



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

July 11, 2011
NOC-AE-11002698
File No.: G25
10 CFR 50.73
STI: 32898356

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

South Texas Project
Unit 1
Docket No. STN 50-498
Licensee Event Report 1-2011-001
Technical Specification Requirement Not Met Regarding Unborated Water Sources

Pursuant to 10 CFR 50.73, STP Nuclear Operating Company (STPNOC) submits the attached Unit 1 Licensee Event Report (LER) 1-2011-001 regarding the identification of valves which were not secured in the closed position, contrary to the requirements of Technical Specifications 3.4.1.4.2.b. and 3.9.1.

This condition is considered reportable under 10 CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

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

There are no commitments contained in this LER. Corrective actions will be implemented in accordance with the STP Corrective Action Program.

If there are any questions on this submittal, please contact either J. R. Morris at (361) 972-8652 or me at (361) 972-7158.


L. W. Peter
Plant General Manager

JRM

Attachment: LER 1-2011-001

JE22
NRK

cc:
(paper copy)

Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
612 East Lamar Blvd, Suite 400
Arlington, Texas 76011-4125

Balwant K. Singal
Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North (MS 8B1)
11555 Rockville Pike
Rockville, MD 20852

Senior Resident Inspector
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

Balwant K. Singal
U. S. Nuclear Regulatory Commission

John Ragan
Catherine Callaway
Jim von Suskil
NRG South Texas LP

Ed Alarcon
Kevin Pollo
Richard Pena
City Public Service

Peter Nemeth
Crain Caton & James, P.C.

C. Mele
City of Austin

Richard A. Ratliff
Texas Department of State Health
Services

Alice Rogers
Texas Department of State Health
Services

NRC FORM 366 (10-2010)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB: NO. 3150-0104 Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53). U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects_resource@nrc.gov , and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-1104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an 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.					
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)					EXPIRES: 10/31/2013					
1. FACILITY NAME South Texas Unit 1					2. DOCKET NUMBER 05000498			3. PAGE 1 OF 4		
4. TITLE Technical Specification Requirement Not Met Regarding Unborated Water Sources										
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
04	30	2011	2011	001	0	07	11	2011	N/A	N/A
9. OPERATING MODE 5			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR§: (Check all that apply)							
10. POWER LEVEL 000			<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)				
			<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)				
			<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)				
			<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)				
			<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)				
			<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)				
			<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)				
			<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER				
			<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A				
12. LICENSEE CONTACT FOR THIS LER										
FACILITY NAME Jim Morris, Licensing Engineer								TELEPHONE NUMBER (Include Area Code) 361-972-8652		
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT										
CAUSE	S YSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	S YSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	
14. SUPPLEMENTAL RESPONSE EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO					15. EXPECTED SUBMISSION DATE			MONTH	DAY	YEAR
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)										
On April 30, 2011, South Texas Project (STP) Unit 1 was in refueling outage 1RE16, with the unit in Mode 5, Reactor Coolant System loops not filled. In support of a planned evolution to transfer water from the 1B Recycle Holdup Tank (RHT) to the Volume Control Tank, a Senior Reactor Operator (SRO) assigned to review atypical plant conditions during the outage identified a potential dilution source that was not included in the plant surveillance procedure used to confirm compliance with Technical Specification 3.4.1.4.2 regarding unborated water sources. Although the valves were not secured closed as required by TS, the valves were closed and no dilution occurred.										
Technical Specifications were revised in 2003 to remove references to specific valves required to be isolated with respect to unborated water sources and replaced with more generic language. However, the impact of using the RHT as a fill source was not adequately addressed with respect to compliance with the new TS requirements, and thus the surveillance procedure used to ensure compliance did not address all unborated water sources.										
The corrective action will be to revise the plant surveillance procedure used to ensure compliance with TS 3.4.1.4.2 and TS 3.9.1 to reflect the additional valves that must be secured in the closed position to comply with the TS. This corrective action will be implemented in accordance with the STP Corrective Action Program.										
There were no personnel injuries, no offsite radiological releases, and no damage to safety-related equipment associated with this event. This event did not have an adverse effect on the health and safety of the public.										

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
South Texas Unit 1	05000498	YEAR	SEQUENTIAL NUMBER	REV. NO	2 OF 4
		2011	001	00	

I. DESCRIPTION OF EVENT**A. REPORTABLE EVENT CLASSIFICATION**

This event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B), as any operation or condition that was prohibited by the plant's Technical Specifications.

