



JUL 28 2006

Serial: HNP-06-101
10CFR50.73

U.S. Nuclear Regulatory Commission
ATTN: NRC Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT UNIT 1
DOCKET NO. 50-400/LICENSE NO. NPF-63
LICENSEE EVENT REPORT 2005-004-00

Ladies and Gentlemen:

The enclosed Licensee Event Report 2006-002-00 is submitted in accordance with 10 CFR 50.73. This report describes a condition prohibited by Technical Specifications (TS) that the 'A' Train of ESCW was inoperable for a period longer than allowed by TS 3.7.13.

This document contains no new Regulatory Commitment.

Please refer any questions regarding this submittal to Mr. Dave Corlett, Supervisor - Licensing/Regulatory Programs, at (919) 362-3137.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eric McCartney".

Eric McCartney
Plant General Manager
Harris Nuclear Plant

EAM/khv

Enclosure

c: Mr. R. A. Musser (HNP Senior NRC Resident)
Mr. C. P. Patel (NRC-NRR Project Manager)
Dr. W. D. Travers (NRC Regional Administrator, Region II)

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

Handwritten initials "IE22" in a stylized, cursive script.

NRC FORM 366 (6-2004)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0104		EXPIRES: 06/30/2007	
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)				Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 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.			
1. FACILITY NAME Harris Nuclear Plant - Unit 1				2. DOCKET NUMBER 05000400		3. PAGE 1 OF 3	
4. TITLE ESCW inoperable for a period longer than allowed by Technical Specifications due to inadequate procedure							
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY
06	01	2006	2006	- 002 -	00	07	28
						8. OTHER FACILITIES INVOLVED	
						FACILITY NAME	DOCKET NUMBER
						N/A	05000
						FACILITY NAME	DOCKET NUMBER
						N/A	05000
9. OPERATING MODE		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)					
1		<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"/> 20.2201(d)		<input type="checkbox"/> 20.2203(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(ii)(A)	
10. POWER LEVEL		<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"/> 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"/> 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"/> 20.2203(a)(2)(iii)		<input type="checkbox"/> 50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(v)(A)	
		<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"/> 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"/> 20.2203(a)(2)(vi)		<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)		<input type="checkbox"/> 50.73(a)(2)(v)(D)	
		<input type="checkbox"/> 50.73(a)(2)(vii) <input type="checkbox"/> 50.73(a)(2)(viii)(A) <input type="checkbox"/> 50.73(a)(2)(viii)(B) <input type="checkbox"/> 50.73(a)(2)(ix)(A) <input type="checkbox"/> 50.73(a)(2)(x) <input type="checkbox"/> 73.71(a)(4) <input type="checkbox"/> 73.71(a)(5) <input type="checkbox"/> OTHER Specify in Abstract below or in NRC Form 366A					
12. LICENSEE CONTACT FOR THIS LER							
FACILITY NAME Kelli H Voelsing – Licensing Specialist						TELEPHONE NUMBER (Include Area Code) 919-362-3057	
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT							
CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT
D	KM	CHU	York	Y			
14. SUPPLEMENTAL REPORT EXPECTED					15. EXPECTED SUBMISSION DATE		
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO					MONTH DAY YEAR <div style="border: 1px solid black; height: 20px; width: 100%;"></div>		
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)							
<p>During Refueling Outage 13 (RFO-13), a rebuilt York Compressor was installed on the 'A' Chiller for the 'A' Essential Services Chilled Water (ESCW) system. To connect the rebuilt compressor, personnel reinstalled and reconnected the linkage between the compressor pre-rotation vane (PRV) shaft and the PRV motor. The ½" cap screw which connects the PRV internal shaft and the external lever was not torqued to 75 ft-lbs as referenced in plant drawings during this maintenance. On May 25, 2006, the 'A' Chiller was started successfully for the ninth time following the maintenance, and the PRV motor rotated the linkage to fully open the PRVs. However, differential movement between the linkage and the PRV shaft occurred due to the inadequately torqued ½" cap screw. This movement created a misalignment of the connecting linkage, which prevented the VMS-1 switch from shutting when the unit was secured at 21:20 on May 25, 2006. The VMS-1 is a start permissive for the 'A' Chiller. Therefore 'A' Chiller was inoperable from this time until the condition was discovered, corrected and tested on June 3, 2006 at 05:00.</p> <p>The root cause of this event was a technically inadequate procedure. The corrective action to prevent recurrence is to revise the maintenance procedure for the ESCW Chillers to provide instructions for properly torquing the ½" cap screw.</p>							

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Harris Nuclear Plant – Unit 1	05000400	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2006	002	- 00	

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

I. DESCRIPTION OF EVENT

On April 29, 2006, during Refueling Outage 13 (RFO-13), a rebuilt York Compressor was installed on the 'A' Chiller [CHU] for the 'A' Essential Services Chilled Water (ESCW) system [KM]. This maintenance was performed as part of a periodic maintenance plan to replace aging components, and it was the first time that Harris Nuclear Plant (HNP) had replaced a safety-related chiller compressor since original startup. To properly connect the rebuilt compressor, personnel had to reinstall and reconnect the linkage between the compressor pre-rotation vane (PRV) shaft and the PRV motor. The VMS-1 Switch is internal to the PRV motor and provides a start permissive for the chiller unit.

