



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

November 30, 1999  
NOC-AE-000714  
File No.: G26  
10CFR50.73  
STI: 30990550

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

South Texas Project  
Unit 1  
Docket No. STN 50-498  
Licensee Event Report 99-009

Insertion of Incore Flux Thimbles with Core Alteration Requirements Not Satisfied

Pursuant to 10CFR50.73, the STP Nuclear Operating Company (STPNOC) submits the attached Unit 1 Licensee Event Report 99-009 regarding insertion of incore flux thimbles with core alteration requirements not satisfied.

Please note that STPNOC does not believe this matter to be a violation of our Technical Specifications and does not consider it reportable. We are submitting the attached Licensee Event Report based on the Nuclear Regulatory Commission's (NRC) interpretation of our Technical Specifications with respect to the word "component." Based on the NRC's interpretation, actions performed at the station were not in conformance with our Technical Specifications. We believe that our interpretation is conservative and appropriate, and it is based on the way the NRC has interpreted the term in other venues. We also believe that this issue has no safety significance.

Licensee commitments are listed in the Corrective Actions section of the attachment. If there are any questions on this submittal, please contact either Mr. Scott M. Head at (361) 972-7136 or me at (361) 972-7800.

  
G. L. Parkey  
Plant General Manager

kaw  
Attachment: LER 99-009 (South Texas, Unit 1)

IE22

cc:

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

Thomas W. Alexion  
Project Manager, Mail Code 0-4D3  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Cornelius F. O'Keefe  
c/o U. S. Nuclear Regulatory Commission  
P. O. Box 910  
Bay City, TX 77404-0910

J. R. Newman, Esquire  
Morgan, Lewis & Bockius  
1800 M. Street, N.W.  
Washington, DC 20036-5869

M. T. Hardt/W. C. Gunst  
City Public Service  
P. O. Box 1771  
San Antonio, TX 78296

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

Jon C. Wood  
Matthews & Branscomb  
One Alamo Center  
106 S. St. Mary's Street, Suite 700  
San Antonio, TX 78205-3692

Institute of Nuclear Power  
Operations - Records Center  
700 Galleria Parkway  
Atlanta, GA 30339-5957

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

D. G. Tees/R. L. Balcom  
Houston Lighting & Power Co.  
P. O. Box 1700  
Houston, TX 77251

Central Power and Light Company  
ATTN: G. E. Vaughn/C. A. Johnson  
P. O. Box 289, Mail Code: N5012  
Wadsworth, TX 77483

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# LICENSEE EVENT REPORT (LER)

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

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TITLE (4)  
**Insertion of Incore Flux Thimbles with Core Alteration Requirements Not Satisfied**

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 NAME	DOCKET NUMBER
04	22	1999	1999	009	00	11	30	1999		05000
										05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
1	100%	20.2201(b)	20.2203(a)(2)(v)	X	50.73(a)(2)(i)
		20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(ii)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)

**LICENSEE CONTACT FOR THIS LER (12)**

NAME <b>Scott Head – Licensing Supervisor</b>	TELEPHONE NUMBER (Include Area Code) <b>(361) 972-7136</b>
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**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
				no					

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On April 22, 1999, Unit 1 was in refueling outage 1RE08. At approximately 2100 hours the incore thimbles were inserted into the reactor core after core alterations were suspended. On June 29, 1999, an issue was raised to evaluate whether the insertion of the incore thimbles during 1RE08 constituted a core alteration and whether a reportable event had occurred. It was determined that the event was not reportable based on the fact that the insertion had no reactivity impact, and thus was not considered a core alteration based on South Texas Project's interpretation of the definition of core alterations in the Technical Specifications. During 2RE07 on October 19, 1999, the Nuclear Regulatory Commission (NRC) Resident Inspector questioned the Station's interpretation of the definition of core alterations and the issue was re-evaluated. On October 27, 1999, after discussions with the Nuclear Regulatory Commission, the conclusion was made that inserting incore thimbles into the core would be considered a core alteration using the NRC's interpretation. Because the thimbles were inserted in 1RE08 when core alteration requirements were not established, this was a condition prohibited by Technical Specifications. The root cause of the violation of Technical Specifications during 1RE08 was that insertion of the incore flux thimbles was not understood to be a core alteration based on the South Texas Project's interpretation of the definition of core alterations in Technical Specifications. Corrective actions include reviewing the current outage schedule to ensure incore flux thimbles were inserted while core alteration requirements were in place and revising the maintenance procedure for inserting/withdrawing incore flux thimbles to identify movement of incore thimbles as a core alteration.

