Xcel Energy®

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November 18, 2021

L-PI-21-043
10 CFR 50.73

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

Prairie Island Nuclear Generating Plant, Unit 2
Docket No. 50-306
Renewed Facility Operating License No. DPR-60

Prairie Island Nuclear Generating Plant (PINGP) Unit 2 Licensee Event Report 2021-001-00

Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), hereby submits Licensee Event Report (LER) 50-306/2021-001-00 per 10 CFR 50.73(a)(2)(iv)(A).

If you have any questions about this submittal, please contact Carrie Seipp, Senior Regulatory Engineer, at 612-330-5576.

Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

Christopher P. Domingos
Site Vice President, Prairie Island Nuclear Generating Plant
Northern States Power Company – Minnesota

Enclosure (1)

cc: Administrator, Region III, USNRC
Project Manager, Prairie Island, USNRC
Resident Inspector, Prairie Island, USNRC
State of Minnesota

ENCLOSURE 1

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
LICENSEE EVENT REPORT 50-306/2021-001-00

2 pages follow

NRC FORM 366 (08-2020) | U.S. NUCLEAR REGULATORY COMMISSION | APPROVED BY OMB: NO. 3150-0104 | EXPIRES: 08/31/2023

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/)

1. Facility Name	2. Docket Number	3. Page
Prairie Island Nuclear Generating Plant, Unit 2	05000306	1 OF 2

4. Title

22 Turbine Driven Auxiliary Feedwater Pump Actuation Signal Due to Procedure Error

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
										05000
10	03	2021	2021	- 001 -	00	11	18	2021	Facility Name	Docket Number
										05000

9. Operating Mode	10. Power Level
5	0

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

10 CFR Part 20	☐ 20.2203(a)(2)(vi)	☐ 50.36(c)(2)	☒ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(A)	**10 CFR Part 73**
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(4)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(i)	**10 CFR Part 21**	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(1)(i)
☐ 20.2203(a)(2)(ii)	☐ 21.2(c)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(i)
☐ 20.2203(a)(2)(iii)	**10 CFR Part 50**	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)	☐ 73.77(a)(2)(ii)
☐ 20.2203(a)(2)(iv)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	
☐ 20.2203(a)(2)(v)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	

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

12. Licensee Contact for this LER

Licensee Contact	Phone Number (Include Area Code)
Carrie Seipp, Senior Regulatory Engineer	(612) 330-5576

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

14. Supplemental Report Expected	15. Expected Submission Date	Month	Day	Year
☒ No ☐ **Yes** (If yes, complete 15. Expected Submission Date)				

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

On October 3, 2021, with Prairie Island Nuclear Generating Plant (PINGP) Unit 2 in Cold Shutdown, the 22 Turbine Driven Auxiliary Feedwater (AFW) Pump received a valid actuation signal. While performing the prerequisite checklists for Surveillance Procedure (SP) 2083A "Unit 2 Integrated SI Test with a Simulated Loss of Offsite Power Train A," the Train B 22 Turbine Driven Auxiliary Feedwater (AFW) Pump selector switch in the Main Control Room was placed in Shutdown Auto from Manual. This, combined with having the Non-Safety Related 4160 Volt buses 21 and 22 isolated for maintenance, completed the automatic start signal. The turbine and pump did not turn because the equipment was out of service with the steam supply valves closed.

This event is reportable under 10CFR 50.73(a)(2)(iv)(A) due to a valid Pressurized Water Reactor Auxiliary Feedwater actuation signal.

There was no impact on the ability to maintain safe shutdown conditions. The system operated as designed.

The cause of this event was a latent procedure error in SP 2083A.

The corrective action was an update to the SP 2083A prerequisite checklist to place the 22 Turbine Driven AFW Pump selector switch to Manual.

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

(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/)

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Prairie Island Nuclear Generating Plant, Unit 2	05000306	2021	- 001	- 00

NARRATIVE

EVENT DESCRIPTION

On October 3, 2021, the Prairie Island Nuclear Generating Plant (PINGP) Unit 2 was in Mode 5, Cold Shutdown, at 0 percent power with Non-Safety Related 4160 Volt buses 21 and 22 isolated for maintenance. At 1525 CDT, the 22 Turbine Driven Auxiliary Feedwater (AFW) Pump received an unplanned actuation signal while performing the prerequisite checklists of Surveillance Procedure (SP) 2083A "Unit 2 Integrated SI Test with a Simulated Loss of Offsite Power Train A" when the 22 Turbine Driven AFW Pump selector switch in the Main Control Room was placed in Shutdown Auto from Manual.

This event is reportable under 10CFR 50.73(a)(2)(iv)(A) due to a valid Pressurized Water Reactor Auxiliary Feedwater actuation signal, per NUREG 1022, Revision 3.

EVENT ANALYSIS

The 22 Turbine Driven AFW Pump is a part of the PINGP AFW System (EIIS CODE: BA). The AFW System automatically supplies feedwater to the steam generators (SG) to remove decay heat from the Reactor Coolant System upon the loss of normal feedwater supply. The AFW system is configured into two redundant trains. One train has a turbine driven AFW pump; the other has a motor driven AFW pump. One automatic start signal for the turbine driven AFW Pump is the loss of both non-safety related 4160 Volt buses that provide power to the Main Feedwater (MFW) pumps. A loss of power for both MFW pumps will start the turbine driven AFW pump to ensure that at least one SG contains enough water to serve as the heat sink for reactor decay heat and sensible heat removal following the reactor trip.

With Non-Safety Related 4160 Volt buses 21 and 22 isolated for maintenance, placing the 22 Turbine Driven AFW Pump selector switch in Shutdown Auto completed the automatic start signal causing the associated 22 Turbine Driven AFW Pump Steam Block Valve to open. The turbine and pump did not turn because the equipment was out of service with the steam supply valves closed. The 22 Turbine Driven AFW Pump Steam Block Valve then returned to the closed position on a Low Pump discharge pressure signal.

ASSESSMENT OF SAFETY CONSEQUENCES

The actuation signal for the 22 Turbine Driven AFW Pump did not challenge the ability to maintain safe shutdown conditions. There were no radiological, environmental, or industrial impacts associated with this event. The health and safety of the public and site personnel were not impacted during this event.

CAUSE OF THE EVENT

The cause of this event was a latent procedure error in SP 2083A from when the procedure was changed from testing both trains of the system to testing each of the trains separately.

CORRECTIVE ACTIONS

Operations updated the SP 2083A prerequisite checklist to place the 22 Turbine Driven AFW Pump selector switch to Manual.

PREVIOUS SIMILAR EVENTS

No previous similar events have occurred at PINGP in the prior 3 years.