

Dennis B. Madison
Vice President - Hatch

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January 29, 2009

Docket No.: 50-366

NL-09-0044

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

Edwin I. Hatch Nuclear Plant – Unit 2
Licensee Event Report
Main Control Room Environmental Control System
Inoperable Due to System Tagout

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73 (a)(2)(v)(D), Southern Nuclear Operating Company is submitting the enclosed report for a condition that occurred on February 21, 2008 and identified for reporting on December 5, 2008.

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

Sincerely,

A handwritten signature in cursive script that reads "Dennis B. Madison".

D. R. Madison
Vice President – Hatch

DRM/MJK/daj

Enclosure: LER 2-2008-005

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. D. H. Jones, Vice President – Engineering
RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. R. E. Martin, NRR Project Manager – Hatch
Mr. J. A. Hickey, 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 2	2. DOCKET NUMBER 05000 366	3. PAGE 1 OF 4
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4. TITLE
Main Control Room Environmental Control System Inoperable Due to System Tagout

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
02	21	2008	2008	005	0	01	29	2009	FACILITY NAME	DOCKET NUMBER

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 99.7	<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 type="checkbox"/> 50.73(a)(2)(i)(B)	<input checked="" 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 / Kathy Underwood, Performance Improvement Supervisor	TELEPHONE NUMBER (Include Area Code) 912-537-5931
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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

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 5, 2008 at approximately 1119 EST, it was determined that a written report should have been made to report an instance where the Main Control Room Environmental Control System (MCREC) was inoperable on February 21, 2008. At the time the system was inoperable Unit 2 was in the Run mode at a power level of approximately 2796 CMWTh, 99.7 percent rated thermal power. On February 21, during refueling outage 1R23, work on Essential Cabinet 1B supply breaker was to begin and a tagout was authorized to provide a clearance boundary. Prior to de-energizing Essential Bus 1B, the tagout instructions required placing Instrument Bus 1B on alternate power supply. The 'A' Air Handling Unit (AHU) had previously been tagged out and was still out of service. When Instrument Bus 1B was de-energized, the 'C' AHU tripped, and the 'B' AHU did not auto-start. The control room crew realized that no AHUs were operable and directed that Instrument Bus 1B be placed back on normal supply. This action took approximately 10 minutes. After power was restored to Instrument Bus 1B, the 'C' AHU was restarted, and the 'B' AHU could auto-start if required.

The direct cause of the inoperable MCREC system was determined to be an inadequate clearance and tagging review to identify plant response to removing Instrument Bus 1B from service.

The load list was revised to include more detail regarding response of the 'C' AHU on de-energizing the instrument bus or breaker, and procedures were revised to include additional details regarding expected response of 'C' AHU when the instrument bus is de-energized.

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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 (EIS Code XX).

DESCRIPTION OF EVENT

On February 21, during refueling outage 1R23, electrical PMs on 1R25-S037 Essential Cabinet B supply breaker (EIS Code EC) were to begin and tagout 1-DT-1R23-1-DT-07-1R23-00511 was authorized to provide a clearance boundary. Prior to de-energizing Essential Bus 1B, the tagout instructions required placing Instrument Bus 1B (EIS Code EC) on its alternate power supply. Approximately one week prior, the 'A' AHU had been tagged out due to repairs on Plant Service Water (PSW) system (EIS Code BI) components and was still out of service. During the transfer to the alternate power supply, Instrument Bus 1B was de-energized, which caused the 'C' AHU (EIS Code VI) to trip, and the 'B' AHU failed to auto-start. At this time, the control room crew realized that no AHUs were operable and directed that Instrument Bus 1B be placed back on normal supply. An operator was directed to start the 'B' AHU which was accomplished approximately 4-5 minutes after power had been lost. Instrument Bus 1B was placed back on its normal supply within approximately 10 minutes, during which time Unit 2 was required to enter Limiting Condition of Operation (LCO) 3.0.3 in accordance with Technical Specifications 3.7.4.E and 3.7.5.F. This action was required since all three AHUs were inoperable. After the 'B' AHU was started, MCREC operability was restored, but LCO 3.0.3 was not exited until after power was restored to Instrument Bus 1B.