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

**DESCRIPTION OF THE EVENT**

On April 22, 1999, Unit 1 was in refueling outage 1RE08. At approximately 2100 hours, the incore thimbles were inserted into the reactor core after core alterations had been suspended. On June 29, 1999, Condition Report 99-9620 was initiated to evaluate whether the insertion of the incore thimbles during 1RE08 constituted a core alteration and whether a reportable event had occurred. Condition Report 99-9620 was closed when it was determined that the event was not reportable based on the fact that the insertion had no reactivity impact, and thus was not considered a core alteration based on South Texas Project's interpretation of the definition of core alterations in the Technical Specifications.

At the start of refueling outage 2RE07 the Nuclear Regulatory Commission Resident Inspector questioned the Station's interpretation of the definition of core alterations and a new Condition Report (99-14640) was initiated on October 19, 1999, to re-evaluate this issue. On October 27, 1999, following discussions with the Nuclear Regulatory Commission, a decision was made that insertion of the incore flux thimbles would be treated as a core alteration. Based on this decision, the sequence of events from 1RE08 was determined to be reportable.

As a conservative measure, the 2RE07 refueling outage schedule was reviewed and measures were taken to ensure core alteration requirements were in place when the incore thimbles were inserted. This action was taken to preclude any additional Technical Specification violation issues during the outage in progress, and allow for a more thorough review of this issue following the outage.

The definition of CORE ALTERATIONS in the current South Texas Project Technical Specifications is:

CORE ALTERATIONS shall be the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe conservative position.

The term "component" is not defined and was considered subject to interpretation to determine the intent of the definition in Technical Specifications. When this issue was previously evaluated under Condition Report 99-9620 on June 29, 1999, the insertion of the incore flux thimbles was determined to not constitute a core alteration based on review of other documents. It has been South Texas Project's practice to use Improved Technical Specifications (ITS) to help understand how to apply current Technical Specifications for plant conditions. The Improved Technical Specification definition of core alterations replaced the vague term "components" with "fuel, sources, or reactivity control components" as follows:

CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel.

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Because the incore flux thimbles did not fall into any of these categories, the insertion of incore flux thimbles was not considered a core alteration. Also, the definition of core alteration in the South Texas Project refueling operations procedure stated that movement of items that do not affect core reactivity or core geometry is not considered a core alteration. Based on the information obtained from Improved Technical Specifications and the refueling operations procedure, it was determined that insertion of the incore flux thimbles was not a core alteration.

After discussions with the Nuclear Regulatory Commission on October 27, 1999, a re-evaluation of the condition that was identified on June 29, 1999, concluded that core alterations, using the Nuclear Regulatory Commission's interpretation, would be considered to have taken place when the incore flux thimbles were inserted into the core. Further investigation revealed that core alteration requirements per Technical Specification 3.9.4 were not satisfied when the incore flux thimbles were inserted.

**CAUSE OF THE EVENT**

The root cause of the violation of Technical Specifications during 1RE08 was that insertion of the incore flux thimbles was not considered a core alteration based on the South Texas Project's interpretation of the Technical Specification definition of core alterations.

**ANALYSIS OF THE EVENT**

Technical Specification 3.9.4 requirements were not satisfied when the incore flux thimbles were inserted on April 22, 1999. Thus, based on the Nuclear Regulatory Commission interpretation of the South Texas Project Technical Specifications definition of core alterations, the event is a condition prohibited by Technical Specifications and is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

This event did not have an adverse effect on the health or safety of the public. Inserting the incore flux thimbles with the equipment hatch open is not a safety concern because this activity would not impact core reactivity control nor fuel integrity.

Insertion of incore flux thimbles without core alteration requirements established is unique to non-rapid refueling outages since the insertion is performed in a different sequence than during a rapid refueling outage. 1RE08 was the first non-rapid refueling outage since 1RE01/2RE01.

**CORRECTIVE ACTIONS:**

1. As a precautionary measure while this issue was being evaluated, the 2RE07 outage schedule was reviewed to ensure core alteration requirements were in place when incore flux thimbles were inserted. This was completed on October 19, 1999.
2. The maintenance procedure for inserting and withdrawing incore flux thimbles will be revised to include a step that ensures core alteration requirements are in place when moving incore flux thimbles. This will be completed prior to the next refueling outage.

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**ADDITIONAL INFORMATION:**

There have been no other previous events reported by the South Texas Project to the Nuclear Regulatory Commission within the last three years similar to this occurrence.

A Technical Specification change to revise the definition of core alterations to be consistent with the Improved Technical Specifications definition will be submitted to the Nuclear Regulatory Commission. When the Improved Technical Specification definition is incorporated into the current Technical Specifications, inserting incore flux thimbles into the core will not be considered a core alteration, and there will be no change necessary to plant equipment to support the new definition.