



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77481

April 10, 2002  
NOC-AE-02001301  
File No.: G25  
10CFR50.73  
STI: 31427986

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

South Texas Project  
Unit 2  
Docket No. STN 50-499  
Licensee Event Report 02-001  
Gaseous Waste Processing System Oxygen Monitor Automatic Trip Inoperable

Pursuant to 10CFR50.73, South Texas Project submits the attached Unit 2 Licensee Event Report 02-001 regarding the discovery that the Gaseous Waste Processing System Oxygen Monitor Automatic Trip function was inoperable for approximately 12 hours, which exceeds the allowed outage time in Technical Specification 3.3.3.11.

This event did not have an adverse effect on the health and safety of the public.

If there are any questions on this submittal, please contact W. R. Bealefield, Jr. at (361) 972-7696 or me at (361) 972-7849.

*Kend Cooper for E.D. Halpin*

E. D. Halpin  
Plant General Manager

Attachment: LER 02-001 (South Texas, Unit 2)

*IE22*

**cc:**

**(paper copy)**

**Ellis W. Merschhoff  
Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, Texas 76011-8064**

**U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852**

**Richard A. Ratliff  
Bureau of Radiation Control  
Texas Department of Health  
1100 West 49th Street  
Austin, TX 78756-3189**

**Cornelius F. O'Keefe  
U. S. Nuclear Regulatory Commission  
P. O. Box 289, Mail Code: MN116  
Wadsworth, TX 77483**

**C. M. Canady  
City of Austin  
Electric Utility Department  
721 Barton Springs Road  
Austin, TX 78704**

**(electronic copy)**

**A. H. Gutterman, Esquire  
Morgan, Lewis & Bockius LLP**

**M. T. Hardt/W. C. Gunst  
City Public Service**

**Mohan C. Thadani  
U. S. Nuclear Regulatory Commission**

**R. L. Balcom/D. G. Tees  
Reliant Energy, Inc.**

**A. Ramirez  
City of Austin**

**C. A. Johnson/A. C. Bakken III  
AEP - Central Power and Light Company**

**Jon C. Wood  
Matthews & Branscomb**

## LICENSEE EVENT REPORT (LER)

(See reverse for required number of  
digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 60 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-4 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to: bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME South Texas Unit 2	2. DOCKET NUMBER 05000 499	3. PAGE 1 OF 3
--	-------------------------------	-------------------

4. TITLE Gaseous Waste Processing System Oxygen Monitor Automatic Trip Inoperable
--

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
01	17	2001	2002	01	00	04	10	2002		05000
9. OPERATING MODE 1			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check all that apply)							
10. POWER LEVEL 100			20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)	
			20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)	
			20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)		73.71(a)(4)	
			20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)	
			20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER	
			20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 368A	
			20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)			
			20.2203(a)(2)(v)		X 50.73(a)(2)(i)(B)		50.73(a)(2)(vii)			
			20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)			
			20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)			

## 12. LICENSEE CONTACT FOR THIS LER

NAME William R. Bealefield, Jr.	TELEPHONE NUMBER (Include Area Code) 361-972-7696
------------------------------------	--

## 13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

## 14. SUPPLEMENTAL REPORT EXPECTED

YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

## 16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

During a review of narrative logs maintained by Gaseous Waste Processing System (GWPS) operators, an incident was identified in Unit 2 where, on January 17, 2001, the GWPS Inlet Header Valve and Discharge Flow Valve control handswitches were left in the "OPEN" position for longer than four hours. This configuration made the automatic trip feature of the oxygen monitor for the GWPS inoperable. Technical Specification 3/4.3.3.11 states, "The explosive gas monitoring system instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their Alarm/Trip Setpoints set to ensure that the limits of Specification 3.11.2.5 are not exceeded." Specification 3.11.2.5 limits the concentration of oxygen in the GWPS inlet to less than or equal to 3% by volume. The explosive gas monitoring instrumentation must be capable of performing its function automatically to be considered operable. When the control handswitches for the inlet and discharge valves are in "OPEN", the automatic trip function of the oxygen monitor is bypassed and the instrumentation should be declared inoperable. Four hour grab samples must be taken and the samples analyzed within the following four hours or the GWPS must shut down. No documentation could be found to show that the samples were taken or analyzed. The handswitches for the inlet and outlet control valves in this event were in the "OPEN" position for approximately 12 hours before being placed in the "NORMAL" position which restored the automatic trip function.

