JAN 1 1 1974

Docket Nos. 50-275
and 50-323

APPLICANT: PACIFIC GAS AND ELECTRIC COMPANY (PG&E)

FACILITY: DIABLO CANYON UNITS 1 AND 2

SUMMARY OF MEETING HELD TO DISCUSS RECENT OFFSHORE EXPLORATIONS OF USGS AND PG&E

A meeting between representatives of PG&E, USGS, and the AEC was held at the US Geological Survey offices in Menlo Park, California, on January 8, 1974. PG&E was also represented by Douglas H. Hamilton of Earth Sciences Associates, one of their geological consultants. J. Harding of the Friends of the Earth was also present, but did not participate in the meeting. The complete list of attendees is given in Enclosure No. 1.

The purpose of the meeting was to discuss faulting near Diablo Canyon that was discovered during recent offshore geologic mapping performed by both USGS and PG&E in the vicinity of the Diablo Canyon site. USGS conducted extensive work in this offshore area during the Fall of 1973, and in November reported the discovery of a possible fault in this region (see memo from W. P. Gammill to J. M. Hendrie dated November 21, 1973). PG&E performed additional mapping work in this area during December of 1973.

Mr. Holly Wagner of the USGS presented and described the offshore seismic reflection survey in the vicinity of the Diablo Canyon site. The survey design consists of continuous reflection profiles along traverses that are approximately normal to the coast line and are spaced at one-mile intervals. The staff viewed both the seismic reflection recordings and a map showing the locations and trends of three faults and two sea terraces that have been interpreted from the seismic reflection data. For our discussion the faults were referred to as Faults A, B, and C. Each was discussed as follows:

1. Fault A: At its nearest approach, this fault is located about 3 miles southwest of the Diablo Canyon site. It strikes northwest and has a total mapped length of less than one mile. The fault is confined to the Mesozoic geologic section and does not offset the sea floor. It intersects one of the sea terraces, which has a 10 foot change in elevation, at a small angle, and it was at this point of intersection that the original seismic profile (#139) crossing occurred. As a

LB

OFFICE ➤						
SURNAME ➤						
DATE ➤						

consequence of this intersection, fault A was originally believed to offset the sea floor. Subsequent review of the seismic profile and additional profiling show that what was believed to be fault offset of the sea floor is actually a sea terrace which has a height of 10 feet at this point and no offset of bedding.

2. Fault B: This fault trends subparallel to fault A and is about four miles southwest of the plant site at its closest approach. As with fault A, fault B is also contained within the Mesozoic section. Terrace deposits cover the fault in one region and, while it is clear that it does not offset the sea floor, the fault may extend into the terrace deposits. The total mapped length of fault B is approximately six miles.

3. Fault C: This fault also trends subparallel to faults A and B, and is about five miles from the Diablo Canyon site at its nearest approach. It is contained within the Tertiary geologic section, and the youngest formations which are offset by it are Pliocene. There is no evidence that the fault offsets the sea floor in its total mapped length of nine miles.

An offshore geologic feature described in a report by Hoskins and Griffith[1] was also discussed at the meeting. This feature has been mapped by Hoskins and Griffith for a length of approximately 90 miles, at a distance of about 5-6 miles offshore from the Diablo Canyon site. They described it as a fault zone, heading northwest, that separates a major Tertiary sedimentary basin on its west side from Mesozoic rocks on its east side. The staff had previously requested additional information from PG&E on this fault (See questions from the completeness review dated August 13, 1973, and first round questions dated January 4, 1974; both of these requests were sent to PG&E as part of the overall safety review process). The applicant is continuing his investigations of the seismic significance of this feature.

Doug Hamilton presented data from the PG&E sponsered explorations of the same offshore area, and there was good general agreement between these results and the USGS data. Hamilton indicated that he is preparing a final report for PG&E on the findings of the offshore explorations. He mentioned that this report would be available be the first part of February. Holly Wagner said that the USGS report should be finished about the same time.

---

[1] Hoskins, E. G., and J. R. Griffith, 1971, "Hydrocarbon Potential of Northern and Central California Offshore," in Cram, I. H. (editor), Future Petroleum Provinces of the United States -- Their Geology and Potential, Amer. Assoc. Petrol. Geol. Mem. 15, Vol. 1, p. 212-218.

OFFICE ▶						
SURNAME ▶						
DATE ▶						

The staff has evaluated the offshore exploration data obtained to date by USGS and PG&E. As a result of this evaluation, the staff feels that faults A and B are local features which do not represent potential earthquake sources that would produce accelerations at the site which are greater than those produced by the safe shutdown earthquake set forth by PG&E in the FSAR.

Fault C may be related to the larger structural feature described by Hoskins and Griffith; however, its limited extent of nine miles makes it a minor source of potential earthquake activity, regardless of its relation to the Hoskins - Griffith feature. As with faults A and B, the staff feels that accelerations at the site produced by fault C would be well within the limits for which the plant is designed.

Original Signed by

Thomas J. Hirons
Light Water Reactors Group 1-3
Directorate of Licensing

Enclosure:
Attendance List

cc w/encl:
RP Assistant Directors
AEC PDR
Local PDR
RP Branch Chiefs
S. Varga
R. W. Klecker
J. M. Hendrie
TR Assistant Directors
TR Branch Chiefs
R. Cushman
L. Chandler
RO (3)
V. H. Wilson
R. B. McMullen
J. C. Stepp
R. Fraley, ACRS (16)

DISTRIBUTION:
Docket (2)
RP Reading
LWR 1-3 Reading

OFFICE ▶	L:TR	L:TR	L:LWR 1-3			
SURNAME ▶	x7415 CStepp:esp	WPGammill	TJHirons:esp			
DATE ▶	1/ /74	1/ /74	1/ /74			

Original signed by