

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 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If 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

FACILITY NAME (1)

South Texas, Unit 1

DOCKET NUMBER (2)

05000 498

PAGE (3)

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TITLE (4)

Failure to Fully Meet the Requirements of Technical Specification Surveillance 4.0.5 for Containment Isolation Check Valves.

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	
09	28	98	98	006	01	10	14	98	South Texas, Unit 2	05000 499	
									FACILITY NAME	DOCKET NUMBER	
										05000	
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
1		20.2201(b)			20.2203(a)(2)(v)			X 50.73(a)(2)(i)		50.73(a)(2)(viii)	
POWER LEVEL (10)		20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)		50.73(a)(2)(x)	
100		20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)		73.71	
		20.2203(a)(2)(ii)			20.2203(a)(4)			50.73(a)(2)(iv)		OTHER	
		20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A	
		20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)			

LICENSEE CONTACT FOR THIS LER (12)

NAME

Scott Head - Licensing Supervisor

TELEPHONE NUMBER (Include Area Code)

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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

SUPPLEMENTAL REPORT EXPECTED (14)

YES
(If yes, complete EXPECTED SUBMISSION DATE).

X NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

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

On August 26, 1998, Units 1 and 2 were operating in Mode 1 at 100% power. On August 26, 1998 during a review of the Inservice Test Plan, it was determined that a total of 21 containment isolation check valves had not been tested in the required position for performing a specific safety function (closed) within the required testing periodicity as required by Technical Specification Surveillance 4.0.5 for inservice testing in accordance with the Section XI ASME Code. The affected valves had been tested when local leak rate testing required by Appendix J of 10CFR50 was performed. The South Texas Project had received approval from the Nuclear Regulatory Commission to implement performance-based leak rate testing as allowed by Option B of Appendix J. Local leak rate testing for the affected valves was subsequently extended beyond a periodicity of a refueling cycle without evaluating the impact on Section XI ASME Code requirements. The cause of this event was inadequate change management with respect to implementing Appendix J, Option B of 10CFR50. Corrective actions included entry into Technical Specification 3.6.3 and testing of four valves in Unit 2, request and receipt of enforcement discretion from the requirements of Technical Specification Surveillance 4.0.5 until the remaining Unit 1 valves could be tested, and submittal of an exigent Technical Specification amendment request for one time deferral of testing of those valves that required a cold shutdown period for testing. Additional corrective actions include the development of individual surveillance test activities for the affected valves, a review to verify that all inservice testing requirements are identified uniquely and a review of Section XI ASME Code-related programs implemented within the past 5 year period for impact on other programs. Subsequent review identified additional containment isolation check valves that had not been tested in the required position. These valves have since been tested satisfactorily.

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DESCRIPTION OF EVENT:

On August 26, 1998, Units 1 and 2 were operating in Mode 1 at 100% power. On August 26, 1998 during a review of the Inservice Test Plan, it was determined that a total of 21 containment isolation check valves (shown in Table 1) had not been tested in the required position for performing a specific safety function (closed) within the required testing periodicity. Technical Specification Surveillance Requirement 4.0.5 requires that inservice testing of ASME Code Class 1, 2, and 3 valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50, Section 50.55a(g)(6)(i). Section XI of the ASME Code requires that valves in the Inservice Test Program be exercised periodically to the position required to fulfill their safety function. The containment isolation check valves shown in Table 1 have a safety function to close to maintain containment integrity. The South Texas Project had established relief to test the affected valves at a periodicity of each cold shutdown of sufficient duration or refueling outage.

