NRC Form 366
(9/83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3	0 5 0 0 0 3 6 2	1 OF 0 2

TITLE (4)
DISCONNECTED LEADS IN PLANT PROTECTION SYSTEM CABINETS

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 2	2 7	8 4	8 4	0 1 1	0 0	0 3	2 8	8 4		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	X OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	Informational Report
		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	TELEPHONE NUMBER
	AREA CODE
J. G. HAYNES, STATION MANAGER	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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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)

This submittal provides an informational Licensee Event Report (LER) for a condition resulting from incomplete restoration following testing of the Plant Protection System (PPS). On February 27, 1984 with Unit 3 in Mode 4 and during investigation of the Reactor Trip Breaker (RTB) pushbutton occurrence described in LER 84-006, one set of leads in each of the four PPS bays were found to be disconnected. These disconnected leads removed the automatic shunt trip feature from RTB's #1, #2, #3 and #4. However, the automatic undervoltage feature was not affected nor were the undervoltage and shunt trip features in the manual mode. The subject leads had been disconnected and not restored during 18-month surveillance testing conducted earlier.

Between the 18-month surveillance and discovery of the condition, Unit 3 had not been operated in a mode requiring operability of the RTB's. Upon discovery the leads were immediately connected. Procedural changes have been made, and training has been provided to prevent a recurrence.

The health and safety of plant personnel or the public were not affected by this occurrence.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

This submittal provides an informational Licensee Event Report (LER) for a condition resulting from incomplete restoration following testing of the Plant Protection System (PPS) (EIIS System Code JC). During the inspection of the K-4 relay located in PPS Bay D for the Reactor Trip Breaker (RTB) (EIIS Component Code 52) pushbutton, see LER 84-006, on the evening of February 27, 1984, while in Mode 4 the leads for terminals 22 and 23 were found to be disconnected. Examination of PPS Bays A, B and C revealed similarly disconnected leads for terminals in their respective bays. These disconnected leads isolated the reactor switchgear leads for the shunt trip device of RTB's #1, #2, #3 and #4 and removed the automatic shunt trip feature from these RTB's.

An investigation into the disconnected leads revealed that Plant Protection System response time testing for Channel A in accordance with Procedure S023-II-3.1, "Surveillance Requirement Plant Protection System Response Time Test for Channel A (Eighteen Month Interval)" was performed during the period of January 26, 1984 through February 16, 1984 during a maintenance outage. Step 6.19.1 of this procedure requires the disconnection of the four sets of subject leads to determine the electronic response time of the Plant Protection System without unnecessary cycling of the reactor trip switchgear breakers. The restoration section of the procedure (Step 6.47.1) requires reconnection of proper leads to terminals but did not refer the user to each specific lead to be reconnected.

The subject leads were disconnected on January 27, 1984. System restoration after completion of the testing was completed on February 15, 1984 and the restoration section of the procedure was completed on February 16, 1984 by another individual without adequate confirmation that the subject leads had been reconnected. Therefore, the disconnected leads were attributable to a combination of inadequate restoration steps in the procedure and oversight by the personnel involved. The leads were immediately reconnected and the shunt trip devices for RTB's #1, #2, #3 and #4 were tested and found to be operating satisfactorily. Subsequently, the Unit 2 Plant Protection System cabinets were checked and no other disconnected leads were found. Between the 18-month surveillance and discovery of the condition, Unit 3 had not been operated in a mode requiring operability of the RTB's.

Procedure S023-II-3.1 has been revised to include a step which specifically calls out retermination of the leads disconnected in Step 6.19.1 and requires visual verification and sign off by two individuals. Additionally, training sessions have been conducted with all Instrumentation and Control personnel to re-emphasize the importance of following step-by-step instructions and test procedures, and the significance of signatures/initials in procedures.

As future corrective action, all procedures which require disturbing protective circuits such as by the disconnection of leads, are currently being reviewed to determine the adequacy of their restoration sections, in this regard. If inadequacies are noted, they will be revised accordingly, including the requirement for independent verification.

Neither the health and safety of plant personnel nor the public were affected by this occurrence. All RTB's had operable automatic undervoltage devices as well as manual undervoltage and shunt trip devices from the Control Room and local pushbuttons.

Southern California Edison Company

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March 28, 1984

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

Subject: Docket No. 50-362
Informational Report
Licensee Event Report No. 84-011
San Onofre Nuclear Generating Station, Unit 3

This submittal provides an informational Licensee Event Report (LER) for an occurrence involving the Plant Protection System (PPS). The health and safety of plant personnel or the public were not affected by these occurrences.

If you require additional information, please so advise.

Sincerely,

JGHaynes

Enclosure: LER No. 84-011

cc: A. E. Chaffee (USNRC Resident Inspector, Units 1, 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

U.S. Nuclear Regulatory Commission
J. B. Martin, Regional Administrator

Institute of Nuclear Power Operations (INPO)

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