



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

May 17, 2004
NOC-AE-04001724
STI: 31743778
10CFR50.73

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

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
Licensee Event Report LER 1-04-002
Inoperable Control Room Makeup and Cleanup Filtration Systems

Pursuant to 10CFR50.73, the South Texas Project submits the attached Licensee Event Report 1-04-002 regarding failure to complete a Limiting Condition for Operation (LCO). This event did not have an adverse effect on the health and safety of the public.

On March 17, 2004, with Units 1 and 2 operating in Mode 1, the South Texas Project declared all three trains of Control Room Makeup and Cleanup Filtration Systems (CRMCFs) inoperable in both units. The basis for this conclusion was the fact that the CRMCFs did not maintain the Control Room Envelope (CRE) at sufficient positive pressure relative to adjacent areas during tests performed in March 2003 for Unit 2 and early March 2004 for Unit 1, as required by a surveillance requirement. This event is reportable as a condition prohibited by the Technical Specifications.

There are no commitments contained in this event report. Resulting corrective actions will be handled in accordance with the South Texas Project Corrective Action Program.

If there are any questions on this submittal, please contact S. M. Head at (361) 972-7136 or me at (361) 972-7849.

A handwritten signature in black ink, appearing to read "E. D. Halpin".

E. D. Halpin
Plant General Manager

jal/

Attachment: LER 1-04-002

IE22

cc:

(paper copy)

Bruce S. Mallett
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

Jeffrey Cruz
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

L. D. Blaylock
City Public Service

Michael K. Webb
U. S. Nuclear Regulatory Commission

R. L. Balcom
Texas Genco, LP

A. Ramirez
City of Austin

C. A. Johnson
AEP Texas Central 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: 50 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-6 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, NEOB-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

1. FACILITY NAME South Texas						2. DOCKET NUMBER 05000 498						3. PAGE 1 OF 5							
4. TITLE Inoperable Control Room Makeup and Cleanup Filtration Systems																			
5. EVENT DATE						6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED							
MONTH		DAY		YEAR		YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME South Texas			DOCKET NUMBER 05000 499				
03		17		2004		2004 - 02 - 00			05		17		2004		FACILITY NAME DOCKET NUMBER 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)			50.36C(1)(i)(A)			50.73(a)(2)(iv)(A)			73.71(a)(4)								
		20.2203(a)(2)(i)			50.36C(1)(ii)(A)			50.73(a)(2)(v)(A)			73.71(a)(5)								
		20.2203(a)(2)(ii)			50.36C(2)			50.73(a)(2)(v)(B)											
		20.2203(a)(2)(iii)			50.46(a)(3)(ii)			50.73(a)(2)(v)(C)											
		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 J. A. Loya										TELEPHONE NUMBER (Include Area Code) 361-972-7922									
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT																			
CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO EPIX		CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO EPIX	
14. SUPPLEMENTAL REPORT EXPECTED										15. EXPECTED SUBMISSION DATE		MONTH		DAY		YEAR			
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO									
16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)																			
<p>At 1242 on 3/17/04, with Units 1 and 2 operating in Mode 1, the South Texas Project (STP) declared all three trains of the Control Room Makeup and Cleanup Filtration Systems (CRMCFs) inoperable in both Units. The basis for this conclusion was the fact that the CRMCFs did not maintain the Control Room Envelope (CRE) at sufficient positive pressure relative to adjacent areas during tests performed in March 2003 for Unit 2 and early March 2004 for Unit 1, as required by a surveillance requirement.</p> <p>Pursuant to 10CFR50.73, STP submits this Licensee Event Report regarding the inoperability of all three CRMCFs trains of each unit as a condition prohibited by the Technical Specifications.</p> <p>The direct causes of this condition were degraded Unit 1 and Unit 2 CRE system health, coupled with the station's non-conservative interpretation regarding the applicability of the surveillance requirement to certain adjacent areas. The CRMCFs was capable of performing its safety function of limiting control room operator doses to less than 5 rem whole body.</p> <p>This condition resulted in no personnel injuries, no offsite radiological releases, and no damage to safety-related equipment. There were no challenges to plant safety.</p>																			
NRC FORM 366 (7-2001)																			

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

I. DESCRIPTION OF EVENT

A. REPORTABLE EVENT CLASSIFICATION

This event is reportable pursuant to 10CFR50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications.

