

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3										DOCKET NUMBER (2) 0 5 0 0 0 3 6 2				PAGE (3) 1 OF 0 3		
TITLE (4) CONTAINMENT EMERGENCY FAN COOLER 3E-401 LOW FLOW																
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)						
MONTH	DAY	YEAR	YEAR	SEQ. NUMBER	REV. NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)			
0 3	2 6	8 5	8 5	0 0 9	0 0	0 4	2 5	8 5					0 5 0 0 0			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)														
1		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)		
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(c)		
1 0 0		20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
		20.405(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(viii)(A)						
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)						
		20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(x)						
LICENSEE CONTACT FOR THIS LER (12)																
NAME J. G. HAYNES, STATION MANAGER										TELEPHONE NUMBER AREA CODE 7 1 4 4 9 2 - 7 7 0 0						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO				
Abstract (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																
<p>The Containment Emergency Cooling System (CECS) has four emergency cooling units (ECU), two in each of two trains. Flow balancing for the Component Cooling Water System which serves these coolers is by setting system manual isolation valves in specified, partially open positions.</p> <p>The Technical Specifications include the requirement for a monthly check of flow through each ECU. Minimum flow for an acceptable surveillance is 2,000 gpm.</p> <p>On 3/26/85, with Unit 3 at 100% power, the indicated flow for ECU 3E-401 was 1,700 gpm. The manual outlet isolation valve for this unit was checked and found to be less than the specified amount open. It was promptly opened to increase flow through the unit to more than 2,000 gpm.</p> <p>An evaluation has been performed to determine if the operability of the affected train of the CECS was affected by the reduced flow through ECU 3E-401. This evaluation has determined that the train was at all times operable in that it was capable of removing heat in excess of its design heat load of 140 million BTU/hr under all required conditions.</p> <p>Investigation has determined that the isolation valve was incorrectly positioned following a LLRT performed after the February surveillance flow test. Incorrect positioning was due to a legibility problem in the handwritten documentation for valve realignment following the LLRT and the lack of adequate valve position indication.</p>																
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SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3	05000362	85	-009	-00	02	OF 03

TEXT (If more space is required, use additional NRC Form 366A's) (17)

The surveillance flow test conducted on 2-26-85 verified flow through 3E-401 was in excess of 2,000 gpm.

On 2-27-85, the outlet isolation valve for 3E-401 was shut to perform an LLRT.

The realignment following the LLRT, including repositioning of the outlet isolation valve, also occurred on 2-27-85. Repositioning was performed using a copy of Work Authorization Record which included the handwritten notation that the valve should be 9 1/4 turns open.

Due to the poor quality of the original handwriting, and of the copy provided to the two assigned operators for use in the valve realignment, they interpreted the notation as calling for the valve to be positioned 4 1/4 turns open. It was thus positioned and then locked as required. Valve alignment was independently verified on 3-1-85. As the manual isolation valve does not presently have any position indication, the independent verification could only establish that the valve was partially opened and locked.

The surveillance flow test conducted on 3-26-85 resulted in an indicated flow to ECU 3E-401 of 1,700 gpm, 15% below the 2,000 gpm specified as the minimum for an acceptable surveillance test. The unit outlet manual isolation valve was checked and found 4 1/4 turns open instead of 9 1/4 turns open, as specified in the system alignment procedure S03-2-17, "Component Cooling Water Pump and System Operations - Unit 3." It was opened to 9 1/4 turns open and flow was verified as being in excess of 2,000 gpm.

An evaluation was immediately initiated to evaluate the operability of the train of containment emergency cooling. Flow through the companion emergency cooling unit in the train, ECU 3E-399, was determined to be in excess of 2,350 gpm. As documented in an analysis by the unit manufacturer, the design heat removal capability for the train of emergency cooling of 140 million BTU/hr would be met, under design conditions, with 2,350 gpm of CCW flow through 3E-399 and 1,700 gpm of flow through 3E-401. Accordingly, the train remained operable even though flow through 3E-401 was less than 2,000 gpm.

In addition, consideration of the existing seawater injection temperature during the period of reduced flow, indicates that the inlet temperature to 3E-401 would have been less than design. This lower inlet temperature would have increased the heat removal capacity of the unit, compared to design conditions.

Notwithstanding continued operability of the affected train of containment emergency cooling, corrective action is required to prevent recurrence of this event. This corrective action is as follows:

- Where independent verification of intermediate valve position cannot be established, a flow test or other objective operability demonstration will be required following valve positioning. In this case, a flow test was at first planned following the LLRT, but it was then deleted on the basis that the independent verification made the flow test unnecessary.

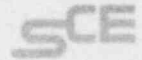
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- Wherever possible, local valve position indication will be provided to permit independent verification of intermediate valve position. A project to provide this capability has been under way for some time, but it had not yet resulted in the addition of position indication to this valve.
- An evaluation will be made of where the need for intermediate valve positioning can be eliminated by the installation of orifice plates. Such plates will be installed where practical.
- Personnel have been reinstructed on the importance of clarity in handwritten communication and in making and reading copies thereof.

*Southern California Edison Company*



SAN ONOFRE NUCLEAR GENERATING STATION

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STATION MANAGER

April 25, 1985

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

Subject: Docket No. 50-362  
30-Day Report  
Licensee Event Report No. 85-009  
San Onofre Nuclear Generating Station, Unit 3

Pursuant to 10 CFR 50.73(a)(2)(i), this submittal provides the required 30-day written Licensee Event Report (LER) for an occurrence involving the Containment Cooling System. Neither the health and safety of plant personnel nor the health of the public was affected by this event.

If you require any additional information, please so advise.

Sincerely,

Enclosure: LER No. 85-009

cc: F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)  
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)  
J. B. Martin (Regional Administrator, USNRC Region V)  
Institute of Nuclear Power Operations (INPO)

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