

REGULATORY DOCKET FILE COPY
Southern California Edison Company

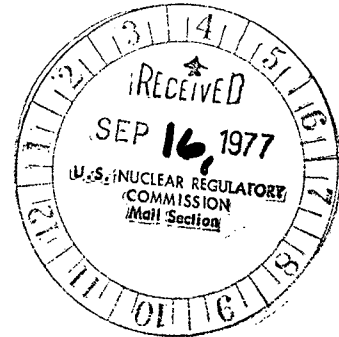


P. O. BOX 800
2244 WALNUT GROVE AVENUE
ROSEMEAD, CALIFORNIA 91770

J. T. HEAD, JR.
VICE PRESIDENT

TELEPHONE
213-572-1472

September 7, 1977



U. S. Nuclear Regulatory Commission
Region V
Office of Inspection and Enforcement
Suite 202, Walnut Creek Plaza
1990 North California Boulevard
Walnut Creek, California 94596

Attention: Mr. R. H. Engelken, Director

Docket No. 50-206
San Onofre Unit 1

Dear Sir:

- References:
- (1) Letter from SCE (H. L. Ottoson) to USNRC, Region V dated August 24, 1977
 - (2) Letter from SCE (K. P. Baskin) to NRC (A. Schwencer) dated March 25, 1977 re: Plant Modifications to Eliminate Postulated Single Failure Effects
 - (3) Letter from SCE (K. P. Baskin) to NRC (A. Schwencer) dated December 21, 1976 re: Single Failure Analysis

Reference (1) provided notification to the Regional Office of a deficiency in the charging pump circuitry as recently revised in order to eliminate undesirable single failure effects. This letter is the followup report to Reference (1) and is submitted in accordance with the provisions of Section 6.9.2a of Appendix A to the Provisional Operating License No. DPR-13.

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SCE

Reference (2) indicated our intention to remove one charging pump from equipment automatically started by the sequencer as an interim measure to eliminate undesirable single failure effects discussed in the single failure analysis submitted by Reference (3). Removal of one charging pump from equipment automatically started by the sequencer eliminates the potential failure of both charging pumps (one of which is needed during recirculation) as a result of the postulated failure, in an open position, of MOV/LCV 1100C. MOV/LCV 1100C isolates the hydrogen pressurized Volume Control Tank from the suction of the charging pumps. Without such isolation, hydrogen from the Volume Control Tank could cause the cavitation of the charging pumps.

The interim measure identified above was completed as part of Design Change 77-05 prior to return to operation of San Onofre Unit 1 in April 1977. Subsequent to the completion of Design Change 77-05 and the return to operation of San Onofre Unit 1, it was discovered that Design Change 77-05 did not eliminate the automatic starting of both charging pumps in the event of a loss of the 480V power supply to MOV/LCV 1100C. Loss of the MOV/LCV 1100C 480V power supply results in the deenergizing of a relay which normally isolates the standby* charging pump from the auto start signal from the sequencer. Deenergization of this relay enables the automatic starting of the standby charging pump with a start signal from the sequencer. Design Change 77-05 did not, therefore, effect the desired interim measure, namely, the removal of one charging pump from equipment automatically started by the sequencer.

As indicated in Reference (1), redesign of the charging pump circuitry to correct the above-described deficiency has been initiated. The redesign consists of replacing the isolating capability of the above-identified relay with a manual alignment switch for each charging pump control circuitry. This redesign eliminates the automatic starting of both charging pumps by the sequencer and satisfies the requirements of the interim measure identified in Reference (2). Additional details of the deficiency and the redesign will be provided by separate cover.

The redesign has been reviewed and approved by the On-Site Review Committee (OSRC) as Design Change 77-10 in accordance with the Appendix A Technical Specifications. The redesign will be implemented during the next plant outage which is now scheduled to begin September 8, 1977. Until this redesign is implemented, administrative procedures have been implemented to assure that one charging pump will be available for recirculation service. A temporary operating memorandum has been put into effect which provides for operator action to prevent the loss of one charging pump in the event MOV/LCV 1100C loses its 480V power supply during a LOCA.

