



September 28, 2021

NRC 2021-0037  
10 CFR 50.73

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

Point Beach Nuclear Plant, Unit 1  
Docket 50-266  
Renewed License Nos. DPR-24

Licensee Event Report 266/2021-001-00

Enclosed is Licensee Event Report (LER) 266/2021-001-00 for Point Beach Nuclear Plant, Unit 1. NextEra Energy Point Beach, LLC is providing this LER regarding the Unit 1 manual reactor trip.

This letter contains no new regulatory commitments.

If you have any questions please contact Mr. Eric Schultz, Licensing Manager, at 920-755-7854.

Sincerely,

A handwritten signature in black ink that reads "Michael Strobe" followed by a horizontal line and "Michael Holzman / MS".

Michael Strobe  
Site Vice President  
NextEra Energy Point Beach, LLC

Enclosure

cc: Administrator, Region III, USNRC  
Project Manager, Point Beach Nuclear Plant, USNRC  
Resident Inspector, Point Beach Nuclear Plant, USNRC  
PSCW



**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 <https://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 [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@nrc.gov), and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk all: [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.

1. Facility Name Point Beach Nuclear Plant Unit 1	2. Docket Number 05000266	3. Page 1 OF 4
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4. Title  
Main feedwater pump trip results in manual reactor trip.

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
07	31	2021	2021	- 001 -	00	09	28	2021	NA	05000NA
									NA	05000NA

9. Operating Mode 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 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)	<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 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)	

Other (Specify here, in Abstract, or in NRC 366A).

12. Licensee Contact for this LER

Licensee Contact Thomas P. Schneider – Senior Licensing Engineer	Phone Number (Include Area Code) 920-755-7797
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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
E	EA	MO	TECO-WH	Y	X	JL	TC	ABB	N

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

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

At 1646 on July 31, 2021, with Unit 1 operating in MODE 1 at full power, Operators removed Unit 1 from service by manually tripping the reactor when operators identified control board indications warranting prompt removal of the reactor from service.

All control rods fully inserted into the core due to the manual trip. The auxiliary feedwater system started as expected when a valid system actuation occurred after the reactor trip. There was no emergency core cooling system actuation and offsite power was maintained throughout the event. After the reactor trip, equipment anomalies occurred for which the operators effectively responded.

The cause of the condition requiring the manual reactor trip was a failure of the main steam generator feedwater pump B motor. Corrective actions included replacement of the main steam generator feedwater pump B motor and additional maintenance activities for anomalies identified during the reactor trip.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A).



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

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Point Beach Nuclear Plant Unit 1	05000266	2021	- 001	- 00

**NARRATIVE**

**Description of the Event:**

At 1646 on July 31, 2021, with Unit 1 operating in MODE 1 at full power, Operators removed Unit 1 from service by manually tripping the reactor [AC] when operators identified control board indications warranting prompt removal of the reactor from service.

All control rods [JD] fully inserted into the core due to the manual trip. The auxiliary feedwater system [BA] started as expected when a valid system actuation occurred after the reactor trip. There was no emergency core cooling system actuation [JE] and offsite power [FK] was maintained throughout the event.

After the reactor trip, a condenser steam dump valve [JI] cycled and did not fully close. The valve was locally isolated to prevent additional reactor [AC] cooldown. After the turbine trip, the crossover steam dump system motor operated valves [SE] did not close. This caused main condenser [SG] vacuum conditions to deteriorate. This lead to main condenser unavailability and the use of the atmospheric steam dump system. Field action was taken to close the crossover steam dump valves. Additionally, during the feedwater transition, the main feedwater B regulating bypass valve [JB] did not control in automatic and was taken to manual control.

This 60-day licensee event report is being submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A).

**Cause of the Event:**

The cause of the manual reactor trip was due to the failure of main steam generator feedwater (SGFW) pump B motor [EA][MO]. The root cause has been determined to be less than adequate manufacturing process controls for the stator and rotor assembly. A misalignment between the stator and rotor resulted in periodic contact of the rotor to stator eventually degrading the iron laminations and winding insulation to the point of failure of the stator winding.

The condenser steam dump valve [JI] condition was caused by the failure of its positioner [TC]. The crossover steam dump valve [SE] condition was caused by the failure of a relay [RLY], and the feedwater regulating valve condition will be investigated further during the next available opportunity.

**Analysis of the Event:**

The feedwater system is comprised of two half-capacity main SGFW pumps that deliver fluid to the secondary side of the steam generators. The fluid is used to remove the heat generated in the reactor and to produce steam used for electrical power generation.

The loss of the main SGFW pump motor required an immediate reduction in reactor power to support the limitations of a single train of feedwater. At the time of the failure the reactor power was not low enough to support removal of one of the two operating main SGFW pumps, which necessitated a manual reactor trip.

The Auxiliary Feedwater Pumps started as expected on low steam generator level experienced due to reducing steam demand from the turbine trip in response to the reactor trip.

After the reactor trip, all control rods fully inserted in the core due to the manual trip. There was no Emergency Core Cooling System actuation. Offsite power was maintained throughout the event. The equipment anomalies that occurred did not affect safety system functions.

**Corrective Actions:**

The anomalies experienced during the shutdown were diagnosed, and those requiring maintenance prior to reactor restart were completed. The reactor was returned to service at reduced power and the main SGFW pump motor was replaced



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CONTINUATION SHEET**

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		2021	- 001	- 00

prior to returning the reactor to full power. Additionally, procurement specifications will be updated to include industry approved standards and oversight criteria for critical motor assembly.

**Safety Significance:**

During the event and subsequent recovery actions, there was no loss of any safety systems, structures, or components. The auxiliary feedwater pumps started as expected during the transient. The main SGFW pump A remained available to remove decay heat after the reactor trip. Plant systems anomalies occurred following the manual reactor trip. The operating crew appropriately responded to the anomalies. Following the manual reactor trip, all control rods fully inserted into the core as designed to control reactivity and temperature of the core. The reactivity effects during this event had no impact on the safety of the core and thus, the event was determined to be of very low safety significance. There was no impact on the health and safety of the public because of this event.

**Similar Events:**

There have not been similar events of manual reactor trips in the past three years with the same initiating condition.

**Component Failure Data:**

Main Steam Generator Feedwater Pump Motor: TECO Westinghouse – Frame 7118  
Main Steam Condenser Dump Valves: ABB Inc – Model AV232300  
Crossover Steam Dump Valves: Cutler Hammer – Model BFD20S



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

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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO IRIS
X	SE	RLY	Cutler Hammer -C770	N