OCT 14 1981

Docket Nos: 50-275
50-323

MEMORANDUM FOR: George Lear, Chief
Hydrologic and Geotechnical Engineering Branch
Division of Engineering

FROM: Myron Fliegel, Leader, Hydrologic Engineering Section
Hydrologic and Geotechnical Engineering Branch
Division of Engineering

SUBJECT: MEETING WITH APPLICANT TO DISCUSS DAMAGED BREAKWATER

Plant Name: Diablo Canyon Nuclear Power Station, Units 1 & 2
Licensing Stage: OL

A meeting was held with the applicant, Pacific Gas and Electric Company (PG&E), on September 25, 1981 to discuss various approaches available to resolve the staff's concerns relating to the flood protection of the Ultimate Heat Sink intake structure. The staff concerns are a result of damage incurred by the breakwater during severe wave attack in January, 1981. In our safety evaluation, credit was taken for the protection afforded by the breakwater to the intake during the postulated design flood event. Because of the damage sustained by the breakwater, its ability to provide protection to the intake structure has been questioned by the staff.

The following agreements, understandings and conclusions were reached at the meeting.

1. PG&E's analysis of design flood effects on the intake will take credit for the protection afforded by a "degraded" breakwater. PG&E will provide documentation, for NRC review, to show that if left unrepaired after assumed further wave damage, the breakwater would not completely erode. Rather it would degrade to approximately the MLLW level at which elevation it would not sustain further wave degradation.

2. PG&E will analyze the effects on the intake structure of the design flood event. Credit for the breakwater in the degraded condition as agreed to by NRC after evaluation of the material provided as per item 1. above can be taken. Results of the tests performed on the physical model can be used by PG&E. In addition to inundation effects, wave forces on the intake structure will be addressed.

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3. In order to determine the design flood event the following combinations will be investigated and documented by PG&E:

   a. A Probable Maximum Tsunami combined with storm waves of annual severity and high tide with anomaly.

   b. A Maximum Credible Wave Event combined with high tide with anomaly. Several approaches to determining the Maximum Credible Wave Event were discussed.

4. PG&E will address other potential consequences of a degraded breakwater including ship collisions and tribar impacts on the intake.

5. PG&E will provide documentation, to NRC, in the form of a report(s), on the above items.

6. NRC staff and consultant will visit the physical model in order to observe it during tests. Another meeting with PG&E will be held at that time to review progress in resolving this item.

Original Signed by
Myron H. Fliegel

Myron Fliegel, Leader
Hydrologic Engineering Section
Hydrologic and Geotechnical
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Division of Engineering

cc: R. Vollmer
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