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November 6, 1987

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206  
ESF Single Failure Analysis  
San Onofre Nuclear Generating Station  
Unit 1

By letter dated October 16, 1987, the NRC was provided with a report describing the significant findings of the then ongoing single failure analysis of the Engineered Safety Features (ESF) for San Onofre Unit 1. The analysis was performed as requested by NRC letter dated September 23, 1986 and resulted from the failure of PT-459 on July 30, 1986. The final report documenting the ESF single failure analysis was committed to be provided by November 6, 1987. The purpose of this letter is to submit the final report for NRC review.

Accordingly, the report entitled, "Engineered Safety Features Single Failure Analysis, San Onofre Nuclear Generating Station, Unit 1," dated November 1987, is enclosed. This report describes the methodology used to perform the single failure analysis and documents the results obtained.

The design of the auxiliary feedwater system used in the analysis is the design which will be implemented at the next refueling outage. It incorporates the addition of a third auxiliary feedwater pump and eliminates the existing single failure susceptibilities of the system. Also, credit was taken for the steam/feedwater flow mismatch trip modifications which will be implemented at the same time.

The design descriptions for the modifications to the auxiliary feedwater system and the steam/feedwater flow mismatch trip will be provided to the NRC by November 20, 1987. Design descriptions for additional modifications, to resolve other single failure concerns identified by this effort, will be

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November 6, 1987

provided with the November 20, 1987 submittal to the extent that they are available. If necessary, a schedule for submittal of additional information will be provided at that time.

If you have any questions or desire additional information regarding this subject, please contact me.

Very truly yours,



Enclosure

cc: J. O. Bradfute, NRR Project Manager, San Onofre Unit 1  
J. B. Martin, Regional Administrator, NRC Region V  
F. R. Huey, NRC Senior Resident Inspector, San Onofre Units 1, 2 and 3

**ENGINEERED SAFETY FEATURES SINGLE FAILURE ANALYSIS**

**SAN ONOFRE NUCLEAR GENERATING STATION  
UNIT 1**

**NOVEMBER 1987**

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SUBJECT: Forwards "ESF Single Failure Analysis, San Onofre Nuclear  
 Generating Station, Unit 1," final rept, per 871016 ltr.  
 Analysis performed per NRC 860923 ltr re failure of PT-459  
 on 860730.

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