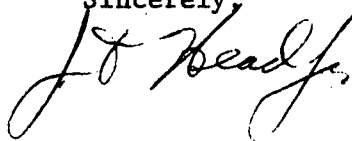
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*As indicated in Reference (2) the standby charging pump is that pump not automatically started by the sequencer and therefore made available for subsequent recirculation service.

SCE

Enclosed is a completed Licensee Event Report form designated LER 77-11. If you have any questions concerning this matter please let me know.

Sincerely,



Enclosure

cc: Director, Office of Inspection and Enforcement (40 copies)
Director, Office of Management Information & Program
Control (3 copies)



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Reference (1) provided notification to the Regional Office of a deficiency in the charging pump circuitry as recently revised in order to eliminate undesirable single failure effects. This letter is the followup report to Reference (1) and is submitted in accordance with the provisions of Section 6.9.2a of Appendix A to the Provisional Operating License No. DPR-13.

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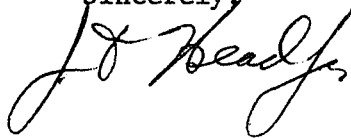
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Enclosed is a completed Licensee Event Report form designated LER 77-11. If you have any questions concerning this matter please let me know.

Sincerely,



Enclosure

cc: Director, Office of Inspection and Enforcement (40 copies)
Director, Office of Management Information & Program
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LICENSEE EVENT REPORT

LER 77-11

CONTROL BLOCK:

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(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME 01 C A S O S 1						LICENSE NUMBER 0 0 - 0 0 0 0 0 - 0 0						LICENSE TYPE 4 1 1 1 1			EVENT TYPE 0 1		
7	8	9	14	15	25	26	30	31	32								
CATEGORY 01 CON'T		REPORT TYPE P O		REPORT SOURCE T		DOCKET NUMBER L				EVENT DATE 0 5 0 - 0 2 0 6			REPORT DATE 0 8 2 4 7 7				
7	8	57	58	59	60	61	68	69	74	75	80						

EVENT DESCRIPTION

02	During normal operation, a deficiency was discovered in the charging pump circuitry,															80
03	as recently revised by Design Change 77-05, to eliminate undesirable single failure															80
04	effects. Design Change 77-05 was intended to remove one charging pump from equipment															80
05	automatically started by the sequencer, however postulated loss of power continues to															80
06	result in the auto start of both pumps contrary to the intent of DC 77-05. Redesign															80

SYSTEM CODE P C		CAUSE CODE B		COMPONENT CODE V A L V O P				PRIME COMPONENT SUPPLIER Z		COMPONENT MANUFACTURER Z Z Z Z			VIOLATION N			
7	8	9	10	11	12	17	43	44	47	48						

CAUSE DESCRIPTION

08	Deficiency in the charging pump circuitry recently revised to eliminate the automatic															80
09	starting of both pumps by the sequencers.															80
10																80

FACILITY STATUS E		% POWER 0 9 9		OTHER STATUS NA				METHOD OF DISCOVERY Z		DISCOVERY DESCRIPTION NA					
7	8	9	10	12	13	44	45	46							
FORM OF ACTIVITY RELEASED Z		CONTENT OF RELEASE Z		AMOUNT OF ACTIVITY NA				LOCATION OF RELEASE NA							
7	8	9	10	11	44	45									

PERSONNEL EXPOSURES

NUMBER 0 0 0		TYPE Z		DESCRIPTION NA							
7	8	9	11	12	13						

PERSONNEL INJURIES

NUMBER 0 0 0		DESCRIPTION NA								
7	8	9	11	12						

OFFSITE CONSEQUENCES

15 NA																
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LOSS OR DAMAGE TO FACILITY

TYPE Z		DESCRIPTION NA															
7	8	9	10														

PUBLICITY

17 NA																
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ADDITIONAL FACTORS

18	of the charging pump control circuitry to eliminate starting of both pumps has been															80
19	initiated (77-11).															80

NAME: H. L. Ottoson

PHONE: (213) 572-1989

RECEIVED DOCUMENT
PROCESSING UNIT

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