**LICENSEE EVENT REPORT (LER)**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
South Texas Unit 2	05000 499	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2	OF	3
		2002	01	00			

NARRATIVE (If more space is required, use additional copies of NRC Form 368A) (17)

**DESCRIPTION OF EVENT**

In response to a question in the January 30, 2002 Licensed Operator Requalification class, it was determined that operating the Gaseous Waste Processing System with the inlet and outlet valve control handswitches in the "OPEN" position causes the oxygen monitor automatic trip function to become inoperable according to Technical Specification (T/S) 3.3.3.11. Based on comments that there might be cases where South Texas Project (STP) did not comply with the associated Technical Specification requirements, a Condition Report (CR) 02-1680 was prepared and Plant Operations management requested a reportability review. This review was completed on February 14, 2002.

A Mechanical Auxiliary Building operator's narrative logbook entry dated January 17, 2001, indicates the GWPS inlet and outlet valve control handswitches were placed in the "OPEN" position and remained in that position for approximately 12 hours with process flow present. The Mechanical Auxiliary Building operators in this event were interviewed, but could not provide any additional information and they could not remember if the handswitches were periodically placed back in the "NORMAL" position. The logbook documents the GWPS being placed in operation at 2130 on January 16, 2001 with the inlet and outlet flow valve handswitches in the "OPEN" position. The next entry in the logbook pertaining to the GWPS was at 0930 on January 17, 2001 stating that GWPS was placed in "AUTO".

Technical Specification 3.3.3.11 states: "The explosive gas monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their Alarm/Trip Setpoints set to ensure that the limits of Specification 3.11.2.5 are not exceeded." Action b. of T/S 3.3.3.11 states: "With less than the minimum number of explosive gas monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13." Table 3.3-13 requires the Oxygen monitor (Process) to be OPERABLE during GASEOUS WASTE PROCESSING SYSTEM operation with ACTION "51" to be taken if it is not operable. ACTION "51" states: "With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, operation of this GASEOUS WASTE PROCESSING SYSTEM may continue provided grab samples are collected at least once per 4 hours and analyzed within the following 4 hours."

Based on the logbook entries and the lack of any record of grab samples being taken or analyzed, the requirements of T/S 3.3.3.11 for the GWPS were not met for a period of 12 hours on January 17, 2001.

This event was determined to be reportable in accordance with 10CFR50.73(a)(2)(i)(B), "Operation or condition prohibited by technical specifications." A licensee event report is required if the condition lasted longer than permitted by the T/S without the required compensatory action taken.

**LICENSEE EVENT REPORT (LER)**

1. FACILITY NAME	2. DOCKET	3. LER NUMBER			3. PAGE
South Texas Unit 2	05000 499	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		2002	01	00	

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

**EVENT SIGNIFICANCE**

With the oxygen monitor inoperable, the automatic trip function of the GWPS for high oxygen levels was incapable of isolating the system. A high oxygen concentration could lead to an unsafe explosive mixture in the system. There is no record of alarms or instrument indication of high oxygen concentrations during the 12 hour period of this event.

The GWPS is not used to prevent or mitigate core damage accident sequences as described in the STP Probabilistic Risk Assessment (PRA). Fire detection and suppression systems were unaffected by this event. If a fire or explosion were to occur in the GWPS, a reactor trip would not be expected and therefore initiating event frequency is unaffected. Based on this evaluation, this event did not affect core damage frequency and was not risk significant.

The explosive gas monitoring instrumentation does not meet the 10CFR50.36(c)(2)(ii) criteria for limiting conditions for operation and is not included in NUREG 1431, Revision 2, Improved Technical Specifications, Westinghouse Plants. STP submitted a license amendment request in October 2001 to relocate the explosive gas monitoring instrumentation requirements to the STP Technical Requirements Manual.

**CAUSE OF EVENT**

**Root Cause:**

The root cause of this incident was a lack of understanding of the Technical Specification requirements for GWPS operability.

**CORRECTIVE ACTIONS**

1. This Licensee Event Report will be included in the Licensed Operator and Plant Operator requalification programs to include a discussion of the Technical Specification requirements associated with the operation of the GWPS and procedural changes. This corrective action will be completed by June 13, 2002.
2. Plant procedure OPOP02-WG-0001, Gaseous Waste Processing System Operations, has been revised to include specific requirements for notifying the control room and declaring the oxygen monitor inoperable when inlet or outlet valve control handswitches are taken to the "OPEN" position. This corrective action was completed on February 25, 2002.

**ADDITIONAL INFORMATION**

This is the only event involving the GWPS inlet and outlet control valves found in the Mechanical Auxiliary Building Operators logbook from January 1999 thru March 2002.