

Dennis R. Madison
Vice President - Hatch

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February 5, 2010

Docket No.: 50-321; 50-366

NL-10-0219

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant
Licensee Event Report
Main Control Room Air Conditioner Inoperable
Due to Inoperable Solenoid Valve

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), Southern Nuclear Operating Company is submitting the enclosed Licensee Event Report (LER) concerning inoperable main control room air conditioner due to an inoperable solenoid valve.

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

A handwritten signature in black ink, appearing to read "Dennis R. Madison".

D. R. Madison
Vice President – Hatch

DRM/MJK/

Enclosure: LER 1-2009-006

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Ms. P. M. Marino, Vice President – Engineering
RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. D. N. Wright, NRR Project Manager – Hatch
Mr. E. D. Morris, Senior Resident Inspector – Hatch

LICENSEE EVENT REPORT (LER)

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 Edwin I. Hatch Nuclear Plant Unit 1	2. DOCKET NUMBER 05000 321	3. PAGE 1 OF 4
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4. TITLE
Main Control Room Air Conditioner Inoperable Due To Inoperable Solenoid Valve

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
12	15	2009	2009	- 006 -	0	02	05	2010	Edwin I. Hatch Nuclear Plant Unit 2	05000 366
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: <i>(Check all that apply)</i>			
10. POWER LEVEL 99.6	<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)
	<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)(viii)(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 Edwin I. Hatch / Steve Tipps, Principal Licensing Engineer	TELEPHONE NUMBER (Include Area Code) 912-537-5880
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
A	BI	SHV	V030	YES					

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

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

On December 15, 2009 it was identified that the plant was operating in a condition prohibited by the Technical Specification (TS). The cooling for the main control room (MCR) air conditioning was no longer single failure proof. Further investigation revealed that on January 6, 2006 valve 1P41-F123A was identified as not having any stem travel. This valve is in the Plant Service Water (PSW) cooling line for the air conditioner for the office outside the MCR boundary and outside of the area serviced by the MCR air conditioner. This valve is one of two valves that are designed to isolate in the event of a pipe rupture to ensure adequate flow is maintained for MCR air conditioner cooled by Division I PSW. Since the valve would not isolate, this portion of the line would no longer be considered single failure proof, which should have resulted in entry into the condition required by the TS.

This event was caused most recently by the failure of the operating shift team to recognize the significance of the failure of the isolation valve.

Corrective actions include, update existing procedures to require design modifications be reviewed by Licensing; review the implementing design modification for additional impacts; plan to provide alternate cooling source for the annex cooler, and include Lessons Learned in operability training for licensed personnel.

**LICENSEE EVENT REPORT (LER) U.S. NUCLEAR REGULATORY COMMISSION
CONTINUATION SHEET**

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor
Energy Industry Identification System codes appear in the text as (EIIIS Code XX).

DESCRIPTION OF EVENT

On December 15, 2009 Unit 1 was operating at 2792 CMWTh 99.6 percent rated thermal power, Unit 2 was operating at 2792 CMWTh, 99.6 percent rated thermal power. On that date it was identified that the plant was operating in a condition prohibited by the Technical Specifications in that the cooling for the main control room air conditioning was no longer single failure proof. Further investigation revealed that on January 6, 2006 valve 1P41-F123A was identified as not having any stem travel when the valve is supposed to automatically close. This valve is in the Plant Service Water (PSW, EIIIS Code BI) cooling line for the air conditioner for the Operations Shift Manager's office which is outside the main control room boundary and outside of the area serviced by the main control room air conditioners (EIIIS Code VI). This additional air conditioner was added in 1982 as part of a design modification which added office space adjacent to the main control room in order to allow the space in the main control room to be better utilized. The 1P41-F123A valve is one of two valves that are designed to automatically isolate in the event of a failure of the non-safety related portion of the PSW line during a design basis seismic event, because that portion of the PSW line is not seismic class IE by design. The isolation of this section of piping ensures that adequate flow is maintained for main control room air conditioner(s) cooled by Division I PSW. Since valve 1P41-F123A would not isolate, this portion of the line would no longer be considered single failure proof, which should have resulted in entry into the condition required by the Technical Specifications for the loss of Main Control Room Air Conditioner Units which are aligned to Division I PSW. The cooling for the Main Control Room Air Conditioner Units is described in the Technical Specifications Bases, but not to the component detail that would make it obvious that the cooling system was no longer single failure proof. Since the PSW valve that failed provides cooling to a non-safety related air conditioner unit, the operating shift team did not recognize the significance of the failure of this isolation valve. Additional information was also available in CR 2009111670 that included a review of the work history for valve 1P41-F123A which contained a history of unreliable operation. This should have prompted a review of the operability of the component based on questions regarding its continued reliability. Upon identification of the function played by this component and its degraded condition, the affected PSW cooling line was isolated. It will remain in that state until corrective actions are taken to address the degraded condition and reliability of the isolation valve.

