

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) South Texas, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 9 8	PAGE (3) 1 OF 0 4
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TITLE (4)
Inoperability of Two Toxic Gas Monitors

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)													
1	2	0 6	8	7	8	7	0	2	2	0	0	0	1	0	7	8	8			0	5	0	0	0

OPERATING MODE (8) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																						
POWER LEVEL (10) 0 0 0	20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.402(e)	50.36(c)(1)	50.36(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vi)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(ix)	73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
											X												

LICENSEE CONTACT FOR THIS LER (12)									
NAME Charles Ayala - Supervising Licensing Engineer								TELEPHONE NUMBER 5 1 2 9 7 2 - 8 6 2 8	
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
E									

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 approximately 0530 hours on December 6, 1987 with Unit 1 in Mode 4, both Control Room Toxic Gas Monitors were found inoperable. The Control Room Ventilation was immediately placed into the recirculation mode. Channel checks on both Toxic Gas Monitors had been performed by a reactor plant operator in training for control room operator, on December 4, 1987. The method he used in performing the channel checks required placing the monitors in the summary mode. With the Toxic Gas Computers in this mode the actuation function of the monitors was disabled. Upon completing the channel checks the operator failed to return the monitoring systems to normal operation. The cause of the occurrence was failure to provide adequate training. Corrective actions which are being taken include providing training for the operators on the proper operation and use of the Toxic Gas Monitors, evaluating the feasibility of a more positive method of determining the operability of the Toxic Gas System, and revising the Log Keeping procedure to provide adequate instruction in performing channel checks on the Toxic Gas Monitors. Plant briefings will be conducted and the Plant Conduct of Operations procedure will be revised to specifically designate how students can be used.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

DESCRIPTION OF OCCURRENCE:

At approximately 0530 hours on December 6, 1987 with the Unit in Mode 4 and prior to initial criticality, it was discovered that both Control Room Toxic Gas Monitors were out of service. The control room ventilation was immediately placed into recirculation mode in accordance with the requirements of Technical Specification 3.3.3.7 action statement b. At approximately 0653 hours both monitors were verified operational. An investigation was initiated to determine the sequence of events which resulted in both toxic gas monitors being out of service.

The ensuing investigation concluded that at approximately 1200 hours on December 4, 1987 a reactor plant operator in training for control room operator, incorrectly performed the required channel checks on both toxic gas monitors (two toxic gas monitors are used to monitor the control room intake air). The operator issued commands through a keyboard to obtain current readings from the Toxic Gas Monitor System but failed to return the monitors to normal service.

The operators were using two different methods to perform the Technical Specification channel check. One method was to compare eight hour automatically generated printouts. The second method was to initiate, through keyboard commands, a current printout of the monitored gas readings. In both methods the Toxic Gas indicating lights and trouble lights were checked for indication of possible system troubles.

The second method used to perform the channel check placed the computer in the summary mode. With the computer in the summary mode, the actuation function of the monitors is disabled. When the monitor is returned to normal operation the monitoring resumes. Indicating and status lights remain in their normal configuration throughout this method of channel check. If a keyboard error is made in returning the monitors to service, the indicating and status lights will remain in their normal configuration.

The operators who performed subsequent channel checks did not recognize that the monitors were out of service because the monitors continued to printout data even though the data was not meaningful and indicating lights remained normal. The monitors were determined to be inoperable when one of the operators recognized that the readings differed from previous channel checks he had performed.

The NRC was notified of the occurrence at 2050 hours on December 7, 1987.

CAUSE OF OCCURRENCE:

The root causes of this event are a failure to provide adequate training on the operation of the Toxic Gas Monitoring System equipment and the performance of channel checks, lack of positive indication of system status, and lack of procedural guidance.

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

ANALYSIS OF EVENT:

No toxic gas releases occurred during the period while the monitors were inoperable and no unusual fumes or reports of unusual effects on control room personnel were identified during this time. Additionally, since the Unit had not yet been critical and no radioactive material had been produced, there were no safety consequences to the general public due to this occurrence.

The event was reportable pursuant to 10CFR50.73(a)(2)(i)(B) since the plant operated for approximately forty two (42) hours in a condition prohibited by Technical Specification 3.3.3.7. Additionally, the event was reportable pursuant to 10CFR50.73(a)(2)(vii) since a single cause allowed both toxic gas monitors to become inoperable.

CORRECTIVE ACTIONS:

To prevent recurrence of the event, the following corrective actions are being taken:

1. The Toxic Gas Monitors have been reprogrammed such that operators will not be required to manipulate the system to perform channel checks. The reprogramming work has been completed; however, the documentation is still in process.
2. Additional training will be conducted on the proper operation and use of the Toxic Gas Monitors by January 15, 1988. By March 1, 1988, HL&P will review and revise as necessary the on the job training program for operator rounds and channel checks in general to ensure effectiveness of training.
3. The Log Keeping procedure will be revised to provide adequate instructions for performing channel checks on the Toxic Gas Monitors by January 15, 1988 and by April 1, 1988 HL&P will review and revise as necessary other operator logs for channel check requirements.
4. Evaluate the feasibility of a positive method for determining the operability of the Toxic Gas Monitoring System by March 1, 1988.
5. Plant briefings will be conducted and the Plant Conduct of Operations procedure will be revised to specifically designate how trainees can be used. Current guidance has been formulated in the form of night orders. The procedure change will be made by February 1, 1988.

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ADDITIONAL INFORMATION:

There have been other reportable events due to auto actuations of the Control Room ventilation to recirculation mode due to Toxic Gas Monitoring System malfunctions or loss of power; however, this is the first reportable event as a result of the operator's lack of operational knowledge of the Toxic Gas Monitoring System at South Texas Project Electric Generating Station.

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The Light company

Houston Lighting & Power

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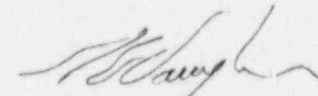
January 7, 1988
ST-HL-AE-2471
File No.: G26
10CFR50.73

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project Electric Generating Station
Unit 1
Docket No. STN 50-498
Licensee Event Report 87-022 Regarding
Inoperability of Both Control Room Toxic Gas Monitors

On December 7, 1987, Houston Lighting & Power (HL&P) notified the NRC pursuant to 10CFR50.72 of a reportable event regarding the inoperability of both Control Room toxic gas monitors. The event did not have any adverse impact on the health and safety of the public. In accordance with 10CFR50.73 HL&P submits the attached Licensee Event Report (LER 87-022).

If you should have any questions on this matter, please contact Mr. C.A. Ayala at (512) 972-8628.



G. E. Vaughn
Vice President
Nuclear Plant Operations

GEV/CAA/clr

Attachment: Licensee Event Report 87-022 Regarding
Inoperability of Both Control Room Toxic
Gas Monitors

cc:

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