

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9007030135 DOC.DATE: 90/06/27 NOTARIZED: NO DOCKET #  
 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 90-003-00:on 900603,toxic isolation sys actuation due to personnel error.

W/9 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 6  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

### NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL		RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD5 LA	1 1		PD5 PD	1 1
	KOKAJKO, L.	1 1			
INTERNAL:	ACNW	2 2		ACRS	2 2
	AEOD/DOA	1 1		AEOD/DSP/TPAB	1 1
	AEOD/ROAB/DSP	2 2		DEDRO	1 1
	NRR/DET/ECMB 9H	1 1		NRR/DET/EMEB9H3	1 1
	NRR/DLPQ/LHFB11	1 1		NRR/DLPQ/LPEB10	1 1
	NRR/DOEA/OEAB11	1 1		NRR/DREP/PRPB11	2 2
	NRR/DST/SELB 8D	1 1		NRR/DST/SICB 7E	1 1
	<del>NRR/DST/SPLB8D1</del>	1 1		NRR/DST/SRXB 8E	1 1
	<del>REG-FILE</del> 02	1 1		RES/DSIR/EIB	1 1
	RGN5 FILE 01	1 1			
EXTERNAL:	EG&G STUART,V.A	4 4		L ST LOBBY WARD	1 1
	LPDR	1 1		NRC PDR	1 1
	NSIC MAYS,G	1 1		NSIC MURPHY,G.A	1 1
	NUDOCS FULL TXT	1 1			

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,  
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION  
 LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED  
 TOTAL NUMBER OF COPIES REQUIRED: LTTR 36 ENCL 36

*Handwritten signature/initials*

*Southern California Edison Company*

P. O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

H. E. MORGAN  
VICE PRESIDENT AND SITE MANAGER  
SAN ONOFRE

TELEPHONE  
714-368-9470

June 27, 1990

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

Subject: Docket No. 50-361  
30-Day Report  
Licensee Event Report No. 90-003  
San Onofre Nuclear Generating Station, Unit 2

Pursuant to 10 CFR 50.73(d), this submittal provides the required 30-day written Licensee Event Report (LER) for an occurrence involving the Toxic Gas Isolation System in Units 2 and 3. Since this occurrence involves a system common to both Units 2 and 3, a single report for Unit 2 is being submitted in accordance with NUREG-1022. This event 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,

*HE Morgan*

Enclosure: LER No. 90-003

cc: C. W. Caldwell (USNRC Senior Resident Inspector, Units 1, 2 and 3)

J. B. Martin (Regional Administrator, USNRC Region V)

Institute of Nuclear Power Operations (INPO)

9007030135 900627  
FDR ADDCK 050000361  
S FDC

*IF22*  
*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			
Title (4) TOXIC GAS ISOLATION SYSTEM 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)				
0   6	0   3	9   0	9   0	---	0   0   3	---	0   0			9   0	SONGS, Unit 3				0   5   0   0   0   3   6   2				
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)																
POWER LEVEL (10) 0   7   5 //////////////////////////////////// //////////////////////////////////// //////////////////////////////////// //////////////////////////////////// ////////////////////////////////////			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				
			20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)				Abstract below and				
			20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)				in text)				
20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(x)											
LICENSEE CONTACT FOR THIS LER (12)																			
Name H. E. Morgan, Vice President and Site Manager												TELEPHONE NUMBER AREA CODE 7   1   4   3   6   8   -   9   4   7   0							
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																			
CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS
SUPPLEMENTAL REPORT EXPECTED (14)														Expected Submission Date (15)		Month	Day	Year	
<input type="checkbox"/> Yes (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO																			
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																			

At 1634 on 6/3/90, with Unit 2 at 75% power and Unit 3 in Mode 5, a Toxic Gas Isolation System (TGIS) Train B actuation occurred when an operator depressed the reset pushbutton switch (PB) for the Train B chlorine analyzer. The operator had been dispatched to reset TGIS Train A, which had actuated as expected during a planned power supply transfer. Due to inadequate attention to detail, however, the operator depressed the reset PB for Train B rather than for Train A, resulting in the unplanned TGIS Train B actuation. TGIS Trains A and B were reset and ventilation lineups returned to normal by 1700. There is no safety significance to this event since TGIS Train A and Train B components operated as designed, and an abnormal chlorine concentration was not detected.

Depressing the TGIS Train B chlorine analyzer reset PB resulted in the momentary de-energization of the TGIS Train B actuation relay, causing the actuation. Operations personnel were generally not aware of this system characteristic.

With regard to resetting the incorrect train of TGIS, appropriate disciplinary action has been administered to the operator involved with this event, emphasizing the importance of attention to detail. This event will be reviewed with Units 2 and 3 Operations personnel. A Human Performance Evaluation will also be performed of this event to determine further corrective actions, as appropriate. This event will be reviewed for inclusion in operator training programs, as appropriate.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 90-003-00	PAGE 2 OF 5
---	---------------------------	-------------------------	----------------

Plant: San Onofre Nuclear Generating Station  
Unit: Two  
Reactor Vendor: Combustion Engineering  
Event Date: 06-03-90  
Time: 1634

A. CONDITIONS AT TIME OF THE EVENT:

Unit 2: Mode 1, 75% power  
Unit 3: Mode 5, Cold Shutdown

B. BACKGROUND INFORMATION:

The common Unit 2 and 3 control room is designed to be automatically isolated by the Control Room Emergency Air Cleanup System (CREACUS) [VI] to protect personnel from potential outside airborne contamination. CREACUS is started in the isolation mode when the Toxic Gas Isolation System (TGIS) [VI] detects chlorine, ammonia, or butane (hydrocarbon) gas in the outside air intake. Technical Specification Limiting Condition for Operation (LCO) 3.3.2, "Engineered Safety Features Actuation System," establishes TGIS operability requirements.

