

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8710190237 DOC. DATE: 87/10/16 NOTARIZED: NO DOCKET #
 FACIL: 50-206 San Onofre Nuclear Station, Unit 1, Southern California 05000206
 AUTH. NAME AUTHOR AFFILIATION
 MEDFORD, M. O. Southern California Edison Co.
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards description of ESF single failure analysis, per NRC
 860923 request resulting from 860730 failure of PT-59. Final
 rept will be provided by 871106.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 91
 TITLE: DR Submittal: General Distribution

NOTES: ~~License Exp date~~ in accordance with 10CFR2.2.109. 05000206

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID CODE/NAME		LTR	ENCL		ID CODE/NAME		LTR	ENCL
	PDS LA		1	0		PD5 PD		5	5
	BRADFUTE, J		1	1					
INTERNAL:	ARM/DAF/LFMB		1	0		NRR/DEST/ADS		1	1
	NRR/DEST/CEB		1	1		NRR/DEST/MTB		1	1
	NRR/DEST/RSB		1	1		NRR/DOEA/TSB		1	1
	NRR/PMAS/ILRB		1	1		OGC/HDS2		1	0
	<u>REG FILE</u> 01		1	1		RES/DE/EIB		1	1
EXTERNAL:	EG&G BRUSKE, S		1	1		LPDR		1	1
	NRC PDR		1	1		NSIC		1	1

TOTAL NUMBER OF COPIES REQUIRED: LTR 21 ENCL 18



Southern California Edison Company

USNRC-DS

1987 OCT 19 A 10:12

P. O. BOX 800
2244 WALNUT GROVE AVENUE
ROSEMEAD, CALIFORNIA 91770

M. O. MEDFORD
MANAGER OF NUCLEAR ENGINEERING
AND LICENSING

TELEPHONE
(818) 302-1749

October 16, 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

In accordance with the request provided by NRC letter dated September 23, 1986 a single failure analysis of the Engineered Safety Features (ESF) for San Onofre Unit 1 has been ongoing. This request resulted from the failure of PT-459 which occurred on July 30, 1986 and which identified a single failure susceptibility of the Reactor Protection System which had not been previously identified. The results of the ongoing analysis have identified several additional scenarios where a single failure can prevent the ESF from performing their function as required for design basis transients and accidents.

On October 7, 1987 NRC notification was made pursuant to 10 CFR 50.72 b (ii) B. to inform the NRC of the existence of these newly identified single failure susceptibilities of the ESF. A conference call with NRC Region V staff was held following the notification to provide a more complete discussion of the affected equipment and postulated scenarios.

On October 9, 1987 a meeting was held with the NRC staff in Bethesda, Maryland to describe the single failure scenarios and to describe actions being taken to ensure continued safe plant operation with the identified scenarios. During this meeting the NRC staff requested that SCE prepare a report to address the information presented during the meeting. The purpose of this letter is to provide the requested report.

Enclosure 1 provides a description of the scenarios for which a single failure of an ESF function will result in consequences not bounded by current analyses. Each scenario includes a specific justification for continued operation which references a better estimate analysis case and additional operator actions. These better estimate cases are provided in Enclosure 2. In these analyses credit is taken for realistic plant

8710190237 871016
PDR ADDCK 05000206
S PDR

ADD
11

October 16, 1987

behavior and existing conditions of moderator temperature coefficient (MTC). The MTC used in the analysis is applicable for core burn-up until December 14, 1987. Prior to that date additional analysis will be performed or other actions taken to justify further operation.

Enclosure 3 provides a description of the operator actions which have been identified to correct equipment misoperations resulting from the postulated single failures. Additional manning has been provided to assist the on shift staff in accomplishing the required actions. Training has been conducted to instruct each shift on the conditions and required actions for each affected scenario.

Although the currently implemented measures ensure the continued safe operation of the unit, permanent corrective actions will be implemented on an expedited schedule. We have initiated engineering design efforts to eliminate all of the single failure susceptibilities of the ESF without reliance on operator action or better estimate analysis. Modifications to the affected systems will be implemented by no later than the upcoming Cycle 10 refueling outage.

The final report on the ESF Single Failure Analysis will be provided to the NRC by November 6, 1987. The report will include a complete description of the methodology used and the results obtained. To the extent that information regarding design modifications for corrective actions is available it will also be provided at that time.

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

Very truly yours,



Enclosures

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