

LICENSEE EVENT REPORT (LER)

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

TITLE (4)

CEAC 1 DNBR TRIP

EVENT DATE (5)
MONTH DAY YEAR
0 3 2 4 8 4 8 4
LER NUMBER (6)
YEAR SEQ. NUMBER REV. NUMBER
0 1 1 9 0 0 0 4 2 3 8 4
REPORT DATE (7)
MONTH DAY YEAR
0 3 2 4 8 4
OTHER FACILITIES INVOLVED (8)
FACILITY NAMES
DOCKET NUMBER(S)
0 5 0 0 0 0 0 0 0 0 0 0THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)
OPERATING MODE (9)
1
POWER LEVEL (10)
1 0 0
20.402(b) 20.405(c) X 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) 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)
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 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)

YES (If yes, complete EXPECTED SUBMISSION DATE) X NO
EXPECTED SUBMISSION DATE (15)
MONTH DAY YEAR

Abstract (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On March 24, 1984, at 1934, with Unit 2 in Mode 1 at 100% power, a false position indication for Control Element Assembly (CEA) 20 on Control Element Assembly Calculator (CEAC) 1 resulted in penalty factors being generated by CEAC 1, which, when used by the Core Protection Calculators, resulted in a reactor trip due to low Departure from Nucleate Boiling Ratio (DNBR) trips on all four Reactor Protection System channels. Following the reactor trip, the Emergency Feedwater System actuated on low steam generator level due to shrink. No systems or components malfunctioned during this event.

The specific cause for the false position indication for CEA 20 has not been determined. Extensive trouble-shooting and component replacement performed during previous similar CEA 20 position indication failures (See LER's 83-069, 83-087, 83-124 and 83-155) have not permanently resolved this problem. As corrective action for this event, a Multipurpose Acquisition and Control System chassis was replaced in CEAC 1. The removed chassis is being tested to determine if a fault exists.

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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQ. NUMBER	REV. NUMBER			
SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 2	0 5 0 0 0 3 6 1	8 4	- 0 1 9	- 0 0	0 2	OF	0 2

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

On March 24, 1984, at 1934, with Unit 2 in Mode 1 at 100% power, a false position indication for Control Element Assembly (CEA) (EIIS Component Code ROD) 20 on Control Element Assembly Calculator (CEAC) (EIIS Component Code CPU) 1, which indicated that CEA 20 had deviated from the other CEA's in its group by approximately eight inches, resulted in penalty factors being generated by CEAC 1, which, when used by the Core Protection Calculators (CPC's) (EIIS Component Code CPU), resulted in a reactor trip due to low Departure from Nucleate Boiling Ratio (DNBR) trips on all four Reactor Protection System (RPS) (EIIS System Code JC) channels. Following the reactor trip, the Emergency Feedwater System (EIIS System Code BA) actuated on low steam generator (EIIS Component Code SG) level due to shrink. All systems and components functioned properly during this event.

The specific cause for the false position indication for CEA 20 has not been determined. Extensive trouble-shooting and component replacement performed during previous similar CEA 20 position indication failures (See LER's 83-069, 83-087, 83-124 and 83-155) have not permanently resolved this problem. As corrective action for this event, the Multipurpose Acquisition and Control System chassis which converts analog CEA position signals to digital readouts was replaced in CEAC 1. The removed chassis is being tested to determine if a fault exists.

Past CEA 20 false position indications have not resulted in a reactor trip. A contributing cause for the reactor trip of this event was a change which had increased the CEA deviation penalty factor multipliers to accommodate single CEA deviation events under the most adverse Calculated Thermal Power (BDT) decalibration (See LER 84-009). Prior to this change the CEA 20 deviation described in this event would not have generated sufficient penalty factors to produce the DNBR trip. To prevent recurrence of this type of trip, the penalty factor multipliers were returned to their original value, and Units 2 and 3 Procedure S023-5-1.7 was changed to include provisions for verifying BDT calibration at 20 percent power intervals during power ascension and following movement of CEA's. This change will remain in effect until a final recommendation addressing BDT decalibration is received from Combustion Engineering.

There are no credible alternative conditions under which this event would have resulted in the plant being outside its design limits.

Southern California Edison Company



SAN ONOFRE NUCLEAR GENERATING STATION

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SAN CLEMENTE, CALIFORNIA 92672

J. G. HAYNES
STATION MANAGER

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April 23, 1984

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

Subject: Docket No. 50-361
30-Day Report
Licensee Event Report No. 84-019
San Onofre Nuclear Generating Station, Unit 2

Pursuant to 10 CFR 50.73.a.2(iv), this submittal provides the required 30-day written Licensee Event Report (LER) for an occurrence involving the actuation of the Reactor Protection System and the Emergency Feedwater System. The health and safety of the public or plant personnel were not affected by this event.

If you require any additional information, please so advise.

Sincerely,

Enclosure: LER No. 84-019

cc: A. E. Chaffee (USNRC Resident Inspector, Units 1, 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)
J. B. Martin (Regional Administrator, NRC Region V)
Institute of Nuclear Power Operations (INPO)

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