B. PLANT OPERATING CONDITIONS PRIOR TO EVENT

South Texas Project (STP) Unit 1 was in Mode 5, with Reactor Coolant System loops not filled, as part of refueling outage 1RE16.

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

No structures, systems, or components were inoperable at the start of the event that contributed to the event.

D. NARRATIVE SUMMARY OF THE EVENT

On April 30, 2011, STP Unit 1 was in refueling outage 1RE16, with the unit in Mode 5, Reactor Coolant System loops not filled. In support of a planned evolution to transfer water from the Boron Recycle System (BRS) 1B Recycle Holdup Tank (RHT) to the Volume Control Tank, a Senior Reactor Operator (SRO) assigned to review atypical plant conditions during the outage identified a potential unborated water source that was not included in the plant surveillance procedure used to confirm compliance with Technical Specifications 3.4.1.4.2 regarding unborated water sources.

Technical Specification (TS) 3.4.1.4.2 (Reactor Coolant System – Cold Shutdown – Loops not Filled) requires in Mode 5 that "Each valve or mechanical joint used to isolate unborated water sources shall be secured in the closed position." Note that a similar requirement in TS 3.9.1 (Refueling Operations – Boron Concentration) applies during Mode 6. The associated surveillance procedure was focused on systems directly coupled to the Chemical and Volume Control System, such as Reactor Makeup Water (RMW), where an opened valve can reduce the RCS boron concentration by the addition of unborated water. The SRO review revealed that transferring water from the RHT to refill the RCS loops indirectly exposed the RCS to unborated water via Demineralized Water (DW) connected to the BRS. The surveillance procedure did not ensure that the connecting valves between the RHT and the DW system were secured closed. Although the valves were not secured closed as required by TS, the valves were closed and no dilution occurred.

E. METHOD OF DISCOVERY

The non-compliance with Technical Specifications was discovered during Senior Reactor Operator review of planned refueling outage activities.

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
South Texas Unit 1	05000498	YEAR	SEQUENTIAL NUMBER	REV. NO	3 OF 4
		2011	001	00	

II. EVENT-DRIVEN INFORMATION

A. SAFETY SYSTEMS THAT RESPONDED

N/A

B. DURATION OF SAFETY SYSTEM INOPERABILITY

N/A

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The STP at-power risk model cannot be used to obtain either core damage frequency (CDF) or large early release frequency (LERF) data for this event (there is no PRA evaluation of boron dilution during shutdown). However, since the valves of concern in the potential unborated water path were not opened, and no dilution occurred, the potential impact to CDF and LERF from this event is negligible and the event is considered to be of low safety significance.

III. CAUSE OF THE EVENT

In 1997, STP procedures were revised to allow using water from the RHT to refill the RCS loops in addition to using the Refueling Water Storage Tank (RWST) or the Boric Acid Tanks (BATs). Prior to this, only the RWST or BATs were used for RCS refill. This change allowed clean, hydrazine-treated, borated water from the RHT to be used as a water source to refill the RCS during a refueling outage. In 2003, Technical Specifications 3.4.1.4.2 and 3.9.1 were revised to remove references to specific valves that were required to be secured to protect against dilution and replaced with the more generic language discussed in Section I.D above. However, the potential consequences of using the RHT as a fill source was not adequately addressed with respect to compliance with the revised TS requirements, and thus the surveillance procedure used to ensure compliance did not address all potential unborated water sources.

IV. CORRECTIVE ACTIONS

The surveillance procedure used to ensure compliance with TS 3.4.1.4.2 and 3.9.1 requirements will be revised to reflect the additional valves that must be secured in the closed position to comply with the TS. (Targeted due date September 30, 2011).

Tracking and implementation of this action will be controlled in accordance with the STP Corrective Action Program.

NRC FORM 366A		LICENSEE EVENT REPORT (LER) CONTINUATION SHEET		U.S. NUCLEAR REGULATORY COMMISSION	
1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
South Texas Unit 1	05000498	YEAR	SEQUENTIAL NUMBER	REV. NO	4 OF 4
		2011	001	00	

V. PREVIOUS SIMILAR EVENTS

There have been no similar reportable events at STP within the last three years.

VI. ADDITIONAL INFORMATION

N/A