B. PLANT OPERATING CONDITIONS PRIOR TO EVENT

Both South Texas Project Units 1 and 2 were in Mode 1 operating at 100% power.

C. STATUS OF STRUCTURES, SYSTEMS, AND COMPONENTS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

All three trains of CRMCFS were inoperable in both Units 1 and 2.

D. NARRATIVE SUMMARY OF THE EVENT, INCLUDING DATES AND APPROXIMATE TIMES

From 3/1 - 3/6/04, STP performed testing to measure unfiltered in-leakage into the Unit 1 CRE in accordance with commitments made in response to Generic Letter 2003-01, "Control Room Habitability." The Component Test method described in NEI 99-03, "Control Room Habitability Guidance," was utilized for this purpose in order to gather data that would support future use of this method in lieu of Tracer Gas Testing, which was considered a less desirable option.

During the test, several test points measured less than the acceptance criteria specified in OPEP05-HE-0002, "Control Room Envelope Differential Pressure Test." Extensive air balancing was unsuccessful in restoring affected test points above the acceptance criteria. The Test Manager and Component Test Project Manager subsequently decided to terminate balancing efforts despite the fact that six test points did not meet the test acceptance criteria. The basis for this conclusion was that the purpose of the testing was to measure in-leakage pursuant to Generic Letter 2003-01, and no in-leakage was detected by virtue of all measured points being positive. This supported the understanding that the failed points, while representing degraded conditions, did not impact operability, and a correlation to the Technical Specification surveillance requirement that relied on measuring the same parameter was not made. The same determination had been made when concluding Component Testing in Unit 2 in March 2003 with seven test points remaining outside of the acceptance criteria.

On 3/7/04, the NRC Resident Inspectors inquired on the potential impact of the failed measurements on CRMCFS operability. After being briefed regarding the station's position that the failures did not affect operability, the Resident Inspectors expressed their intent to raise the issue with the NRC Regional Office. The following day, the STP Project Manager developed a white paper detailing the station position and forwarded it to the NRC Resident Inspectors to facilitate discussions. Several days of frequent, intensive interactions between the NRC and STP followed.

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On 3/17/04, the NRC informed STP of their interpretation that all three trains of CRMCFs in Unit 1 were not in compliance with TS surveillance requirement 4.7.7.e.3. The NRC additionally acknowledged that the non-compliance did not represent a nuclear safety concern. While reevaluating the station's position in light of the NRC's interpretation of the surveillance requirement, STP conservatively declared all three trains of CRMCFs inoperable in both Units at 1242. This placed both units in a 12-hour shutdown LCO action statement (TS 3.7.7.c). The station then submitted a request for enforcement discretion, the basis for which was the low safety significance of the condition. The NRC granted the Notice of Enforcement Discretion at 1946, after which Units 1 and 2 exited their respective LCO action statements.

TS 3.7.7.c requires that the unit be shut down or the CRMCFs be restored to operable status within 12 hours following identification of the failed test points. Unit 1 was not shut down within 12 hours after the failed surveillance test in early March, 2004. Additionally, a similar condition existed with respect to the Unit 2 CRE in March, 2003. This represents a condition prohibited by the Technical Specifications and is therefore reportable under 10CFR50.73(a)(2)(i)(B).

On 4/15/04, the NRC approved an exigent change to TS 3.4.7.7 that incorporated a provision for evaluating and taking compensatory actions for test areas or point(s) where the differential pressure surveillance requirement of $\geq 1/8"$ Water Gauge (wg) was not met. The station subsequently declared all three trains in both Units operable and exited the LCO.