CAUSE OF EVENT

This event was caused most recently by the failure of the operating shift team to recognize the significance of the failure of isolation valve 1P41-F123A in that the cooling system for the main control room air conditioner units cooled by Division I PSW were no longer single failure proof. As a result the required Technical Specification Required Action Statement for inoperable main control room air conditioner unit was not entered on December 10, 2009, nor was it entered on January 6, 2006, when the condition was first identified. There was a missed opportunity to strengthen the Technical Specifications and Bases as well as to establish the periodic testing of the isolation valves when preparing the design change package that installed the additional air conditioner.

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REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This event is reportable under 10 CFR 20.73(a)(2)(i)(B), Any operation or condition which was prohibited by the plant's Technical Specifications. Since valve 1P41-F123A would not isolate, this portion of the line would no longer be single failure proof, which should have resulted in entry into the Condition required by the Technical Specifications for the loss of Main Control Room Air Conditioner Units which are aligned to the Division I of PSW, but did not.

The Control Room AC portion of the Main Control Room Environmental Control System (hereafter referred to as the Control Room AC System) provides temperature control for the control room following isolation of the control room. The Control Room AC System consists of three 50 percent capacity subsystems that provide cooling and heating of control room supply air. Each subsystem consists of an air handling unit (AHU) (i.e., cooling coils and fan), water cooled condensing units, refrigerant compressors, ductwork, dampers, and instrumentation and controls to provide for control room temperature control. The condensing units receive cooling water from the Plant Service Water System. One condensing unit receives cooling from Division I PSW, one unit is capable of receiving cooling from both Divisions I and II PSW, the other condensing unit receives cooling from Division II PSW. The Control Room AC System is designed to provide a controlled environment under both normal and accident conditions. Two subsystems provide the required temperature control to maintain a suitable control room environment for a sustained occupancy of 14 persons. The design conditions for the control room environment are 72-79 Fahrenheit and less than 75 percent relative humidity.

In the event the loss of the non-seismic piping was to occur, there are valves available in the seismic portion of the Control Room AC system to provide isolation from the Division 1 PSW thus ensuring the cooling system remains operable. It should be noted that the main control room air conditioning system is manually placed into service. As long as the alignment and operation of the system can be manually accomplished operability of the system is maintained. Should the condition of the system become degraded due to some portion of the system no longer being "single failure" proof, a Tech Spec RAS must be entered. Since loss of cooling water does not result in the design limits being exceeded immediately and the area is continuously inhabited, it is reasonable to expect the operating crews to identify and compensate for the loss of cooling in a reasonable period of time.

Based on this analysis, it is concluded that this event had no adverse impact on nuclear safety.

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CORRECTIVE ACTIONS

The current plans are to provide cooling to MCR Annex A/C unit using non-safety related cooling water.

The development of training for licensed personnel for modifications implemented will be reviewed to ensure that the Lessons Learned from this event are considered when preparing and delivering this training. The Lessons Learned from this event will be included in licensed re-qualification segments for licensed personnel and in future operability determination training.

Revise NMP-AD-010 to require that Design Change Packages be reviewed by Nuclear Licensing in order to determine if adequate information is contained in the Technical Specifications and/or Bases that ensure the operating shift teams have adequate guidance to recognize the significance of the modification and how it can impact the operability of the system with which it interfaces.

ADDITIONAL INFORMATION

Other Systems Affected: None

Failed Components Information:

Master Parts List Number: 1P41-F123A
 Manufacturer: Valcor
 Model Number: V526-5631-17
 Type: Valve, Valve, Shutoff
 Manufacturer Code: V030

EIIS System Code: BI
 Reportable to EPIX: Yes
 Root Cause Code: A
 EIIS Component Code: SHV

Commitment Information: This report does not create any new permanent licensing commitments.

Previous Similar Events: This is considered to be an isolated event of this nature.