

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3

DOCKET NUMBER (2)

0 5 0 0 0 3 6 1

PAGE (3)

1 OF 0 3

TITLE (4)

SPURIOUS TOXIC GAS ISOLATION SYSTEM (TGIS) ACTUATIONS

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 (5)				
03	21	85	85	010	00	04	22	85	SONGS, UNIT 3	0 5 0 0 0 3 6 2				
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											
4			20.402(b)			20.405(c)			X 50.73(a)(2)(iv)			73.71(b)		
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)			73.71(c)		
0 0 0			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 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 3/21/85 at 0700, with Unit 2 in Mode 4 and Unit 3 in Mode 1 at 62% power, a spurious Toxic Gas Isolation System (TGIS) Train 'A' actuation occurred. Subsequent to this date, additional spurious actuations occurred on 3/31 and 4/7. The Control Room Emergency Air Cleanup System (CREACUS) actuated as required. Each actuation was verified to be spurious by confirming that the meter indications on the TGIS panel were less than their respective setpoints, and TGIS was reset. See also LERs 84-006, -012, -021, -026, -032, -037, -042, -052, -055, -065, 85-003, and -019 (Docket No. 50-361).

Spurious TGIS actuations have been a recurring event, and have been the result of one or more of the following conditions: overly conservative alarm setpoints; electrical noise; rapid temperature and pressure changes; radio transmissions; vibration; and dust and dirt accumulation. Corrective actions have significantly reduced the number of spurious actuations. A Technical Specification amendment has implemented more appropriate setpoints which should further reduce the number of spurious actuations. A TGIS Task Force has recommended additional corrective actions and these actions are all in progress.

There are no reasonable or credible circumstances which could have increased the severity of this event. The health and safety of plant personnel or the public was not affected.

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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3	0 5 0 0 0 3 6 1	8 5	- 0 1 0	- 0 0	0 2	OF 0 3

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

On 3/21/85 at 0700, with Unit 2 in Mode 4 and Unit 3 in Mode 1 at 62% power, a spurious Toxic Gas Isolation System (TGIS) Train 'A' (EIIS System Identifier JF) actuation occurred. Subsequent to this date, additional spurious actuations occurred on 3/31 and 4/7. The Control Room Emergency Air Cleanup Sytem (CREACUS)(EIIS System Identifier VI) actuated as required. The actuations were verified to be spurious by confirming that the meter indications on the TGIS panel were less than their respective setpoints, and TGIS was reset.

Spurious TGIS actuations have been a recurring event, and have been the result of one or more of the following conditions: overly conservative alarm setpoints; electrical noise levels; rapid temperature and pressure changes; radio transmissions; vibration; and dust and dirt accumulation. See also LERs 84-006, -012, -021, -026, -032, -037, -042, -052, -055, -065, 85-003, and -019 (Docket No. 50-361).

Several corrective actions were implemented in 1983 that were effective in reducing, but not eliminating, the spurious TGIS actuations. These actions include: sealing the door in the corridor housing the TGIS, which has reduced rapid temperature and pressure changes and dust accumulation; banning radios in the area; and reducing calibration and surveillance intervals on the TGIS analyzers. In September 1984, the time delay for the ammonia and carbon dioxide analyzers was increased. And, in February 1985, a Technical Specification amendment was implemented which changed the setpoints of the ammonia and butane analyzers, and removed the carbon dioxide analyzer. As a result of all these actions, the number of spurious actuations has been reduced from an average of thirty per quarter to eight in the last quarter of 1984, and five in the first quarter of 1985.

A TGIS Task Force was formed to propose additional corrective actions to minimize spurious TGIS actuations. Their recommendations, which are in the process of being implemented, are as follows:

1. Alarm Monitoring to determine which alarms initiate TGIS actuation.
2. Improved calibration and preventative maintenance procedures.
3. Alarm delays for alarm circuits of CO₂, NH₃, hydrocarbon, and Cl₂ analyzers.
4. Change analyzer failure trip logic to remove analyzer "Lo Alarm" circuitry from actuator trip logic and rewire to equipment "trouble" alarm only.
5. Miscellaneous Design Modifications
 - a) Individual analyzer alarm indicators.
 - b) Noise suppression modifications, heat dissipation/air condition evaluation.
 - c) Fabricate and install a hydrogen gas cylinder rack with pressure regulator, pressure switch, pressure indicators, tubing and reroute one electrical circuit. This modification adds redundant burner fuel supply for the butane analyzer.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

- d) Fabricate and install two compressed air cylinder racks with pressure regulators pressure switches, pressure indicators, tubing and two new circuits. This modification replaces the existing compressed air system supply with a more reliable source.
- e) Modify two flow switch circuits to terminate fuel supply on loss of sample flow to the butane analyzer.

Many of the above TGIS Task Force recommendations are already in progress and should greatly reduce spurious TGIS actuations at SONGS 2 and 3.

There are no reasonable or credible circumstances which could have increased the severity of these events. Neither the health and safety of plant personnel nor the health and safety of the public was affected by these events.

Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

J. G. HAYNES
STATION MANAGER

SCE

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April 22, 1985

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

Subject: Docket No. 50-361
30-Day Report
Licensee Event Report No. 85-010
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 actuations of the Toxic Gas Isolation System (TGIS). Since these events involved shared systems between Units 2 and 3, these events have been combined into a single report in accordance with NUREG-1022. Neither the health and safety of plant personnel nor the health and safety of the public was affected by these events.

If you require any additional information, please so advise.

Sincerely,

JG Haynes

Enclosure: LER No. 85-010

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)

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