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*Southern California Edison Company*

SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

J. G. HAYNES  
STATION MANAGER

May 15, 1985

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U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region V  
1450 Maria Lane, Suite 210  
Walnut Creek, California 94596-5368

Attention: Mr. J. B. Martin, Regional Administrator

Subject: Docket No. 50-361  
Follow-up Report: Diesel Generator Camshaft Bearing Support  
Bracket Failure  
San Onofre Nuclear Generating Station, Unit 2

- References:
1. SCE 10 CFR 50.55(e) Report to the NRC, Region V, dated September 1, 1981, Diesel Generator 2G003, Engine No. 2, Camshaft Bearing Support Bracket Failure
  2. Bechtel 10 CFR 21 Report to the NRC, Region IV, dated September 15, 1981, same subject

The referenced reports, submitted pursuant to 10 CFR 50.55(e) and 10 CFR 21, respectively, concerned a failure of a camshaft bearing support bracket on Unit 2 Diesel Generator 2G003 in 1981. This letter provides follow-up information on the cause and corrective actions related to this condition.

In 1981, during preoperational testing, it was discovered that the rear end camshaft bearing support bracket and several associated bolts on the left bank of 2G003, Engine No. 2 were broken. The cause of the failure was diagnosed to be improper torquing of the mounting bolts. Corrective action taken was to replace the broken components, and to retorque the bolts within manufacturer's specifications. However, on November 22, 1984, during scheduled six-year maintenance activities, the same type of failure was discovered again on 2G003.

Investigation of the November 1984 failure revealed that the actual cause was that the endsheet bolt holes for the cam bearing support bracket were milled too high. This caused misalignment of the bracket, which, over a period of time, caused the bracket and bolts to break due to cyclical stress induced by the cam rotation. The problem was corrected, with approval from the manufacturer's representative, by enlarging the front bolt holes on the camshaft bearing support bracket, replacing the broken components, and realigning the camshaft within vendor specifications.

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MR. J. B. MARTIN

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The diesel generator was never inoperable as a result of this condition. No evidence of this condition has been discovered on any other Unit 2 or 3 engines during various maintenance activities. The equipment manufacturer, General Motors Corporation, is being notified by the SCE Quality Assurance Organization under separate correspondence.

If you have any questions, please contact me.

Sincerely,

*JG Hynes/HEM*

cc: F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)  
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

Institute of Nuclear Power Operations (INPO)