



LICENSEE EVENT REPORT (LER)

(See Page 2 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/nureqs/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 email to Infocollections.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street NW, Washington, DC 20503. 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

Braidwood Station, Unit 1

050
 052

2. Docket Number

456

3. Page

1 OF 3

4. Title

Unit Trip on Low Steam Generator Level due to Failure to verify Isolation Valves were 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	<input type="checkbox"/> 050	Docket Number
05	05	2024	2024	- 001 -	00	07	03	2024	N/A	<input type="checkbox"/>	
									N/A	<input type="checkbox"/>	

9. Operating Mode

2

10. Power Level

003

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 checked="" 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"/> 73.1200(a)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<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"/> 73.1200(b)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<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"/> 73.1200(c)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<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"/> 73.1200(d)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input checked="" type="checkbox"/> 10 CFR Part 21	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input checked="" type="checkbox"/> 10 CFR Part 73	<input type="checkbox"/> 73.1200(e)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.77(a)(1)	<input type="checkbox"/> 73.1200(f)
<input type="checkbox"/> 20.2203(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(2)(i)	<input type="checkbox"/> 73.1200(g)
<input type="checkbox"/> 20.2203(a)(2)(iv)		<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(ii)	<input type="checkbox"/> 73.1200(h)
<input type="checkbox"/> 20.2203(a)(2)(v)		<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)		

OTHER (Specify here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact

Dane Brunswick, Regulatory Assurance Manager

Phone Number (include area code)

(779) 231-6246

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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

14. Supplemental Report Expected

No Yes (If yes, complete 15. Expected Submission Date)

15. Expected Submission Date

Month	Day	Year

16. Abstract (Limit to 1326 spaces, i.e., approximately 13 single-spaced typewritten lines)

At 0338 CDT on May 05, 2024, with Braidwood Station, Unit 1 operating in MODE 2, the reactor automatically tripped due to low water level in 1C steam generator (SG). The 1A and 1B auxiliary feedwater (AF) pumps were manually started by the Control Room crew in an attempt to restore SG water level prior to the trip. The trip was uncomplicated as all systems responded as expected post trip.

The cause of lowering SG water level was the main feedwater isolation valves remaining closed during power ascension due to improper procedure use by a reactor operator. As a result, insufficient feedwater flow was available to 1B and 1C SGs. Corrective actions include addressing accountability with individuals involved as well as development and implementation of an Operations Fundamental Out-of-the-Box Evaluation.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) for "Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section, ..." Specifically, for 1) 10 CFR 50.73(a)(2)(iv)(B)(1) for the "Reactor protection system (RPS) including: reactor scram or reactor trip," and 2) 10 CFR 50.73(a)(2)(iv)(B)(6) for the "PWR auxiliary or emergency feedwater system."



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

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1. FACILITY NAME Braidwood Station, Unit 1	<input checked="" type="checkbox"/> 050	2. DOCKET NUMBER 456	3. LER NUMBER		
	<input type="checkbox"/> 052		YEAR	SEQUENTIAL NUMBER	REV NO.
			2024	- 001	- 00

NARRATIVE

A. Plant Operating Conditions Before the Event:

Event Date: May 5, 2024

Unit: 1 MODE: 2 Reactor Power: 003 percent

Unit 1 Reactor Coolant System (RCS) [AB]: Normal operating temperature and pressure

No structures, systems or components were inoperable at the start of this event that contributed to the event.

B. Description of Event:

On 5/5/24 at 0330 CDT, Unit 1 entered MODE 1 for planned startup following a refueling outage.

At 0336 Unit 1 was returned to MODE 2 due to lowering water levels in 1B and 1C steam generators (SG). At 0337 1A and 1B auxiliary feedwater (AF) pumps were manually started by the Control Room team in an attempt to restore SG water level.

At 0338 Unit 1 reactor automatically tripped due to 1C SG reaching its Lo-2 water level reactor trip setpoint of 18 percent.

The trip was uncomplicated with all systems responding normally post trip. Following stabilization it was identified that the low flow feedwater isolation upstream isolation valves for the 1B and 1C SGs were closed. The valves were closed due to outage maintenance activities. The operator responsible for the procedure step to open the valves incorrectly assumed they were open based on knowledge of valve stroke procedures that had been previously completed.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) for "Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section, ..." Specifically, for 1) 10 CFR 50.73(a)(2)(iv)(B)(1) for the "Reactor protection system (RPS) including: reactor scram or reactor trip," and 2) 10 CFR 50.73(a)(2)(iv)(B)(6) for the "PWR auxiliary or emergency feedwater system." This LER is being submitted as a follow up to ENS 57107, dated May 5, 2024.

C. Cause of Event

The root cause for the automatic reactor trip was licensed operations personnel failing to properly utilize human performance tools and procedures. The procedure step to verify/open the steam generator low flow feedwater upstream isolation valves was not completed prior to raising reactor power per the startup procedure based on the incorrect assumption the isolation valves had been opened several shifts prior as a part of another procedure.

D. Safety Consequences:

There were no safety consequences impacting plant or public safety as a result of this event. The reactor trip system responded automatically due to the trip signal received. There was no loss of any function that would have prevented fulfillment of actions necessary to 1) Shutdown the reactor and maintain it in a safe shutdown condition, 2) Remove residual heat, 3) Control the release of radioactive material, or 4) Mitigate the consequences of an accident.



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	<input type="checkbox"/> 052		YEAR 2024	SEQUENTIAL NUMBER - 001	REV NO. - 00

NARRATIVE

There was no loss of safety function for this event since the response to the plant conditions occurred as expected. As a results, the health and safety of the public and site personnel were not impacted by this event.

E. Corrective Actions:

System line-up verifications and validation of start-up procedure steps were performed. Individuals involved had qualifications removed and are required to be remediated prior to resuming operational duties. Training was conducted with oncoming crew, system alignment was verified, and the reactor and steam plant were started up and returned to full-power operation.

The corrective actions include:

- Addressing accountability with the operations individuals for gaps in procedure use and adherence leading to a configuration control event.
- Developing and implementing an Operations Fundamental Out-of-the-Box Evaluation (OBE); individuals who demonstrate gaps to be evaluated for placement on an Operator Excellence Plan, and a rollup of learnings from the OBEs to be documented.

F. Previous Occurrences:

No previous, similar Licensee Event Reports were identified at the Braidwood Station in the past three years.

G. Component Failure Data:

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model</u>	<u>Mfg. Part Number</u>
N/A	N/A	N/A	N/A