



SEP 09 2005

Serial: HNP-05-105
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 2005-004-00 is submitted in accordance with 10 CFR 50.73. This report describes a condition prohibited by Technical Specifications (TS) that both trains of ESCW are considered to have been 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/jpy

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.
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P. O. Box 165
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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
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4. TITLE
ESCW inoperable for a period longer than allowed by Technical Specifications

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
07	12	2005	2005	- 004 -	00	09	09	2005	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
	<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)						
10. POWER LEVEL 100	<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)(vii)(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 John P. Yadusky – Lead Engineer	TELEPHONE NUMBER (Include Area Code) 919-362-2020
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO			

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

On November 5, 2004 Engineering Change (EC) 51444 inadvertently introduced reliance on a manual action to ensure operability of the Essential Services Chilled Water System (ESCW) in the event of a sustained loss of Service Air (SA) pressure. On March 5, 2005 temporary modification EC 60425 manually isolated the expansion tank, and issued detailed procedure guidance, meeting the requirements of Information Notice (IN) 97-78, to maintain ESCW expansion tank pressure.

Between November 5, 2004 and March 5, 2005, instructions provided to the operator, while feasible, did not have sufficient detail to meet NRC guidance for manual actions (IN 97-78). Although functional, both trains of ESCW are considered to have been inoperable for a period longer than allowed by Technical Specification (TS) 3.7.13. The root cause of this event was that site personnel failed to recognize that the plant had inadvertently introduced reliance on an operator manual action to ensure operability, in the event of a sustained loss of SA, without fully documenting actions taken to meet the guidance of IN 97-78 and Nuclear Energy Institute (NEI) 96-07.

The corrective actions to prevent recurrence are to provide 10CFR50.59 refresher and real time training covering operator manual actions. The procedure governing the EC process will be revised to provide guidance concerning requirements for manual actions.

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

I. DESCRIPTION OF EVENT

From the end of Refueling Outage 12 (RFO-12) on November 5, 2004, through March 5, 2005, the plant increased to and operated at 100 percent power. On July 12, 2005 it was recognized that specific guidance for operator manual actions related to the ability to respond to a loss of pressure in the Essential Services Chilled Water System (ESCW) [KM] expansion tank, in the event of a sustained loss of Service Air (SA) [LF], was not sufficiently detailed to ensure operability for the period from November 5, 2004 through March 5, 2005.

During RFO-12, Engineering Change (EC) 51444, was installed to improve plant reliability by replacing active solenoid valves with passive check valves. The purpose of this EC was to ensure that adequate pressure and inventory would be maintained in the ESCW during accident conditions. This improvement was accomplished by installing new check valves on both the Demineralized Water System (DW) [KC] and SA supply lines to the ESCW expansion tank and extending the class boundary to those valves. The previous solenoid operated (Target Rock) isolation valves were removed from the SA supply lines. EC 51444 allowed the SA system to be in constant communication with the ESCW Expansion tank such that as long as the SA header remained pressurized, the ESCW expansion tank would be pressurized. In the event of an extended loss of SA, EC 51444 added actions to plant procedure APP-ALB-002 to direct plant response on a loss of expansion tank pressure. These actions were to ensure that pressure in the expansion tanks was monitored and action initiated in the event that SA header pressure could not be immediately restored. However, specific guidance on how the ESCW expansion tank pressure was to be maintained was not adequately documented in accordance with IN 97-78.

The manual actions added to APP-ALB-002 did not fully address the considerations identified in Information Notice (IN) 97-78, "Crediting of Operator Actions in Place of Automatic Actions and Modifications of Operator Actions, Including Response Times." The 10 CFR 50.59 evaluation did not adequately address the guidance provided in Nuclear Energy Institute (NEI) 96-07 "Guidelines for 10 CFR 50.59 Implementation." When temporary modification EC 60425 was approved on March 5, 2005 to address the premature failure of the SA check valves installed by EC 51444, the considerations of IN 97-78 and NEI 96-07 were adequately addressed.

Although both trains of ESCW were fully functional, both trains of ESCW are considered to have been inoperable from the implementation of EC 51444 at the end of RFO 12 on November 5, 2004, until the approval of temporary modification EC 60425 on March 5, 2005. This time is longer than the time allowed by Technical Specification (TS) 3.7.13.

The instrumentation and controls for the ESCW System are designed for automatic operation after manual starting of the pumps and water chillers. Makeup water level in the system is automatically controlled. The pressure reducing regulator valves in the SA and DW connections at the expansion tank normally regulate the ESCW System and internal pressure. Neither the SA nor the DW supply lines to the ESCW expansion tank are safety related.

Energy Industry Identification System (EIIIS) 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 that site personnel failed to recognize that the plant had inadvertently introduced reliance on an operator manual action to ensure operability, in the event of a sustained loss of SA, without fully documenting actions taken to meet the guidance of IN 97-78 and NEI 96-07.

III. SAFETY SIGNIFICANCE

There were no actual significant safety consequences as result of this condition. Both ESCW trains were functional during this period of time, except for periods of maintenance when the train was under clearance or identified by operators as unavailable. There were no losses of SA during the period from November 5, 2005 to March 5, 2005 which would have required implementation of the manual actions.

For potential safety significance, the ESCW System is composed of two redundant safety trains. It is assumed that the non-safety portion of the system would be unavailable resulting in a loss of SA to the ESCW expansion tanks. It is possible that over a period of time the expansion tanks could become depressurized and void formation could occur. However, based on the instructions provided in APP-ALB-002 by EC 51444, on a SA Low Pressure alarm, Operations would monitor ESCW surge tank pressure and initiate actions as necessary to keep surge pressures at or above 3 psig. While the actions were not specific, it is reasonable to conclude that the potential safety significance would be minimized by the following: the time delay in the decrease in expansion tank pressure is significant, and additional resources would be called in to assist in recovery of SA or to respond to an ESCW trouble alarm.

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 the condition had already been rectified by the approval of temporary modification EC 60425 on March, 5 2005.

IV. CORRECTIVE ACTIONS

As immediate corrective action, the temporary modification, which adequately addressed the required manual actions to repressurize the tank in the event of an extended loss of SA pressure, was approved on March 5, 2005. The corrective action to prevent recurrence will be to provide 10 CFR 50.59 refresher training specifically covering the guidance for operator manual actions to the Harris Engineering Support Services 10 CFR 50.59 qualified personnel and to those pursuing near term qualification. A second corrective action to prevent recurrence will be to provide Real Time Training to the Harris Engineering Support Services personnel on considerations when adding or revising an operator manual action. Additionally, procedure EGR-NGGC-0005 "Engineering Change" will be revised to include requirements for operator manual actions.

V. PREVIOUS SIMILAR EVENTS

No previous HNP events or conditions are known within the last three years related to declaring a system inoperable for a period longer than allowed by Technical Specification due to inadequate evaluation and implementation of operator manual actions.