The affected 21 containment isolation check valves were declared inoperable and Technical Specification 3.6.3 was entered. The affected four Unit 2 containment isolation check valves, as indicated in Table 1, were exercised satisfactorily in the closed direction and declared operable on August 27, 1998. For nine Unit 1 containment isolation check valves, as indicated in Table 1, enforcement discretion from the requirement to apply Technical Specification Surveillance Requirement 4.0.5 for 14 days to allow on-line testing of the subject valves was received from the Nuclear Regulatory Commission on August 27, 1998. Close exercise testing to restore this group of valves to operable status was completed on September 9, 1998. The remaining eight Unit 1 containment isolation check valves, as indicated in Table 1, require a cold shutdown condition to exercise the valves. Enforcement discretion from the requirement to apply Technical Specification Surveillance Requirement 4.0.5 for these valves was received from the Nuclear Regulatory Commission on August 27, 1998. The discretionary period for performing ASME Code testing is pending Nuclear Regulatory Commission staff review and approval of an exigent technical specification amendment request. The exigent technical specification amendment was submitted on August 28, 1998 and requested a one time deferral of testing of the subject valves in the closed position until the next cold shutdown period of sufficient duration or until the next refueling outage. A thorough review was conducted and it has been confirmed that the condition that required entry into Technical Specification 3.6.3, described above, was limited to the affected containment isolation check valves indicated in Table 1.

The affected containment isolation check valves indicated in Table 1 have been historically exercised in the closed direction to meet Section XI ASME Code requirements during performance of local leak rate testing required by Appendix J of 10CFR50. In August, 1996 the South Texas Project received a license amendment to Technical Specifications allowing performance-based containment leak testing per Appendix J, Option B of 10CFR50. Historical leak rate performance of the affected containment isolation check valves allowed extension of the local leak rate test frequency to periodicities greater than each refueling outage. The frequency of the appropriate plant surveillances for leak rate testing was extended for the affected valves. However, an alternate

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test method to exercise the affected valves in the closed direction was not developed to meet the ASME Code inservice testing requirements. As a result, the periodicity for the affected valves was extended with the local leak rate test periodicity.

Subsequent review of the surveillance performance history of containment isolation check valves identified an additional six valves in Unit 1 that have not been tested per ASME Code requirements. They were reported to the Nuclear Regulatory Commission on September 28, 1998. These valves have since been tested satisfactorily. All Unit 2 containment isolation check valves that are tested on a refueling frequency or per a cold shutdown justification have been scheduled for testing during the current Unit 2 refueling outage.

The South Texas Project plans to conduct an implementation review of the ASME Code inservice testing requirements to verify that the Inservice Test Program requirements are being performed as required by the Code. A comparison of the Inservice Test Plan and Bases Document test requirements to the implementing surveillances and procedures will verify that all ASME Code Inservice Testing requirements are being satisfied. Any changes required to the surveillances or procedures will be documented by the Condition Reporting process.

CAUSE OF EVENT:

The cause of this occurrence is inadequate change management with respect to implementing Appendix J, Option B of 10CFR50. When the change was made to implement Appendix J, Option B of 10CFR50 which allowed extension of local leak rate testing periodicities, the change was not adequately evaluated for impact on Section XI ASME Code testing requirements. Specifically, when the Local Leak Rate Testing for the containment penetrations was extended to five years, surveillance test activities were not developed to continue testing the close function of the check valves each refueling outage.

ANALYSIS OF EVENT:

Failure to meet the requirements of Technical Specifications is reportable pursuant to 10CFR50.73(a)(2)(i)(B). The purpose of the containment isolation valves is to ensure that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment and is consistent with General Design Criteria 54 through 57 of Appendix A of 10CFR50. The affected containment isolation check valves were exercised satisfactorily in the closed position in accordance with ASME Code the last time local leak rate testing was performed. Performance-based local leak rate testing results have demonstrated the leak tightness of these valves such that the local leak rate testing periodicities have been extended beyond the periodicity of a normal refueling cycle. Maintenance history has demonstrated reliable performance of these valves.

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Based on the performance history of the affected valves, the Probabilistic Risk Assessment modeling of these valves is correct and the failure rates for these valves are unaffected by this event. Irrespective of the failure rate modeling, the current South Texas Project Probabilistic Risk Assessment model indicates that the potential failure of these valves to close has no impact on core damage frequency. In addition, the impact of these valves [assuming complete failure] from a Large Early Release standpoint is minimal.

