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Docket Nos.: 50-321

NL-21-0850

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

Edwin I. Hatch Nuclear Plant - Unit 1  
Licensee Event Report 2021-002-00  
Low Pressure Coolant Injection Inoperable  
Longer than the Allowed Technical Specification Completion Time

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), Southern Nuclear Operating Company hereby submits the enclosed Licensee Event Report.

This letter contains no NRC commitments. If you have any questions, please contact the Plant Hatch Licensing Manager, Jimmy Collins, at 912.453.2342.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Sonny Dean".

Sonny Dean  
Vice President – Plant Hatch

SD/CJC

Enclosure: LER 2021-002-00

cc: NRC Regional Administrator – Region II  
NRR Project Manager – Plant Hatch  
NRC Senior Resident Inspector – Plant Hatch  
RTYPE: CHA02.004

**Edwin I. Hatch Nuclear Plant - Unit 1  
Licensee Event Report 2021-002-00  
Low Pressure Coolant Injection Inoperable  
Longer than the Allowed Technical Specification Completion Time**

**Enclosure**

**LER 2021-002-00**



# **LICENSEE EVENT REPORT (LER)**

(See Page 3 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [Infocollections.Resource@nrc.gov](mailto:Infocollections.Resource@nrc.gov), and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk alt: [oir\\_submission@omb.eop.gov](mailto:oir_submission@omb.eop.gov). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

<b>1. Facility Name</b> Edwin I. Hatch Nuclear Plant - Unit 1	<b>2. Docket Number</b> 05000 321	<b>3. Page</b> 1 OF 2
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**4. Title**  
Low Pressure Coolant Injection Inoperable Longer Than The Allowed Technical Specification Completion Time

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year	Facility Name	Docket Number
08	03	2021	2021	002	00	10	01	2021		05000
									Facility Name	Docket Number
										05000

<b>9. Operating Mode</b> 3	<b>10. Power Level</b> 000
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**11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)**

<b>10 CFR Part 20</b>	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<b>10 CFR Part 73</b>
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(i)	<b>10 CFR Part 21</b>	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(1)(i)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(i)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<b>10 CFR Part 50</b>	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 73.77(a)(2)(ii)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<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)(v)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
<input type="checkbox"/> OTHER (Specify here, in abstract, or NRC 366A).				

## **12. Licensee Contact for this LER**

<b>Licensee Contact</b> Carl James Collins - Licensing Manager	<b>Phone Number (Include area code)</b> (912) 453-2342
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## **13. Complete One Line for each Component Failure Described in this Report**

Cause	System	Component	Manufacturer	Reportable to IRIS	Cause	System	Component	Manufacturer	Reportable to IRIS
X	AD	ISV	M080	N					

## **14. Supplemental Report Expected**

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date)	<b>15. Expected Submission Date</b>	Month	Day	Year

## **16. Abstract (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)**

On 08/03/2021 at 11:50 EDT, while Unit 1 was at 0% power and in MODE 3 following an unplanned reactor SCRAM, the 'B' reactor recirculation discharge isolation valve failed to initially close when required to do so during the restart of the 'A' reactor recirculation pump. The safety function of the reactor recirculation discharge isolation valve is to ensure that Low Pressure Coolant Injection (LPCI) flow does not bypass the core when it injects into the recirculation lines as described in Technical Specification (TS) Bases 3.3.5.1.

Further investigation revealed that a loose fuse connection caused intermittent contact within the control power circuitry, resulting in the valve being unable to reliably function. Because the same intermittent position indication of the 'B' reactor recirculation discharge isolation valve was identified on 07/05/2021, it is likely that the reactor recirculation discharge isolation valve and subsequently the 'B' LPCI loop was inoperable for longer than allowed by TS 3.5.1. The corrective action to replace the loose bayonet connectors for the fuse holders has been completed.

This condition is reportable per 10 CFR 50.73(a)(2)(i)(B).



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

(See NUREG-1022, R.3 for instruction and guidance for completing this form)

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>

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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Edwin I. Hatch Nuclear Plant - Unit 1	05000-321	2021	002	00

**NARRATIVE****EVENT DESCRIPTION:**

At approximately 11:50 EDT on 08/03/2021, while Unit 1 was at 0% power and in MODE 3 following an unplanned SCRAM, the 'B' reactor recirculation pump discharge valve (1B31-F031B) [EIS Code: AD, ISV] was taken to the closed position per procedure during the restart of the 'A' reactor recirculation pump. Light indication immediately extinguished as soon as the 1B31-F031B switch was taken to the closed position. Maintenance was dispatched and reported that neither the breaker or overloads were tripped. A few seconds later the light indication came on and the 1B31-F031B valve was successfully closed.

**EVENT CAUSE ANALYSIS:**

The site's investigation into the brief loss of control power indication revealed that the continuity issues were the result of a loose bayonet connector in the fuse holder for fuse 1B31-F239. The loose bayonet connector was most likely caused by the maintenance troubleshooting activities performed on 07/05/2021 for a failed MOV motor. The prior troubleshooting activities included the removal and re-installation of both control fuses for the 1B31-F031B valve, which likely loosened the bayonet connectors.

A loose bayonet connector would have caused the power supply to the control circuit of the 1B31-F031B valve to become intermittent, and would have ultimately prevented stroking the 1B31-F031B valve when the switch was placed in the closed position.

**REPORTABILITY AND SAFETY ASSESSMENT:**

The normal position for the 1B31-F031B valve is open with an active safety function to close. This safety function ensures that Low Pressure Coolant Injection (LPCI) [EIS Code: BO] flow does not bypass the core when it injects into the recirculation lines as described in Technical Specification (TS) Bases 3.3.5.1, and provides for core cooling and reactor coolant pressure boundary integrity. With unreliable control circuitry continuity, the closure of valve 1B31-F031B could not be guaranteed during a Loss of Coolant Accident (LOCA), and thus provided reasonable assurance that operability could not be maintained.

Because the operation of valve 1B31-F031B was unreliable from at least 07/05/2021 through 08/05/2021, the 'B' LPCI loop would have been inoperable for a period of time longer than allowed by Condition B of TS Limiting Condition of Operation (LCO) 3.5.1.

There were no safety consequences as a result of this event. The other low pressure Emergency Core Cooling Systems, the 'A' loop of LPCI and both Core Spray pumps [EIS Code: BM], remained operable through the event.

**CORRECTIVE ACTIONS:**

The 'B' LPCI loop was declared inoperable, and the loose bayonet connectors for the fuse holders were replaced (control fuses 1B31-F239 and 1B31-F240) on 08/05/2021.

**PREVIOUS SIMILAR EVENTS:**

None