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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 1 1967

IN REPLY REFER TO
Docket No. 50-275

Pacific Gas and Electric Company
245 Market Street
San Francisco, California 94106

Attention: Mr. Richard H. Peterson
Senior Vice President &
General Counsel

Gentlemen:

This refers to your application for a construction permit and facility license for a nuclear power plant to be located at the Diablo Canyon site. The Advisory Committee on Reactor Safeguards indicated that additional information would be required for the Committee to continue its review. Accordingly, a list of comments and questions from the Committee is attached.

The Committee has indicated that it may have additional questions, particularly on the thermal and hydraulic design aspects.

You are requested to provide the information requested as an amendment to your application. We shall be available to discuss and clarify any of the aspects of the foregoing with you.

Sincerely yours,

Peter A. Morris, Director
Division of Reactor Licensing

Enclosure:
ACRS Questions

cc: Mr. J. P. Stadelman
Westinghouse Atomic Power Division
P. O. Box 355
Pittsburgh, Pennsylvania 15230

SEE ATTACHED SHEET FOR OTHER CONCURRENCES.

DRL:RP	DRL:RT	DRL:RP	DRL
RLTedesco/dj	SLevine	RSBoyd	PAMorris
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C-21

ACRS QUESTIONS
NUCLEAR POWER PLANT
FOR THE
DIABLO CANYON SITE

1. Provide more detailed studies on the question of xenon oscillations, including:

   (a) The probability that undamped oscillations may exist.

   (b) What are the uncertainties in this estimate and what are their approximate magnitudes?

   (c) What are the possible ways in which xenon oscillations could be worse than anticipated in magnitude and in their effect on the reactor?

   (d) What are the requirements placed on reactor instrumentation by the xenon oscillation problem? What assurance is available that these will be met?

   (e) What other possible spatial perturbations in power might occur which should be coupled with xenon oscillations in evaluating control and instrumentation requirements?

2. Provide a detailed discussion of heat removal from the core in the presence of failed fuel elements during a loss-of-coolant accident. Include details on the mechanisms which are assumed to accomplish the necessary heat removal prior to recovering the core. Show the degree of conservatism involved in the application of these mechanisms.

3. The part length absorber cluster (PLAC) assemblies are moved under administrative control and would not result in exceeding the design limits on F_q and DNBR provided that (a) administratively-imposed upper travel limits are not exceeded, and (b) rods are moved periodically (every 3 to 5 hrs) and not left for as long as 24 hours without movement. If these provisions are violated, what are the consequences?

4. For rods that experience DNB (for example, see answer to Question V.B.4, pp. 60-63, Amendment No. 3), please indicate the effects on neighboring rods, including the consequences of flow instabilities. The answer should cover two extremes - one with DNB yielding vapor blanketing and gross degradation of the heat transfer coefficient, and the other permitting operation beyond DNB.

5. Discuss in detail all possible positive reactivity effects which might be introduced by fuel motions during the various hypothesized accidents.

6. Evaluate the need and practicality of a seismic scram.

7. Discuss the pros and cons of one strong-motion accelerometer at the plant, versus two or three; consider the installation of accelerometers on the foundation, on the walls of the containment building, and in the ground near the plant.

8. Discuss the adequacy of steam generator isolation provisions under the assumption that several tubes fail during postulated loss-of-coolant accidents. Discuss the adequacy of such isolation provisions under the assumption of large scale failure of the steam generator.

9. Describe the diesel fuel storage and resupply provisions.

10. Describe the radiation protection provisions made in connection with the control room ventilation system.

11. Are the containment system spray nozzles of such design as to assure performance at rated capacity? What evidence is available concerning their performance if sodium thiosulfate precipitates in the nozzles?

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