

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9712100265 DOC. DATE: 97/11/24 NOTARIZED: NO DOCKET #
 FACIL: 50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina 05000400
 AUTH. NAME AUTHOR AFFILIATION
 VERRILLI, M. Carolina Power & Light Co.
 DONAHUE, J.W. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 97-023-00: on 920721, RCS PIV testing deficiency was noted. Caused by failure to consider all testing variables during initial SP development. Surveillance TP OST-1506 was revised to incorporate correction factor. W/971124 ltr.

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NOTES: Application for permit renewal filed. 05000400

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Serial: HNP-97-212
10CFR50.73

SHEARON HARRIS NUCLEAR POWER PLANT UNIT 1
DOCKET NO. 50-400
LICENSE NO. NPF-63
LICENSEE EVENT REPORT 97-023-00

Sir or Madam:

In accordance with 10CFR50.73, the enclosed Licensee Event Report (LER) is submitted. This LER describes a Reactor Coolant System pressure isolation valve testing deficiency that resulted in a violation of Technical Specifications.

Sincerely,

J. W. Donahue
Director of Site Operations
Harris Plant

MV

Enclosure

c: Mr. J. B. Brady (HNP Senior NRC Resident)
Mr. L. A. Reyes (NRC Regional Administrator, Region II)
Mr. V. L. Rooney (NRC - NRR Project Manager)

9712100265 971124
PDR ADCK 05000400
S PDR



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EXPIRES 04/30/98

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: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND 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.

FACILITY NAME (1)

Harris Nuclear Plant Unit-1

DOCKET NUMBER (2)

50-400

PAGE (3)

1 OF 2

TITLE (4)

Reactor Coolant System Pressure Isolation Valve Testing Deficiency (OST-1506)

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
7	21	92	97	-- 023	-- 00	11	24	97		
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)										
1			20.2201(b)							
100%			20.2203(a)(1)							
			20.2203(a)(2)(i)							
			20.2203(a)(2)(ii)							
			20.2203(a)(2)(iii)							
			20.2203(a)(2)(iv)							
			50.36(c)(1)							
			50.36(c)(2)							
			50.73(a)(2)(i)							
			50.73(a)(2)(ii)							
			50.73(a)(2)(iii)							
			50.73(a)(2)(iv)							
			50.73(a)(2)(v)							
			50.73(a)(2)(vi)							
			50.73(a)(2)(vii)							
			50.73(a)(2)(viii)							
			50.73(a)(2)(ix)							
			50.73(a)(2)(x)							
			73.71							
			OTHER							
			Specify in Abstract below or in NRC Form 366A							

LICENSEE CONTACT FOR THIS LER (12)

NAME

Michael Verrilli Sr. Analyst - Licensing

TELEPHONE NUMBER (Include Area Code)

(919) 362-2303

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 23, 1997, with the plant at approximately 100% power in mode 1, an evaluation was completed by Operations personnel related to a deficiency in the Reactor Coolant System (RCS, EIS Code:AB-V) Isolation Valve Leak Test Procedure (Operations Surveillance Test, OST-1506). This procedure deficiency involved the calculation used to determine the actual leak rate for the RCS pressure isolation valves being tested. Specifically, a correction factor was not included in the calculation as it should have been to consider the effects of back pressure on the downstream side of the valve being tested and the frictional headloss and elevation differences between the valve and testing rig. With this correction factor not applied, test results for certain valve testing configurations could have been influenced in the non-conservative direction. During the above mentioned Operations evaluation, past testing results were reviewed and the appropriate correction factor was applied. One instance was identified where application of the correction factor resulted in the test results failing to meet the leak rate limit allowed by Technical Specification (TS) 3.4.6. This occurred on July 21, 1992, during leak rate testing for 1SI-346, which is a 10 inch check valve in the low head safety injection header. This condition represents a TS violation for not meeting the required 5 gallon per minute maximum allowed leakage through 1SI-346 and subsequently, not taking the appropriate actions as required by TS.

