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November 1, 2021

Docket Nos.: 50-321

NL-21-0966

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

Edwin I. Hatch Nuclear Plant – Unit 1
Licensee Event Report 2021-003-00
High Pressure Coolant Injection Discharge Valve Failure to Open

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(v)(D), 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,

Edwin D. Dean III
Vice President – Plant Hatch

ED/CJC

Enclosure: LER-2021-003-00

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

**Edwin I. Hatch Nuclear Plant – Unit 1
Licensee Event Report 2021-003-00
High Pressure Coolant Injection Discharge Valve Failure to Open**

Enclosure

LER 2021-003-00



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 A104), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk eil: 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.

1. Facility Name Edwin I. Hatch Nuclear Plant Unit 1	2. Docket Number 05000 321	3. Page 1 OF 2
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4. Title
Unit 1 High Pressure Coolant Injection System discharge valve failure to open

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
09	08	2021	2021	- 003 -	00	11	01	2021		05000
									Facility Name	Docket Number
										05000

9. Operating Mode 1 **10. Power Level** 100

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

<input type="checkbox"/> 10 CFR Part 20	<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)	<input type="checkbox"/> 10 CFR Part 73
<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)	<input type="checkbox"/> 10 CFR Part 21	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input checked="" 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)	<input type="checkbox"/> 10 CFR Part 50	<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

Licensee Contact Edwin I. Hatch / Jimmy Collins – Licensing Manger	Phone Number (include area code) 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
A	BJ	ISV	L200	Y					

14. Supplemental Report Expected

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

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

On September 8, 2021, while Unit 1 was at 100% rated thermal power, the High Pressure Coolant Injection (HPCI) pump discharge isolation valve was stroked closed as a part of a valve surveillance activity. Up to this point, HPCI was operable. When the valve was given an open signal, the valve did not return to the open position. Without the ability to open this valve, HPCI is inoperable.

Systematic troubleshooting determined that the pinion gear key in the valve actuator had not been properly staked during previous maintenance activities in 2006, leading to the key moving and the pinion gear disengaging from the actuator motor shaft. This caused the valve to become inoperable, not allowing it to stroke to the open position.

As a corrective action, the pinion gear key was properly staked per procedure to the actuator motor shaft and the pinion gear reinstalled.



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

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-m/doc-collections/nuregs/staff/sr1022/r3/>)

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1. FACILITY NAME Edwin I. Hatch Nuclear Plant Unit 1	2. DOCKET NUMBER 05000-321	3. LER NUMBER		
		YEAR 2021	SEQUENTIAL NUMBER 003	REV NO. 00

NARRATIVE

EVENT DESCRIPTION:

On September 8, 2021 at 0159, while Unit 1 was in MODE 1 at 100% rated thermal power, the High Pressure Coolant Injection (HPCI) pump [E1IS BJ] discharge isolation valve [E1IS ISV] was stroked closed as a part of a valve surveillance activity. Up to this point, HPCI was operable. When the valve was given an open signal, the valve did not return to the open position. Without the ability to open this valve, HPCI is inoperable. There was no other safety related equipment inoperable that contributed to this event. HPCI was returned to operable status on September 9, 2021 at 1444.

EVENT CAUSE ANALYSIS:

Systematic troubleshooting determined that the pinion gear key in the valve actuator had not been properly staked during previous maintenance activities in 2006, leading to the key moving and the pinion gear disengaging from the actuator motor shaft. This caused the valve to become inoperable, not allowing it to stroke to the open position. The cause of the incorrect staking was the SNC maintenance electrician performing the activity in 2006 did not peen enough metal to retain the key as was required in the guidance/procedure.

REPORTABILITY AND SAFETY ASSESSMENT:

HPCI does not have a redundant system; therefore, this condition is being reported as an event or condition that at the time of discovery could have prevented the fulfillment of the safety function per 10 CFR 50.73(a)(2)(v)(D). While the HPCI system was inoperable, the Reactor Core Isolation Cooling (RCIC) system and low pressure emergency core cooling systems were operable. Therefore, there were no safety consequences due to this event. The operating crew responded correctly to the event. The event was within the analysis of the UFSAR Chapter 15. There was not a release of radioactivity during this event.

CORRECTIVE ACTIONS:

As a corrective action, the pinion gear key was properly staked per procedure to the actuator motor shaft and the pinion gear reinstalled.

PREVIOUS SIMILAR EVENTS:

None