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 FACIL:50-361 San Onofre Nuclear Station, Unit 2, Southern Californ 05000361
 AUTH.NAME AUTHOR AFFILIATION
 MORGAN,H.E. Southern California Edison Co.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-026-00:on 880910,control room isolation sys Train B
 spurious action due to personnel error.

W/8 ltr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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	ACRS WYLIE	1 1	AEOD/DOA	1 1
	AEOD/DSP/NAS	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	1 1	ARM/DCTS/DAB	1 1
	DEDRO	1 1	NRR/DEST/ADS 7E	1 0
	NRR/DEST/CEB 8H	1 1	NRR/DEST/ESB 8D	1 1
	NRR/DEST/ICSB 7	1 1	NRR/DEST/MEB 9H	1 1
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	NRR/DEST/RSB 8E	1 1	NRR/DEST/SGB 8D	1 1
	NRR/DLPQ/HFB 10	1 1	NRR/DLPQ/QAB 10	1 1
	NRR/DOEA/EAB 11	1 1	NRR/DREP/RAB 10	1 1
	NRR/DREP/RPB 10	2 2	NRR/DRIS/SIB 9A	1 1
	NUDOCS-ABSTRACT	1 1	REG FILE 02	1 1
	RES TELFORD,J	1 1	RES/DSIR DEPY	1 1
	RES/DSIR/EIB	1 1	RGN5 FILE 01	1 1
EXTERNAL:	EG&G WILLIAMS,S	4 4	FORD BLDG HOY,A	1 1
	H ST LOBBY WARD	1 1	LPDR	1 1
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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 of 0 5																											
Title (4) CONTROL ROOM ISOLATION SYSTEM TRAIN B SPURIOUS ACTUATION DUE TO PERSONNEL ERROR																																									
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																															
Month	Day	Year	Year	///	Sequential Number	///	Revision Number	Month	Day	Year	Facility Names				Docket Number(s)																										
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POWER LEVEL (10) 1 0 0			<table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> 20.402(b)</td> <td><input type="checkbox"/> 20.405(c)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(iv)</td> <td><input type="checkbox"/> 73.71(b)</td> </tr> <tr> <td><input type="checkbox"/> 20.405(a)(1)(i)</td> <td><input type="checkbox"/> 50.36(c)(1)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)</td> <td><input type="checkbox"/> 73.71(c)</td> </tr> <tr> <td><input type="checkbox"/> 20.405(a)(1)(ii)</td> <td><input type="checkbox"/> 50.36(c)(2)</td> <td><input type="checkbox"/> 50.73(a)(2)(vii)</td> <td><input type="checkbox"/> Other (Specify in</td> </tr> <tr> <td><input type="checkbox"/> 20.405(a)(1)(iii)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(A)</td> <td>Abstract below and</td> </tr> <tr> <td><input type="checkbox"/> 20.405(a)(1)(iv)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(B)</td> <td>in text)</td> </tr> <tr> <td><input type="checkbox"/> 20.405(a)(1)(v)</td> <td><input type="checkbox"/> 50.73(a)(2)(iii)</td> <td><input type="checkbox"/> 50.73(a)(2)(x)</td> <td></td> </tr> </table>															<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" 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 type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> Other (Specify in	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	Abstract below and	<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)	in text)	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	
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Name H. E. Morgan, Station Manager										TELEPHONE NUMBER 7 1 4 3 6 8 - 6 2 4 1																															
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																																									

At 1346 on 9/10/88, with Units 2 and 3 at 100% power, a Control Room Isolation System (CRIS) Train B spurious actuation occurred when the technician performing the 31-day surveillance of the CRIS radiation monitor (RE-7825) inadvertently depressed the module power on/off pushbutton. This momentarily deenergized the module, causing the actuation. All CRIS Train B components were verified to have actuated as required. CRIS was reset and the ventilation lineup returned to normal at 1415. There is no safety significance to this event since radiation levels remained normal and all CRIS Train B components actuated as required.

The radiation monitor module pushbuttons used to perform the 31-day surveillance are approximately 0.5 inch in width (which corresponds approximately to the width of one fingertip) and are located immediately adjacent to one another. Thus, a high level of care is required to avoid depressing two adjacent pushbuttons simultaneously. The technician did not exercise sufficient care, and he inadvertently depressed the module power on/off pushbutton simultaneously with the adjacent (intended) detector high voltage on/off pushbutton.

This event was discussed with the technician to ensure proper care is taken during the performance of maintenance activities. This event was also reviewed with all other technicians involved with radiation monitor testing. As previously planned, a keylock bypass switch which allows the actuation logic to be bypassed has since been installed on each of the CRIS radiation monitors, thereby preventing any similar inadvertent actuations during maintenance activities.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 88-026-00	PAGE 2 OF 5
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Plant: San Onofre Nuclear Generating Station
Unit: Two
Reactor Vendor: Combustion Engineering
Event Date: 09-10-88
Time: 1346

A. CONDITIONS AT TIME OF THE EVENT:

Unit 2: Mode 1, Power Operation
Unit 3: Mode 1, Power Operation

B. BACKGROUND INFORMATION:

The Control Room Isolation System (CRIS) and associated Control Room Emergency Air Cleanup System (CREACUS) (EIIS System Code VI) consist of two independent trains of radiation monitors (RT-7824 (Train A) and RT-7825 (Train B)) (EIIS Component Code RIT), emergency ventilation supply (EVS) units (A-206 and A-207) (EIIS Component Code AHU), emergency air conditioning (EAC) units (E-418 and E-419) (EIIS Component Code ACU), cabinet area emergency air cooling units (E-423, E-424, E-426, and E-427) (EIIS Component Code ACU), and associated emergency isolation dampers (EIIS Component Code BDMP). Each radiation monitor is comprised of a particulate/iodine channel and a noble gas channel. Upon receipt of either a high radiation or instrument failure signal, the dampers operate to direct outside air through the EVS and EAC units, both of which contain filtration units (EIIS Component Code FLT), thus providing purified and cooled air to the control room and minimizing exposure to personnel.