The leak rate calculation procedural deficiency in OST-1506 and resulting TS violation were caused by the failure to consider all testing variables during initial surveillance procedure development.

Surveillance test procedure OST-1506 was revised to incorporate the appropriate correction factor to account for head loss and elevation differences during RCS pressure isolation valve leak rate testing.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (5)			PAGE (3)
Shearon Harris Nuclear Plant - Unit #1	50-400	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 2
		97	023	00	

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

EVENT DESCRIPTION:

On October 23, 1997, with the plant at approximately 100% power in mode 1, an evaluation was completed by Operations personnel related to a deficiency in the Reactor Coolant System (RCS, EHS Code:AB-V) Isolation Valve Leak Test Procedure (Operations Surveillance Test, OST-1506). This procedure deficiency involved a calculation used to determine the actual leak rate for the RCS pressure isolation valves being tested. Specifically, a correction factor was not included in the calculation as it should have been to consider the effects of back pressure on the downstream side of the valve being tested and the frictional headloss and elevation differences between the valve and testing rig. With this correction factor not applied, test results for certain valve testing configurations were influenced in the non-conservative direction. During the above mentioned Operations evaluation, past testing results were reviewed and the appropriate correction factor was applied. One instance was identified where application of the correction factor resulted in the test results failing to meet the leak rate limit allowed by Technical Specification (TS) 3.4.6.2. This occurred on July 21, 1992, during leak rate testing for 1SI-346, which is a 10 inch check valve in the low head safety injection header. The TS 3.4.6.2 limit for 1SI-346 valve leakage is 5 gallons per minute. Action statement "C" of TS 3.4.6.2 requires isolation of the high pressure portion of the affected system from the low pressure portion within 4 hours by the use of two closed manual or deactivated automatic valves, or be in at least Hot Standby within the next six hours and in Cold Shutdown within the following 30 hours. Since personnel were not aware that the actual valve leakage exceeded the 5 gallon per minute TS limit, these actions were not taken, therefore this condition represents a TS violation.

The deficient leak rate calculation is contained in one other surveillance test procedure at HNP used to satisfy TS surveillance requirement 4.4.6.2.2. This procedure (Residual Heat Removal System Loop Isolation Valve Leak Test procedure, OST-1507) did not require revision due to the use of a different test configuration. A comprehensive TS surveillance procedure review project is currently in progress to support HNP's conversion to the new Westinghouse Standard Technical Specifications. This project had not reviewed the surveillance procedures associated with TS 3.4.6.2 when this condition was identified. Review of this section of TS and the corresponding surveillance procedures are currently scheduled to begin in December 1997. Based on the scope of the review process and past results, there is a high level of confidence that the condition reported in this LER would have been identified by the review project.

CAUSE:

The leak rate calculation procedural deficiency in OST-1506 and resulting TS violation was caused by the failure to consider all testing variables during initial surveillance procedure development.

SAFETY SIGNIFICANCE:

There were no actual safety consequences associated with this event. Leak rate limits for RCS pressure isolation valves are set sufficiently low to ensure early detection of possible in-series check valve failures. Based on subsequent satisfactory testing performed on 1SI-346 since the July 1992 test, there is no indication of check valve failure.

This event is being reported per 10CFR50.73(a)(2)(i)(B) as a condition prohibited by TS.

PREVIOUS SIMILAR EVENTS:

HNP submitted recent LERs 96-002 and 97-021 to report surveillance procedure deficiencies caused by incorrectly interpreting TS testing requirements during initial surveillance test procedure development or during procedure revisions. LER 96-002 was the result of HNP's actions to address NRC Generic Letter 96-01. A comprehensive TS surveillance procedure review project is currently in progress to support HNP's conversion to the new Westinghouse Standard Technical Specifications.

CORRECTIVE ACTIONS COMPLETED:

1. Surveillance test procedure OST-1506 was revised on October 30, 1997 to incorporate the appropriate correction factor to account for head loss and elevation differences during RCS pressure isolation valve leak rate testing.

