completed our review of this information for the Humboldt Bay Unit No. 3 ECCS, we will contact you regarding the results of our evaluation.

Sincerely,

Original Signed by
Peter A. Morris

Peter A. Morris, Director
Division of Reactor Licensing

Enclosure:
AEC Interim Policy Statement

cc. Mr. Philip A. Crane, Jr.
Pacific Gas and Electric Company
245 Market Street
San Francisco, California 94106

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Form AEC-318 (Rev. 9-53) AECM 0240

☆ U.S. GOVERNMENT PRINTING OFFICE: 1970—407-758

MEMO ROUTE SLIP
Form AEC-93 (Rev. May 14, 1947) AECM 0240

☐ See me about this. ☐ For concurrence. ☐ For action.
☐ Note and return. ☐ For signature. ☐ For information.

TO (Name and unit)	INITIALS	REMARKS
Harold L. Price		Letters addressing implementation of the AEC's interim policy statement on ECCS to:
	DATE	1. Consumers Power (Big Rock Point) 2. Pacific Gas & Electric (Humboldt Bay)
TO (Name and unit)	INITIALS	REMARKS 3. Dairyland Power (LACBWR) 4. Yankee Atomic (Yankee Rowe)
	DATE	5. Saxton Nuclear (Saxton) 6. So. Cal. Edison (San Onofre) 7. Connecticut Yankee (Haddam Neck)
TO (Name and unit)	INITIALS	REMARKS are attached for your approval to dispatch.
	DATE	All of these plants, which were licensed prior to January 1, 1968, have emergency core cooling systems installed. Some may meet the interim acceptance criteria.
FROM (Name and unit) P. A. Morris		REMARKS We believe it important to initiate their ECCS review and effect interim measures to protect against or mitigate a LOCA.
PHONE NO. 7301	DATE 7/14	(Same w/R&E exhibit) 7/19/71

USE OTHER SIDE FOR ADDITIONAL REMARKS

GPO : 1968 O—294-619