Following post-maintenance testing, the 'A' Chiller was successfully started and secured eight times between May 4, 2006 and May 25, 2006. On May 25, 2006 at 20:12, the 'A' Chiller was again started. During this startup of the 'A' Chiller, the PRV motor rotated the linkage to the position which fully opened the PRVs. During this operation, differential movement between the linkage and the PRV shaft occurred because the ½" cap screw, which connects the PRV internal control shaft and the external lever, was not torqued to 75 ft-lbs as referenced in plant design drawings during the installation on April 29, 2006. This differential movement created a misalignment of the connecting linkage.

When the 'A' Chiller was secured on May 25, 2006 at 21:20, the PRV motor operated to fully shut the PRVs. However, because of the misalignment in the linkage created by the differential movement, the PRVs reached the fully shut position before the VMS-1 switch was closed. Because the VMS-1 switch failed to close on May 25, 2006 at 21:20, the start permissive for the 'A' Chiller was not met, and therefore the 'A' Chiller would not have started on demand.

This condition was discovered on June 1, 2006 at 16:25 when the 'A' ESCW Chiller received a routine start demand from Operations, but the chiller did not start. Immediate trouble shooting determined that the 'A' Chiller did not start because the VMS-1 switch was open. This misaligned linkage was corrected and the VMS-1 switch was closed under a work order. The 'A' ESCW system and chiller were restored to an operable condition on June 3, 2006 at 05:00.

The 'A' ESCW system was inoperable from May 25, 2006 at 21:20 until June 3, 2006 at 05:00 when the linkage was repaired and the VMS-1 switch was closed. This time is longer than allowed by Technical Specification (TS) 3.7.13. During this time, the 100% capacity, redundant 'B' ESCW System was in-service and fully functional.

Energy Industry Identification System (EIIS) codes are identified in the text within brackets [].

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

II. CAUSE OF EVENT

The root cause of this event was a technically inadequate procedure, CM-I0014, "York Essential Services Chilled Water Chiller Temperature Controller Maintenance." The procedure did not include the requirement to torque the ½" cap screw, which connects the PRV internal control shaft and the external lever, to 75 ft-lbs as referenced by plant design drawings.

III. SAFETY SIGNIFICANCE

The 'A' chiller was in inoperable for a period of 199 hours 40 minutes, which is longer than the 72 hours allowed by TS 3.7.13. There were no actual consequences of the inoperability of the 'A' Chiller since there were no conditions which caused a demand for the 'A' Chiller to start between May 25, 2006 and June 3, 2006. During this time, the 'B' ESCW System, which includes the 'B' Chiller, was in-service and fully functioning to supply all required loads.

If a design basis accident had occurred between May 25, 2006 at 21:20 through June 3, 2006 at 05:00, the 'A' ESCW system would not have been capable of performing its safety-related functions. This consequence is minimized by the existence of the 100% capacity, redundant 'B' ESCW System. The 'B' ESCW System, which includes the 'B' chiller, was in service and fully functional during this time period.

This condition is reportable as a condition prohibited by Technical Specifications pursuant to 10 CFR 50.73(a)(2)(i)(B) since the condition existed for a time longer than its allowed outage time. This condition was neither recognized nor discovered until after the allowed outage time for this condition had elapsed, and was corrected by the realignment of the linkage and the torquing of the ½" cap screw on June 3, 2006 at 05:00.

IV. CORRECTIVE ACTIONS

As immediate corrective action, the PRV linkage was properly aligned and the ½" cap screw on the PRV control shaft was properly torqued to 75 ft-lbs. This corrective action was completed on June 2, 2006 at 01:41. Following the satisfactory completion of all post-maintenance testing, the 'A' ESCW system was restored to operability on June 3, 2006 at 05:00. The corrective action to prevent recurrence is to revise procedure CM-I0014, "York Essential Services Chilled Water Chiller Temperature Controller Maintenance," to provide instructions for properly torquing the ½" cap screw, which connects the PRV internal control shaft and the external lever arm, when required for cam adjustment.

V. PREVIOUS SIMILAR EVENTS

There is one previous event at HNP where the ESCW system was inoperable for a period longer than allowed by TS. As described in LER 2005-004-00, the cause of this period of inoperability was inadequate implementation of operator manual actions. This previous event and associated root cause are unrelated to this event, and as such, the corrective actions to prevent recurrence put in place for the previous LER on the ESCW, would not have been expected to prevent this occurrence.