There are two independent trains of both CREACUS and TGIS. Each train is actuated by either a remote manual pushbutton switch (PB) [HS], a gas concentration sensed by any of the gas detectors [DET] to be above the actuation setpoint, or a loss of power. TGIS starts CREACUS in the isolation mode. Each CREACUS train then closes all control room air intake and exhaust pathways [DMP], and recirculates the air inside the control room spaces through HEPA filters [FLT] and charcoal adsorbers [ADS].

C. DESCRIPTION OF THE EVENT:

1. Event:

At 1634 on 6/3/90, with Unit 2 at 75% power and Unit 3 in Mode 5, a TGIS Train B actuation occurred when an operator (utility, licensed) depressed the reset PB for the Train B chlorine analyzer. An operation to transfer the power supply for TGIS Train A had just been completed, which resulted in a momentary loss of power to the system and an expected TGIS Train A actuation. The operator was dispatched to reset TGIS Train A, which involves, in part, depressing the chlorine analyzer reset PB. Due to inadequate attention to detail, the operator depressed the reset PB for Train B rather than for Train A, resulting in the unplanned TGIS Train B actuation.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 90-003-00	PAGE 3 OF 5
---	---------------------------	-------------------------	----------------

The proper operation of TGIS Train A and Train B components was verified. The chlorine level was verified to be normal, TGIS Trains A and B were reset, and ventilation lineups returned to normal at 1700 and 1641, respectively.

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

Not applicable

3. Sequence of Events:

<u>TIME</u>	<u>ACTION</u>
1630	TGIS Train A (planned) actuation occurred during power supply transfer operation.
1634	TGIS Train B (unplanned) actuation occurred when TGIS Train B chlorine analyzer reset PB was depressed.
1641	Reset TGIS Train B.
1700	Reset TGIS Train A.

4. Method of Discovery:

Control room alarms and indications alerted the operators of the TGIS actuations.

5. Personnel Actions and Analysis of Actions:

The operators responded properly to the TGIS actuations by verifying proper system operation and determining that the chlorine level was normal prior to returning TGIS to the "standby" mode and restoring normal control room ventilation.

6. Safety System Responses:

The TGIS and CREACUS systems functioned in accordance with their design.

D. CAUSE OF THE EVENT:

1. Immediate Cause:

Depressing the TGIS Train B chlorine analyzer reset PB results in the momentary de-energization of the Train B chlorine channel, resulting in momentary loss of power to the TGIS Train B actuation relay and a TGIS Train B actuation (in accordance with design).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 90-003-00	PAGE 4 OF 5
---	---------------------------	-------------------------	----------------

2. Root Cause:

The operator who was dispatched to reset TGIS Train A instead depressed the reset PB for the Train B chlorine analyzer due to inadequate attention to detail.

3. Contributing Cause:

Reset PBs for most Engineered Safety Features (ESF) systems are normally depressed following an actuation of those systems in order to cause system actuation relays (which were de-energized to cause the actuation) to re-energize. Therefore, reset PBs are not normally associated with causing an actuation of an ESF system which is in the "standby" mode. Operations personnel were generally not aware that depressing the chlorine analyzer reset PB results in a TGIS actuation.

E. CORRECTIVE ACTIONS:

1. Corrective Actions Taken:

With regard to resetting the incorrect train of TGIS, appropriate disciplinary action has been administered to the operator involved with this event, emphasizing the importance of attention to detail.

2. Planned Corrective Actions:

This event will be reviewed with Units 2 and 3 Operations personnel.

A Human Performance Evaluation will be performed of this event to determine further corrective actions, as appropriate.

This event will be reviewed for inclusion in operator training programs, including licensed operator requalification, as appropriate.

F. SAFETY SIGNIFICANCE OF THE EVENT:

There is no safety significance to this event since all TGIS and CREACUS components actuated as required and no abnormal chlorine gas concentration was detected.

G. ADDITIONAL INFORMATION:

1. Component Failure Information:

Not applicable

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

SAN ONOFRE NUCLEAR GENERATION STATION UNIT 2	DOCKET NUMBER 05000361	LER NUMBER 90-003-00	PAGE 5 OF 5
---	---------------------------	-------------------------	----------------

2. Previous LERs for Similar Events:

a. LER 90-005 (Docket No. 50-361)

A Containment Purge Isolation System actuation was caused by a technician initiating a simulated high radiation signal on the wrong train radiation monitor. Corrective actions included both a discussion of the event with other technicians and installation of signage to clearly identify the monitor and train.

b. LER 88-015 (Docket No. 50-361)

A Fuel Handling Isolation System actuation was caused by a technician manipulating a switch on an incorrect monitor. Corrective actions included both a discussion of the event with other technicians and implementation of additional administrative controls for technicians.

c. LER 87-001 (Docket No. 50-361)

Unit 2 was manually tripped in response to closure of a main feedwater isolation valve (MFIV). Although work had been authorized to be performed on the Unit 3 MFIV, a technician (non-utility, non-licensed) had initiated work on the Unit 2 MFIV instead, causing the valve closure. Corrective actions included a discussion of the event with other technicians, emphasizing both proper work practices applicable to a dual unit site and attention to detail.

Unlike each of those events, however, LER 90-003 involved personnel error by an operator. Nevertheless, those events had been discussed with operators in the professional operator development course and at preshift briefings. This action is appropriate, but can only serve to minimize occurrence of personnel error, and therefore cannot absolutely prevent recurrence of similar events.