CAUSE OF EVENT

The cause of the inoperable MCREC system was determined to be an inadequate clearance and tagging review to identify plant response to removing Instrument Bus 1B from service. This resulted in making all of the AHU's for the MCREC system inoperable.

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This report is required by 10 CFR 50.73 (a)(2)(v)(D), Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident. On December 5, 2008, it was determined that inoperability of the MCREC system met this criterion. Since the MCREC pressurization mode is a safety function needed to mitigate the consequences of an accident, the condition should have been reported via a phone notification to the NRC and followed by an LER at the time of the event. The condition met 2 reporting requirements with the first involving the question of whether entry into Technical Specification. 3.0.3 was reportable. The determination was correctly made at that time that no report was required since the condition was cleared within an hour and before power reduction began. Further down in NUREG 1022, Rev. 2, it states this conclusion and also adds "... and no other 10CFR50.73 criteria apply. In this case 10CFR50.73(a)(2)(v) requires the report if the condition could have prevented the fulfillment of the safety function (going into the pressurization mode) of structures or systems to mitigate the consequences of an accident. Since this reporting requirement applied the necessary reports should have been made.

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The MCREC System provides a radiologically controlled environment from which the reactors can be operated safely following a design basis event. The system is designed in accordance with GDC 19 to maintain the control room environment for a 30 day continuous occupancy after a design basis accident without exceeding 5 rem whole body dose or its equivalent to any part of the body. A single MCREC subsystem will pressurize the control room to greater than or equal to 0.1 inches water gauge to prevent infiltration of air from surrounding buildings.

The MCREC System is a standby system, parts of which also operate during normal unit operation to maintain the control room environment. Upon receipt of the initiation signal(s) (indicative of conditions that could result in radiation exposure to control room personnel), the MCREC System automatically switches to the pressurization mode of operation to prevent infiltration of contaminated air into the control room. A system of dampers isolates the control room, and a portion of the recirculated air is routed through either of the two filter subsystems. Outside air is taken in at the normal ventilation intake and is mixed with the recirculated air before being passed through one of the charcoal adsorber filter subsystems for removal of airborne radioactive particles and gaseous iodines.

The safety related function of MCREC System includes two independent and redundant high efficiency air filtration subsystems for emergency treatment of recirculated air and outside supply air. Each subsystem consists of a prefilter, a high efficiency particulate air (HEPA) filter, an activated charcoal adsorber section, a second HEPA filter, a booster fan, and the associated ductwork and dampers. Prefilters and HEPA filters remove potentially radioactive particulate matter. The charcoal absorbers hold up gaseous iodines allowing time for decay.

As documented in the Hatch updated Final Safety Analysis Report (FSAR) section 15.3, the loss-of-coolant accident (LOCA) is the limiting event for radiological exposures to occupants of the control room. Radiological exposures to control room occupants are documented in terms of whole body, skin and thyroid doses. Thyroid doses are the limiting doses for the Hatch control room.

An operator was directed to start the 'B' AHU which was accomplished approximately 4-5 minutes after power had been lost. This action restored the automatic capability of the MCREC system to perform its safety function. The affected instrument bus was re-energized within approximately 10 minutes. Based on this short time of system inoperability and the low probability of a design basis LOCA occurring within this timeframe, it is concluded that this event had no adverse impact on nuclear safety.

CORRECTIVE ACTIONS

Load list A-10229 has been revised to clarify and include more detail regarding response of the 'C' AHU on de-energizing the instrument bus or breaker 15.

Procedure 34SO-R25-001-1, 120/208 VAC Essential Power System, has been revised to include additional details regarding 'C' AHU response when 1R25-S065 is de-energized.

Procedure 34AB-R25-002-1, Loss of Instrument Buses, has been revised to include additional details regarding expected response of 'C' AHU when the instrument bus is de-energized.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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ADDITIONAL INFORMATION

Other Systems Affected: No systems other than those already mentioned in this report were affected by this event.

Failed Components Information: None

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

There are no previous similar events in the last two years, since February 2008, in which the MCREC system was inoperable due to a tagout: