



Southern Nuclear

Sonny Dean
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Docket Nos.: 50-321

NL-21-0828

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

Edwin I. Hatch Nuclear Plant - Unit 1
Licensee Event Report 2021-001-00
Automatic Reactor Scram on Low Reactor Water Level due to Loss of Reactor Feed Pumps

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), 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', written over a circular stamp.

Sonny Dean
Vice President – Plant Hatch

SD/CJC

Enclosure: LER 2021-001-00

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 2021-001-00
Automatic Reactor Scram on Low Reactor Water Level due to Loss of Reactor Feed Pumps**

Enclosure

LER 2021-001-00



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, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk aid: oira_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
Automatic Reactor Scram And Containment Isolation On Low Reactor Water Level Due To Trip Of Both Reactor Feed Pumps

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	001	00	10	01	2021		05000
									Facility Name	Docket Number
										05000

9. Operating Mode 1	10. Power Level 100
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11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

<input checked="" type="checkbox"/> 10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.36(c)(2)	<input checked="" 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)	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)	10 CFR Part 21	<input 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)	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 Carl James Collins - Licensing Manager	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
X	EC	BKR	W120	Y					

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

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

On 08/03/2021 at 1026 EDT, Unit 1 experienced an automatic reactor SCRAM and containment isolation due to low reactor water level. A spurious trip of a Turbine Building 600V breaker caused a loss of control power and immediate trip of both 1A and 1B reactor feed pumps. Due to loss of reactor feedwater, the reactor water level lowered to the setpoints for the following automatic actuations: reactor SCRAM, High Pressure Coolant Injection (HPCI) start, Reactor Core Isolation Cooling (RCIC) start, and both primary and secondary containment isolation. All safety-related actuations occurred as designed. Reactor operators responded to stabilize the plant and control reactor water level. Unit 2 was not affected. The initial notification to the NRC was documented in Event Notification 55394.

Corrective action was completed to replace the failed breaker with a more reliable breaker.

This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv)(A) due to actuations of systems listed in 10 CFR 50.73(a)(2)(iv)(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	001	00

NARRATIVE**EVENT DESCRIPTION:**

Prior to the event on 08/03/2021, Unit 1 was operating at 100% power. There were no inoperable structures, systems, or components that contributed to the event.

At approximately 1025 EDT, the 1B Turbine Building 600V breaker 1R23S002FR6T tripped, due to a spurious trip of its Digitrip 610 trip unit. 1R23S002FR6T is the normal supply breaker to 1A 120/208V Station Service Switchgear 1R23S021. The loss of power to 1R23S021 resulted in both 1A and 1B reactor feed pump turbines losing power to their Mark VIe control panels, resulting in a dual reactor feed pump trips. The loss of both reactor feed pumps resulted in a loss of feedwater and lowering of reactor water level.

At 1026 EDT, automatic reactor SCRAM and primary containment isolation occurred at the Reactor Pressure Vessel (RPV) Low Water Level setpoint. All control rods fully inserted. After the SCRAM, the actuation setpoint was reached for automatic start of the High Pressure Coolant Injection (HPCI) [EIS BJ] and Reactor Core Isolation Cooling (RCIC) [EIS BN] systems and for secondary containment isolation. All safety-related actuations occurred as designed. Reactor operators responded to stabilize the plant and control reactor water level within band.

EVENT CAUSE ANALYSIS:

The event was determined to be caused by a spurious trip of the Digitrip 610 trip unit on the 1B Turbine Building 600V breaker 1R23S002FR6T.

REPORTABILITY AND SAFETY ASSESSMENT:

This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv)(A) due to the following system actuations: Reactor Protection System (RPS), general containment isolation signals affecting containment isolation valves in more than one system, or Emergency Core Cooling System (ECCS) for Boiling Water Reactors (BWRs) including HPCI and RCIC.

There were no safety consequences as a result of this event. There were no safety-related systems that failed during this event. The operating crew responded correctly to the event. The applicable abnormal/emergency operating procedures were entered. The event was within the analysis of the Updated Final Safety Analysis Report (UFSAR) Chapter 15. No radiological release occurred due to this event.

CORRECTIVE ACTIONS:

The corrective action replaced the Digitrip 610 trip unit on the 1B Turbine Building 600V breaker 1R23S002FR6T with a General Electric Microversa Trip Plus (MVT+) trip unit, which is proven to be more reliable.

PREVIOUS SIMILAR EVENTS:

Plant Hatch had two previous events caused by spurious trips of Digitrip 610 trip units. These events occurred in 2008 and 2014. In both cases, power was lost to 1F Control Building 600V bus 1R24S030. Loss of power to 1R24S030 did not result in a total loss of a significant plant system, a transient, or a down power of the unit.