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MAR 4 1977

Mr. Myer C. Bender, Chairman
 Advisory Committee on Reactor
 Safeguards
 U. S. Nuclear Regulatory Commission
 Washington, D. C. 20555

Dear Mr. Bender:

SUBJECT: DIABLO CANYON SEISMIC DESIGN BASES

This refers to Mr. Fraley's memorandum to me of December 20, 1976, on the seismic design bases for Diablo Canyon. Mr. Fraley's memorandum enclosed a number of ACRS consultant reports on the subject and suggested that the NRC staff and Pacific Gas and Electric Company (PG&E) examine the reports and provide written responses to the technical issues raised therein.

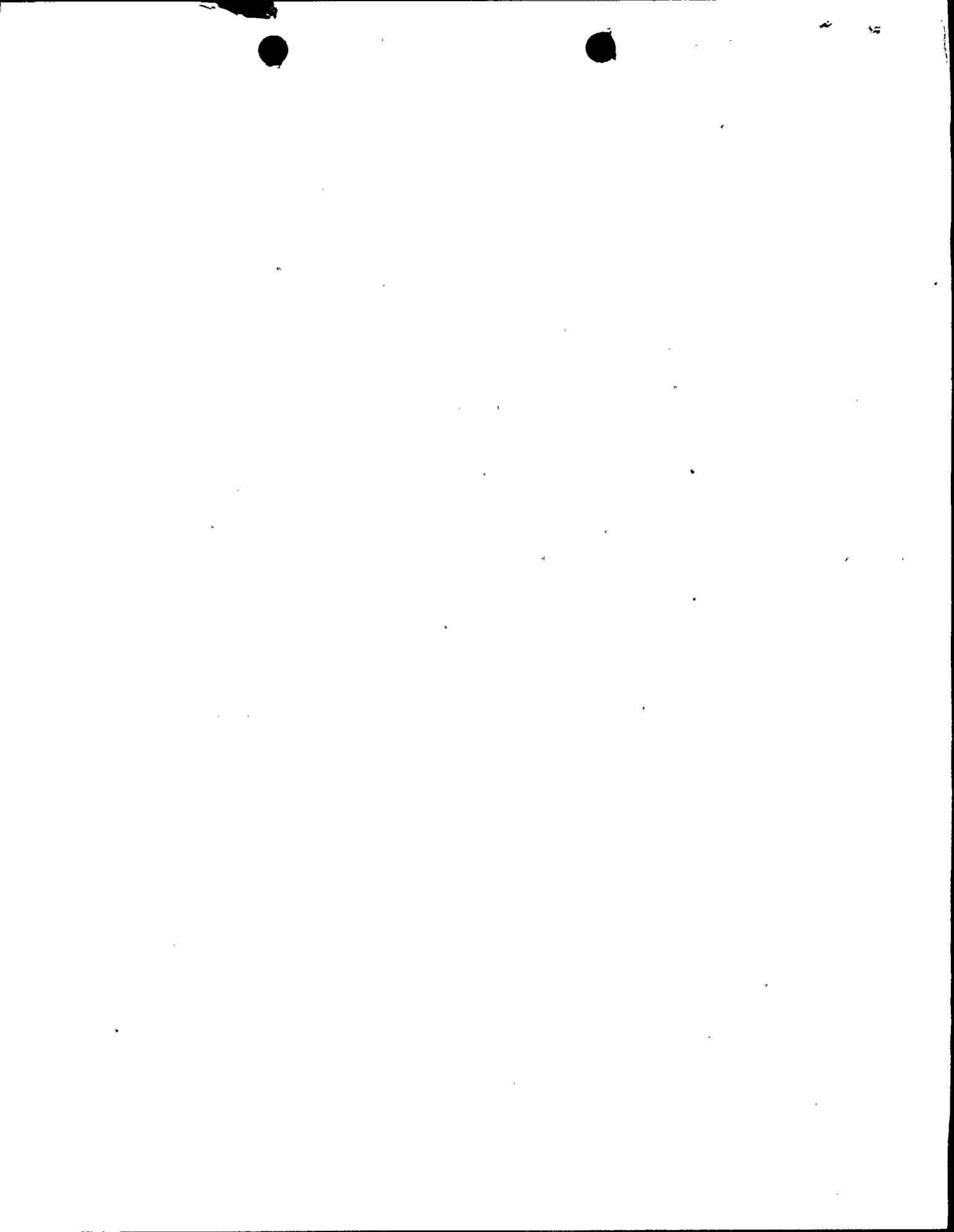
The memorandum and its enclosed reports have been provided to PG&E. It is our understanding that PG&E intends to respond to each of the comments and issues. The NRC staff plans to review the PG&E responses and will provide its comments to the Committee when the review is completed.

In addition, PG&E is performing a number of related studies. The following list, although not comprehensive, includes the studies that we believe are most important in relation to the ACRS consultants' comments:

- (1) Increased and decreased damping
- (2) Importance of the Tau effect
- (3) Sensitivity to a soil structure interaction analysis
- (4) Rocking modes
- (5) Sensitivity to high and low frequency ends of response spectra
- (6) Acceleration

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Mr. Myer C. Bender

MAR 4 1977

We anticipate that PG&E will describe its calculations fully, both for sensitivity studies as well as design calculations. In particular, the contributions of seismic stress to total stress under various loading combinations will be carefully considered.

With regard to probability studies, your consultant, Dr. Trifunac, has recently completed such a study with Dr. Anderson. PG&E's consultant, Dr. Blume, is currently performing a probability study in cooperation with Dr. Allen Cornell. The NRC staff has not made a final decision on whether or not to utilize a probability assessment in its evaluation.

The USGS report on Diablo Canyon discussed at some length the question of potential links between faults that was raised in the letter of November 19, 1976, from the Center for Law in the Public Interest. It is clear from the USGS report that neither confirming nor refuting the potential links would change its view of the magnitude of the design basis seismic event. However, for the record the NRC staff will provide a detailed response to this letter. With regard to Dr. James Brune's letter of November 3, 1976, we are planning to obtain a report from the USGS as a first step in addressing the focusing considerations discussed in this letter. We will provide a written report on both these matters for the Committee's consideration at a later date.

It is our current understanding that PG&E is planning to complete a major part of its reanalysis of the seismic design capability of Diablo Canyon, as well as its responses to Mr. Fraley's memorandum, in time to support a full Committee meeting on both subjects in July 1977. We would like to discuss the plans and schedules for the Diablo Canyon review further with the Committee during your March 1977 meeting.

Sincerely,

Original Signed by
Ben C. Ruscho

Ben C. Rusche, Director
Office of Nuclear Reactor Regulation

cc: Mr. J. Morrissey
Pacific Gas and Electric Company
77 Beale Street
San Francisco, California 94106

Handwritten notes:
3/3/77
Telephone Concurrence from
J. Knight DSS and R. DeYoung DPM
W. Gammill DSE March 3, 1977
D. Williams

(REVISED 3/3/77 PER E. CASE. SEE PREVIOUS YELLOW FOR PREVIOUS CONCURRENCES)

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