

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8710140060 DOC. DATE: 87/10/05 NOTARIZED: NO DOCKET #
 FACIL: 50-361 San Onofre Nuclear Station, Unit 2, Southern California 05000361
 AUTH. NAME AUTHOR AFFILIATION
 MORGAN, H. E. Southern California Edison Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-013-00: on 870904, fuel handling isolation sys Trains A & B actuated. Caused by erroneous attachment of ventilation suction hose to cover installed on pressurizer manway. Maint foreman counseled. W/871005 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: ELD Chandler 1cy.

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	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID	CODE/NAME	LTR	ENCL		ID	CODE/NAME	LTR	ENCL
	PD5	LA	1	1	PD5	PD	1	1	
	ROOD,	H	1	1					
INTERNAL:	ACRS	MICHELSON	1	1	ACRS	MOELLER	2	2	
	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		1	0	NRR/DEST/CEB		1	1	
	NRR/DEST/ELB		1	1	NRR/DEST/ICSB		1	1	
	NRR/DEST/MEB		1	1	NRR/DEST/MTB		1	1	
	NRR/DEST/PSB		1	1	NRR/DEST/RSB		1	1	
	NRR/DEST/SGB		1	1	NRR/DLPQ/HFB		1	1	
	NRR/DLPQ/QAB		1	1	NRR/DOEA/EAB		1	1	
	NRR/DREP/RAB		1	1	NRR/DREP/RPB		2	2	
	NRR/DRIS/SIB		1	1	NRR/PMAS/ILRB		1	1	
	REG FILE	02	1	1	RES DEPY GI		1	1	
	RES TELFORD, J		1	1	RES/DE/EIB		1	1	
	RGN5 FILE	01	1	1					
EXTERNAL:	EG&G	GROH, M	5	5	H ST LOBBY WARD		1	1	
	LPDR		1	1	NRC PDR		1	1	
	NSIC	HARRIS, J	1	1	NSIC MAYS, G		1	1	

NOTES: 1 1

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
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TITLE (4)
FUEL HANDLING ISOLATION SYSTEM (FHIS) ACTUATIONS DURING PRESSURIZER MANWAY REMOVAL

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		
0 9	0 4	8 7	8 7	0 1 3	0 0	1 0	0 5	8 7			
									DOCKET NUMBER(S) 0 5 0 0 0		

OPERATING MODE (9) 5	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	<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)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
	<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)		
	<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 H. E. MORGAN, STATION MANAGER	TELEPHONE NUMBER AREA CODE 7 1 4 3 6 8 - 6 2 4 1
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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)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR
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Abstract (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On 9/4/87, at 2329, and 2354, with Unit 2 in Mode 5, Fuel Handling Isolation System (FHIS) Train 'A' and 'B', respectively, actuated due to high airborne activity levels in the Fuel Handling Building (FHB). The high levels resulted from radioactive gases discharged into containment (and subsequently into the FHB) from the pressurizer. All FHIS components were verified to have actuated in accordance with design. At 0305, on 9/5/87, airborne activity levels were verified to be below the actuation setpoint, and FHIS was reset.

The cause of the event was the erroneous attachment of a ventilation suction hose to a temporary cover installed on the pressurizer manway. The Maintenance Foreman incorrectly directed this action based on his prior experience with the removal of steam generator manways.

The Maintenance Foreman has been counseled regarding the performance of work activities without proper authorization. Additionally, this event will be reviewed with all Maintenance personnel.

There is no safety significance to this event since all FHIS components functioned as designed.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 87-013-00	PAGE 2 OF 5
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Plant: San Onofre Nuclear Generating Station (SONGS)
Unit: 2
Reactor Vendor: Combustion Engineering
Event Date: 9/4/87
Time: 2329

A. PLANT CONDITIONS AT TIME OF THE EVENT:

Mode: (5) Cold Shutdown
RCS Temperature: 100 F
SDCS in operation
Containment open, being maintained at a lower pressure relative to atmosphere.

B. BACKGROUND INFORMATION:

The Fuel Handling Isolation System (FHIS) consists of two independent "trains" of radiation monitors, associated dampers and recirculation filtration units. Each monitor contains a particulate/iodine channel and a noble gas channel. When one channel of either monitor senses high activity, a FHIS actuation occurs which isolates the Fuel Handling Building (FHB) and initiates recirculation.

C. DESCRIPTION OF THE EVENT:

1. Event:

In accordance with the Unit 2 refueling outage schedule, the primary manway on the pressurizer (EIIS Component Code PZR) was removed on 9/4/87 to permit access to the pressurizer for modification of the pressurizer level sensing lines. In anticipation that radioactive gases would escape through this opening, a temporary ventilation system (fan, filter, and suction hose) was installed to minimize the exposure of the workers in the area. The system drew air from the immediate work area and expelled it at a location away from the pressurizer.

