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 FACIL: 50-275 Diablo Canyon Nuclear Power Plant, Unit 1, Pacific Gas & Electric Co. 05000275
 50-323 Diablo Canyon Nuclear Power Plant, Unit 2, Pacific Gas & Electric Co. 05000323
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 RECIP. NAME: MIRAGLIA, F.J. RECIPIENT AFFILIATION: Licensing Branch 3

SUBJECT: Discusses field audit of electrical separations conducted in response to NRC 791130 ltr. Audit demonstrated that electrical equipment & sys have been installed in manner which provides independence & separation per FSAR.

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December 4, 1980

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Licensing Branch No. 3
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Docket No. 50-275
Docket No. 50-323
Diablo Canyon Units 1 and 2

Subject: Field Audit of Electrical Separation

Dear Mr. Miraglia:

In response to Mr. Stolz's letter of November 30, 1979, we have conducted a field audit of electrical separations at our Diablo Canyon facility. The audit showed that electrical equipment and systems have been installed in a manner which provides independence and separation as required by the Diablo Canyon FSAR. The audit procedure, audit work sheets, and instructions for conducting the field audit were reviewed by Region V inspectors.

During their review, Region V inspectors did express a concern in their April 10, 1980 letter (Item 8) regarding the audit procedures addressing separation and identification of associated circuits. PGandE's approach to the separation of associated circuits requires that any circuit which utilizes a safety-related electrical raceway be considered an associated circuit and that it be installed using Class IE criteria. Therefore, in addition to circuit and cable identification, all associated circuits are color coded according to their power, protection, or safeguards train. Once identified with a train, the circuit is treated as safety-related and installed accordingly with adequate separation. Associated circuits were, therefore, thoroughly addressed as part of this audit.

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During the audit, approximately 15% of the Class IE circuits and equipment were examined. After an initial review of audit work sheets, it was found that 16 work sheets appeared not to be in compliance with the FSAR criteria. However, further analysis of each of the 16 work sheets showed that while separation criteria based on color coding alone has been violated, closer examination showed that on the basis of mutual redundancy and single failure criteria no violation of regulatory requirements exists. The analysis of audit work sheets is on file describing the apparent discrepancies and the derivation of our conclusion that the electrical separation conforms with the regulatory criteria. All audit work sheets and related documentation are on file in our General Office and are available for inspection if required.

Electrical separation reviews had been performed by PGandE and accepted by the NRC prior to the November 30, 1979 letter. One review resulted from an inspection by Region V. The resultant work had been completed and the item closed as indicated in the Inspection Reports of November 20, 1979 (Item 3b) and April 10, 1980 (Item 2) transmitted by Mr. G. S. Spencer's letters. Another thorough review of equipment and raceway separation was conducted during the Fire Protection Review at Diablo Canyon. This review was documented in Amendment 51 to the Diablo Canyon Operating License Application and answers to the staff on questions relating to that amendment.

As a result of all these audits, we believe that Diablo Canyon meets the regulatory requirements for electrical separation.

Very truly yours,

Philip A. Grane, 

CC: Service List

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