C. DESCRIPTION OF THE EVENT:

1. Event:

At 1346 on 9/10/88, with Units 2 and 3 at 100% power, a CRIS Train B spurious actuation occurred when the technician performing the 31-day surveillance of the CRIS radiation monitor (RE-7825) inadvertently depressed the module power on/off pushbutton simultaneously with the (intended) detector high voltage on/off pushbutton. This momentarily deenergized the module, causing the actuation. All CRIS Train B components were verified to have actuated as required. CRIS was reset and the ventilation lineup returned to normal at 1415.

2. Inoperable Structures, Systems or Components that Contributed to the Event:

None

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION
UNIT 2

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3. Sequence of Events:

<u>TIME</u>	<u>ACTION</u>
1346	CRIS Train B spurious actuation occurred when the technician inadvertently removed power from the radiation monitor module.
1415	After verifying that all CRIS Train B components actuated as required, CRIS was reset and the ventilation lineup returned to normal.

4. Method of Discovery:

Control room alarms and indications alerted the operators of the CRIS Train B actuation.

5. Personnel Actions and Analysis of Actions:

The operators responded properly to the CRIS Train B actuation by verifying each associated component actuated as required prior to resetting CRIS and returning the ventilation lineup to normal.

6. Safety System Responses:

All CRIS Train B components actuated as required.

D. CAUSE OF THE EVENT:

1. Immediate Cause:

While performing the 31-day surveillance on RE-7825, the radiation monitor technician inadvertently depressed the module power on/off pushbutton. This momentarily deenergized the module, thereby causing the actuation.

2. Intermediate Cause:

The radiation monitor module pushbuttons used to perform the 31-day surveillance are approximately 0.5 inch in width (which corresponds approximately to the width of one fingertip) and are located immediately adjacent to one another. A high level of care is required to avoid depressing two adjacent pushbuttons simultaneously.

3. Root Cause:

The technician did not exercise sufficient care to avoid inadvertently depressing the module power on/off pushbutton simultaneously with the adjacent (intended) detector high voltage on/off pushbutton.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 88-026-00	PAGE 4 OF 5
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E. CORRECTIVE ACTIONS:

1. Corrective Actions Taken:

- a. This event was discussed with the technician involved to ensure proper care is taken during the performance of maintenance activities.
- b. This event was also reviewed with all other technicians involved with radiation monitor testing.
- c. As a result of previous events (refer to Section G), a keylock bypass switch has been installed on each of the CRIS radiation monitors. This switch allows the actuation logic to be bypassed, thereby preventing any similar inadvertent actuations during maintenance activities.

2. Planned Corrective Actions:

No further corrective actions are required since keylock bypass switches have now been installed on all Engineered Safety Feature Actuation System (ESFAS) radiation monitors.

F. SAFETY SIGNIFICANCE OF THE EVENT:

There is no safety significance to this event since radiation levels remained normal and all CRIS Train B components actuated as required.

G. ADDITIONAL INFORMATION:

1. Component Failure Information:

Not Applicable

2. Previous LERs on Similar Events:

a. LER 84-064 (Docket No. 50-361)

A Fuel Handling Isolation System (FHIS) (EIIS System Code VG) Train A spurious actuation occurred when the radiation monitoring technician inadvertently depressed the "normal-alarm defeat" pushbutton simultaneously with the "high radiation reset" pushbutton, removing the monitor from "alarm defeat" and actuating FHIS. These pushbuttons, like the monitor power on/off and detector high voltage on/off pushbuttons, are immediately adjacent to each other and are approximately 0.5 inch in width. Although this event was reviewed with all Instrument and Control technicians, it was later determined that installation of the keylock bypass switches was necessary to prevent recurrence. Prior to this (LER 88-026) event, these bypass switches had been installed on all ESFAS-related radiation monitors except for the CRIS monitors; installation of these switches on the CRIS monitors is now complete.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 88-026-00	PAGE 5 OF 5
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- b. LER 88-015, 87-012, and 84-077 (Docket No. 50-361)

These events involved spurious actuations of ESFAS-related radiation monitors due to personnel error. None of these events, however, involved the inadvertent depressing of narrow, immediately adjacent pushbuttons. The installation of keylock bypass switches has now been completed on the radiation monitors associated with these events. This will preclude similar inadvertent actuations during maintenance activities.

3. Results of NPRDS Search:

Not Applicable



Southern California Edison Company

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H. E. MORGAN
STATION MANAGER

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October 7, 1988

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

Subject: Docket No. 50-361
30-Day Report
Licensee Event Report No. 88-026
San Onofre Nuclear Generating Station, Units 2 and 3

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 a spurious actuation of the Control Room Isolation System. Since this event involved a system shared between Units 2 and 3, a single report is being submitted in accordance with NUREG-1022. This occurrence had no effect on the health and safety of either plant personnel or the public.

If you require any additional information, please so advise.

Sincerely,

Enclosure: LER No. 88-026

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

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