Based on the above, in the event that containment isolation would be necessary, the affected valves will have a high probability of performing their intended safety function. Therefore, the safety significance and potential consequences of this event are minimal.

There were no adverse safety or radiological consequences from this event.

CORRECTIVE ACTION:

1. The affected four Unit 2 containment isolation check valves were exercised satisfactorily in the closed direction.
2. Enforcement discretion from the requirement to apply Technical Specification Surveillance Requirement 4.0.5 for 14 days to allow on-line testing of nine Unit 1 containment isolation check valves was received from the Nuclear Regulatory Commission. The nine affected valves were subsequently exercised satisfactorily in the closed direction.
3. Enforcement discretion from the requirement to apply Technical Specification Surveillance Requirement 4.0.5 for the remaining eight Unit 1 containment isolation check valves that require a cold shutdown condition to exercise the valves was received from the Nuclear Regulatory Commission.
4. An exigent technical specification amendment request for eight Unit 1 containment isolation check valves was submitted for a one time deferral from exercising of the subject valves in the closed position until the next cold shutdown period of sufficient duration or until the next refueling outage.
5. Individual surveillance test activities in the Surveillance Program for all inside containment isolation check valves affected by the condition in this report were developed.
6. The Unit 2 containment isolation check valves that require cold shutdown conditions for ASME Code Section XI exercising in the closed direction have been identified as an outage activity. The Unit 1 containment isolation check valves that require cold shutdown conditions for ASME Code Section XI exercising in the closed direction will be identified as an outage activity by December 3, 1998.
7. A review will be completed by February 16, 1999 to verify that all inservice testing requirements are identified uniquely and performed on the frequency in accordance with the ASME Code.

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8. A comprehensive review of containment isolation check valves to determine compliance with testing requirements at the required frequency per ASME Section XI Code has been completed.
9. A review of Section XI ASME Code-related program changes implemented during the past 5 year period will be completed by January 22, 1999 for impact on other programs.
10. The six additional valves identified in the comprehensive review as not having been tested per Code requirements have been tested satisfactorily.

ADDITIONAL INFORMATION:

The South Texas Project plans to submit the lessons learned from this event to the appropriate station curriculum review committees for inclusion in station training programs. The cause of this event and its ramifications have been reviewed with affected groups.

The South Texas Project has submitted to the Nuclear Regulatory Commission one other Licensee Event Report within the last three years regarding occurrences where Section XI ASME Code testing requirements pursuant to Technical Specification Surveillance 4.0.5 were not met.

- Unit 1 Licensee Event Report 96-002 determined that the testing frequency for Essential Chilled Water Pump 11A was not increased when the alert range for a measured performance parameter was entered.

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TABLE 1

<u>Valve Number</u>	<u>Tested within 24 hrs</u>	<u>Tested within 14 days</u>	<u>Testing requires cold shutdown</u>
U2: CC-0013	X		
U2: CC-0058	X		
U2: CC-0183	X		
U2: CC-0198	X		
U1: CC-0058		X	
U1: CC-0013		X	
U1: CC-0138		X	
U1: CC-0123		X	
U1: CC-0183		X	
U1: CC-0198		X	
U1: CV-0158		X	
U1: DW-0502		X	
U1: SI-0058		X	
U1: IA-0541			X
U1: CV-0034A			X
U1: CV-0034B			X
U1: CV-0034C			X
U1: CV-0034D			X
U1: CC-0319			X
U1: CV-0026			X
U1: FP-0943			X
U1: SI-0005A	X		
U1: SI-0005B	X		
U1: SI-0005C	X		
U1: SI-0030A	X		
U1: SI-0030B	X		
U1: SI-0030C	X		

Legend: U1 - Unit 1 valve
U2 - Unit 2 valve