A temporary manway cover, to be used to exclude foreign materials, was installed in the manway opening. Integral to the temporary manway cover is a fitting for the connection of a ventilation suction hose. This fitting is provided for control of the vessel atmosphere (e.g. humidity) when conditions permit. Similar temporary covers are utilized on steam generator manways.

At about 2250, on 9/4/87, a suction hose was erroneously attached to the temporary cover and the ventilation system began to remove gases from the pressurizer. As a result, activity levels in containment increased. Since the FHB pressure was being maintained at a lower pressure relative to containment, these gases were subsequently drawn into the FHB through the fuel transfer tube, which was open to support refueling equipment pre-operational checks.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 87-013-00	PAGE 3 OF 5
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Maintenance has as a practice previously removed steam generator manways and has frequently attached ventilation systems to them in the manner described above. This led the foreman to incorrectly direct the attachment of the ventilation suction hose to the temporary cover.

As a result of connecting the hose to the cover, on 9/4/87, at 2329, with Unit 2 in Mode 5, FHIS (EIIS System Code VG) Train 'A' actuated due to an increase in airborne activity levels in the FHB. At 2354, FHIS Train 'B' actuated. No fuel handling activities were in progress at the time of the event, and all FHIS components were verified to have actuated in accordance with design. After the source of the high airborne activity was identified and secured, activity levels decreased to below the setpoint, and FHIS was reset at 0305 on 9/5/87.

Although containment activity levels remained below the Containment Purge Isolation System actuation setpoint during this event, containment was evacuated to minimize personnel exposure.

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

None

3. Sequence of Events: (Commencing on 9/4/87)

TIME	ACTION
2250	Pressurizer manway removed and temporary cover installed. Ventilation suction hose erroneously placed on temporary manway cover. Ventilation system in service.
2320	Increase in background levels noted by Health Physics personnel and investigation into level increase initiated.
2329	FHIS Train 'A' actuated.
2330	Temporary ventilation secured.
2340	Initiated precautionary evacuation of containment.
2354	FHIS Train 'B' actuated.
0305	Both trains of FHIS reset.

4. Method of Discovery:

Receipt of FHIS Control Room alarms.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 87-013-00	PAGE 4 OF 5
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5. Personnel Actions and Analysis of Actions:

Following the FHS actuations, alignment verifications were performed by Operations personnel in accordance with Operating Instruction S023-3-2.22, Attachment 14.

Upon the identification of the source of the increase in containment/FHB activity, the pressurizer temporary ventilation was secured.

Containment was evacuated when Health Physics observed an increase in background levels.

6. Safety System Responses:

All FHS components functioned as designed.

D. CAUSE OF THE EVENT:

1. Immediate Cause:

Iodine and noble gas levels in radiation monitors 2RE-7822 and 2RE-7823 (Trains 'A' and 'B') reached the actuation setpoint.

2. Intermediate Cause:

A ventilation suction hose was erroneously attached to the pressurizer manway temporary cover, causing radioactive gases to be drawn out of the pressurizer and into containment. These gases were subsequently drawn into the FHB through the open fuel transfer tube, causing the FHS actuation.

3. Root Cause:

The Maintenance Foreman incorrectly directed the attachment of the ventilation suction hose to the pressurizer manway temporary cover based on his prior experience with steam generator manways.

E. CORRECTIVE ACTIONS:

1. Corrective Actions Taken:

The Maintenance Foreman has been counseled on the performance of work without proper authorization.

2. Planned Corrective Actions:

This event will be reviewed with all Maintenance personnel.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 87-013-00	PAGE 5 OF 5
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F. SAFETY SIGNIFICANCE OF THE EVENT:

There is no safety significance to this event since all FHIS components functioned as designed.

G. ADDITIONAL INFORMATION:

1. Component Failure Information:

Not applicable.

2. Previous LERs on Similar Events:

86-002 (Docket 50-361) FHIS Actuations

Although this event did not involve personnel error, it did involve FHIS actuations caused during the process of removal of a primary system manway.

Southern California Edison Company

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STATION MANAGER

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October 5, 1987

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

Subject: Docket No. 50-361
30-Day Report
Licensee Event Report No. 87-013
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 two actuations of the Fuel Handling Isolation System. Neither the health and safety of plant personnel nor the health and safety of the public was affected by this occurrence.

If you require any additional information, please so advise.

Sincerely,

HE Morgan

Enclosure: LER No. 87-013

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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