

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 2	DOCKET NUMBER (2) 0 5   0   0   0   3   6   1	PAGE (3) 1 0   F   0   4
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TITLE (4)  
RADIATION MONITORS FOUND IN ALARM DEFEAT

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)										
1	0	3	8	4	8	4	0	5	9	0	1	0	1	1	0	1	8	4	SONGS Unit 3		0 5   0   0   0   3   6   2
											0 5   0   0   0										

OPERATING MODE (9) 1

POWER LEVEL (10) 0 8 5

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input checked="" type="checkbox"/> 50.36(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER	
	AREA CODE	NUMBER
J. G. HAYNES, PLANT MANAGER	7 1   4	4 9   2   -   1   7   1   0   1 0

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (if yes, complete EXPECTED SUBMISSION DATE)       NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On 10/3/84, at 2030, with Units 2 and 3 in Mode 1 at 85% and 100% power, respectively, as discovered during an NRC operator licensing oral exam, Control Room Airborne Radiation Monitors 2/3-7824 and 2/3-7825 were found to be in alarm defeat. This would have prevented both trains of the Control Room Isolation System (CRIS) from performing their intended safety function of actuating the Control Room Emergency Air Cleanup System (CREACUS) upon a CRIS signal from the monitors. However, CREACUS would still have actuated on a Toxic Gas Isolation System (TGIS) signal and a Safety Injection Actuation Signal (SIAS). The monitors were immediately placed in normal mode.

Investigation of the event failed to conclusively determine who actuated the alarm defeat. A shiftily surveillance completed at about 2000 on 10/3/84, verified the monitors were in the normal mode. Therefore, the monitors were in alarm defeat for less than 30 minutes. During this time the monitors and recorders associated with CRIS continued to indicate and record their readings.

Neither the health and safety of plant personnel nor the public were affected by this event.

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PDR ADDCK 05000361  
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LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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		YEAR	SEQ. NUMBER	REV. NUMBER			
		8 4	- 0 5 9	- 0 0	0 2	OF	0 4

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

On October 3, 1984, at 2030, with Units 2 and 3 in Mode 1 at 85% and 100% power respectively, as discovered during an NRC operator licensing oral exam, Control Room Airborne Radiation Monitors 2/3-7824 and 2/3-7825 (EIIS Component Code RIT) were found to be in alarm defeat. This condition prevented both trains of the Control Room Isolation System (CRIS) (EIIS System Code VI) from performing their intended safety function of actuating the Control Room Emergency Air Cleanup System (CREACUS) (EIIS System Code VI) upon a CRIS signal from the monitors. However, CREACUS would still have actuated on a Toxic Gas Isolation System (TGIS) (EIIS System Code JF) signal and a Safety Injection Actuation Signal (SIAS). The monitors were immediately placed in normal mode. Investigation has not determined when the alarm defeat was engaged. A shiftly surveillance completed at about 2000 on October 3, 1984, verified the monitors were in normal mode. Therefore, these alarms were apparently not in service for less than 30 minutes.

All other radiation monitors were promptly examined, and three additional radiation monitors were found to be in alarm defeat: Liquid Radwaste Discharge Radiation Monitor 2/3-7813; the Unit 3 Neutralization Sump Discharge Radiation Monitor 3-7817; and the Unit 3 Turbine Sump Radiation Monitor 3-7821. These monitors were immediately placed in normal mode. A surveillance completed at about 0115 on October 3, 1984, verified the alarms were in normal mode. Therefore, the alarms were apparently not in service for less than 19 hours. None of these three monitors provide inputs to Engineered Safety Features. Also, because the associated chart recorders and indications remained operable, no effluent releases were unmonitored. However, these monitors did lose their capability of automatically isolating the flow paths upon high radiation levels.

There were no effluent releases during this period through the flow paths associated with 2/3-7813 and 3-7817. However, automatic releases occurred through Turbine Sump Radiation Monitor 3-7821. Contrary to Technical Specification 3.3.3.8, Action Statement 30, no 8-hour grab samples were analyzed from the Turbine Building Sump. However, the recorder on 3-7821 remained operable and verified no significant activity was released.