E. METHOD OF DISCOVERY OF EACH COMPONENT FAILURE, SYSTEM FAILURE, OR PROCEDURAL ERROR

This condition was identified during an in-leakage test of the CRMCFs.

II. EVENT-DRIVEN INFORMATION

A. SAFETY SYSTEMS THAT RESPONDED

N/A

B. DURATION OF SAFETY SYSTEM INOPERABILITY

All three CRMCFs trains for Unit 1 were inoperable from at least March 6, 2004 to April 15, 2004. All three CRMCFs trains for Unit 2 were inoperable from at least March 2003 to April 15, 2004.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE CONDITION

- 1). This condition posed no impact to Core Damage Frequency or Large Early Release Frequency. All test points not meeting surveillance requirement 4.7.7.e.3 remained positive in relation to adjacent areas thereby preventing unfiltered leakage into the CRE.

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- 2). All trains of CRMCFS in both Units remained capable of fulfilling their design function of limiting control room operator dose to less than 5 rem whole body, as required by 10CFR50, Appendix A - General Design Criterion (GDC) 19.
- 3). This condition did not affect radiological safety, the safety of station personnel, or the general public.

Therefore, this event is **NOT** considered a Safety System Functional Failure in accordance with 10CFR50.73(a)(2)(v).

III. CAUSE OF THE EVENT

A. The Root Cause of the degraded condition of the CRE in both Units was:

The station exhibited an inadequate, compliance-based approach to identifying and resolving CRE system health concerns.

Prior to the advent of Component Testing, the station had based its conclusions regarding the health of the CRE primarily on its ability to pass its differential pressure surveillance tests and by evidence of positive pressure across doors to adjacent areas, as indicated by smoke tests. Test results that were in some cases only marginally acceptable were not viewed with concern primarily because, despite the identified condition, the CRE continued to meet its safety function. Component Testing, first implemented in Unit 2 in early 2003 and including significantly more test points, provided the station with its first comprehensive picture of overall system condition. Unit 2 test results revealed test points at or below the acceptance criteria. Subsequent testing in Unit 1 in June 2003 resulted in all points passing (though marginally in some cases). The station placed low priority on resolving these conditions, and did not formally investigate their technical causes until after the station recognized that Component Test failures were equivalent to surveillance point failures and affected operability. In contrast, the station had aggressively resolved failures of test points formally included in the surveillance test. A more appropriate station response to these system health issues would have, at a minimum, resulted in timely restoration of failed points.

B. The Root Cause of the station's non-conservative interpretation of the applicable TS surveillance requirement was:

STP inappropriately based a TS interpretation primarily on assumptions of an equivalent NRC position gleaned from informal verbal communications with the NRC.

The non-conservative position in regards to application of the TS surveillance requirement was based on interpretations of comments in a series of meetings and other dialog with NRC and the industry between 2000 and 2002. These interactions were inappropriately accepted by STP as a basis that testing additional portions of the CRE boundary did not introduce compliance issues placing plant operation in jeopardy.

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IV. CORRECTIVE ACTIONS

- A. Develop and implement measures that ensure the optimal system health of the Control Room Envelope. The measures adopted shall consider the overall condition of the CRE, as opposed to narrow measures primarily focused on satisfying associated technical specification surveillance requirements.
- B. Revise the Control Room Emergency Air Cleanup System Function Test Procedure to incorporate Component Testing, such that the operability impact of any points that fail to meet minimum differential pressure requirements is clear to the user.
- C. Develop and communicate expectations that STP personnel will not assume NRC concurrence with a station position based upon verbal communications.

V. PREVIOUS SIMILAR EVENTS

LER 1-02-001: CRE HVAC failed to maintain a positive pressure in the Control Room due to the failure of a fire damper. The causes were cited as inadequate communications between operators and engineers, as well as knowledge issues regarding CRE failure modes and appropriate compensatory actions.

VI. ADDITIONAL INFORMATION

None.