An investigation was conducted into this event. Three possibilities were identified: (1) personnel performing surveillances actuated the alarm defeat and inadvertently failed to restore it to normal following the surveillance; (2) since the monitors are in a hallway area of the control room, plant personnel may have accidentally bumped into the panels, actuating the alarm defeat; (3) unauthorized personnel intentionally actuated the alarm defeat. Our assessment of each of these possibilities is as follows: (1) We interviewed operating personnel who performed the surveillances, who stated they did not leave the alarm defeat function in; however, since procedures did not explicitly prohibit the use of the alarm defeat pushbutton, some operators used this function believing it was appropriate in performing their surveillances to prevent spurious actuations; (2) The alarm defeat button is a small bushputton, the first of several buttons arranged vertically on the monitor face, and is very difficult to actuate accidentally by bumping; (3) The affected monitors were on different panels, separated by as much as 50 feet, and other adjacent monitors were found normal; therefore, intentional unauthorized actuation is considered to be unlikely.

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		8 4	- 0 5 9	- 0 0	0 3	OF 0 4

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

Based on the investigation, it could not be conclusively determined who actuated the alarm defeat. A similar occurrence was identified previously and reported for Unit 2 in LER 83-128. LER 83-128 corrective actions were to increase the attention given to the status of the alarm defeat through administrative controls, and to investigate the feasibility of installing lockable, hinged plastic covers over the radiation monitor alarm defeat pushbuttons. The radiation monitor shiftly and daily surveillance procedures were revised to require verifying alarm defeat pushbutton position before beginning surveillance tests. However, installation of the hinged plastic covers was not feasible because of the limited space available on the monitor face. As an alternative corrective action, it was proposed to provide annunciation in the Control Room whenever a radiation monitor was placed in alarm defeat. Design of radiation monitor annunciation and status indication in the Control Room is currently in progress. As interim corrective action, since the investigation did not conclusively determine who actuated the alarm defeat, shiftly and daily surveillance procedures have been revised to specifically prohibit the use of alarm defeat, and to include sign-off verification of radiation monitor pushbutton positions including alarm defeat.

We have studied the ramifications of this event for all plant radiation monitors, and we have concluded that the corrective actions stated in this report will be applied to all radiation monitors with alarm defeat buttons.

When the radiation monitors were found in alarm defeat a four-hour report pursuant to 10 CFR 50.72(b)(2)(iii)(C) and (D), as an "...event or condition that alone could have prevented the fulfillment of the safety function of...systems that are needed to control the release of radioactive material, or mitigate the consequences of an accident" was required. Because the CRIS monitors are considered to have been in alarm defeat for less than 30 minutes, CREACUS was not required to be initiated and Technical Specification 3.3.2, Action Statement 13 was considered satisfied. Technical Specification 3.3.3.8, Action Statement 30, was initially considered to have been satisfied, in that grab samples were taken from the Turbine Building Surp. However, our investigation later determined that these grab samples are used for a weekly composite sample, and are not analyzed every 8 hours. Therefore, Technical Specification 3.3.3.8, Action Statement 30 was violated. The report was then made at 1206 on October 4, 1984. This event was reviewed with appropriate personnel.

There are no reasonable or credible circumstances that would have increased the severity of this event for monitors 2/3-7824 and 2/3-7825. CREACUS would still have actuated on a TGIS signal and a SIAS. In addition, plant Operators would have had other alarm indication of an event and would have manually initiated CREACUS.

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		8   4	-	0   5   9	-	0   0	0   4 OF 0   4

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Monitors 2/3-7813, 3-7817, and 3-7821 are single-train system monitors. In the alarm defeat mode, the capability to automatically isolate their release paths to prevent releases in excess of 10 CFR 20 limits was not available. However, existing administrative controls require verification of monitor status and valve lineups before initiating a release. Two of these monitors (2/3-7813 and 3-7817) are in flow paths used only for batch releases, where chemistry samples are the primary means of determining the level of activity in effluents, and these monitors serve as backups to the chemistry grab samples. For the Turbine Sump Monitor (3-7821), although activity levels currently in the turbine Building Sump would not lead to releases approaching 10 CFR 20 limits, had there been significantly greater activity levels in the sump, the potential might have existed for exceeding 10 CFR 20 limits.

Neither the health and safety of plant personnel nor the public were affected by this event.

*Southern California Edison Company*

**SCE**

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November 1, 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. 84-059  
San Onofre Nuclear Generating Station, Units 2 and 3

Pursuant to 10 CFR 50.36 and 50.73(a)(2)(i), (v), and (vii), this submittal provides the required 30-day written Licensee Event Report (LER) for an occurrence involving five radiation monitors being found in alarm defeat. Since this event involved components common to Units 2 and 3, a single report is being submitted in accordance with NUREG-1022.

If you require any additional information, please so advise.

Sincerely,

*J. G. Haynes*

Enclosure: LER 84-059

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)

**IE22**

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