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March 22, 2021

L-PI-21-010  
10 CFR 50.73

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

Prairie Island Nuclear Generating Plant, Units 1 and 2  
Docket Nos. 50-282 and 50-306  
Renewed Facility Operating License Nos. DPR-42 and DPR-60

Prairie Island Nuclear Generating Plant (PINGP) Unit 1 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) 50-282/2021-001-00 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.

A handwritten signature in black ink, appearing to read 'Christopher P. Domingos', with a large, stylized loop at the end.

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 50-282/2021-001-00**

2 pages follow

<b>NRC FORM 366</b> (08-2020)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>			<b>APPROVED BY OMB: NO. 3150-0104</b>		<b>EXPIRES: 08/31/2023</b>			
 <b>LICENSEE EVENT REPORT (LER)</b> (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 <a href="https://www.nrc.gov/reading-mv/doc-collections/nuregs/staff/sr1022/r3/">https://www.nrc.gov/reading-mv/doc-collections/nuregs/staff/sr1022/r3/</a> )										
<b>1. Facility Name</b> Prairie Island Nuclear Generating Plant, Unit 1					<b>2. Docket Number</b> 05000282		<b>3. Page</b> 1 OF 2			
<b>4. Title</b> 12 Diesel Driven Cooling Water Pump Auto Start Due to Low System Pressure										
<b>5. Event Date</b>			<b>6. LER Number</b>			<b>7. Report Date</b>			<b>8. Other Facilities Involved</b>	
Month	Day	Year	Year	Sequential Number	Rev No.	Month	Day	Year	Facility Name	Docket Number
01	26	2021	2021	- 001 -	00	03	22	2021	Prairie Island, Unit 2	05000306
									Facility Name	Docket Number
										05000
<b>9. Operating Mode</b> 1					<b>10. Power Level</b> 100					
<b>11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)</b>										
<b>10 CFR Part 20</b>		<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)				
<input type="checkbox"/> Other (Specify here, in Abstract, or in NRC 366A).										
<b>12. Licensee Contact for this LER</b>										
<b>Licensee Contact</b> Carrie Seipp, Senior Regulatory Engineer									<b>Phone Number (Include Area Code)</b> (612) 330-5576	
<b>13. Complete One Line for each Component Failure Described in this Report</b>										
Cause	System	Component	Manufacturer	Reportable To IRIS	Cause	System	Component	Manufacturer	Reportable To IRIS	
<b>14. Supplemental Report Expected</b>							<b>15. Expected Submission Date</b>			
<input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date)					Month	Day	Year	
<b>16. Abstract</b> (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)										
On January 26, 2021, the Prairie Island Nuclear Generating Plant (PINGP), 12 Diesel Driven Cooling Water Pump (DDCLP) auto started. Maintenance was in progress on 22 DDCLP and 121 Motor Driven Cooling Water Pump (MDCLP) was aligned as the replacement safety related pump for 22 DDCLP while non-safety related 21 Cooling Water (CL) pump was supporting the system loads. The 12 DDCLP auto started on a sensed low header pressure following the isolation of 22 Cooling Water Strainer for maintenance and subsequent auto initiation of backwash of the other Cooling Water Strainers.										
This event is reportable under 10CFR 50.73(a)(2)(iv)(A) due to a valid Emergency Service Water system actuation.										
There were no nuclear safety impacts. The system operated as designed. All systems responded normally.										
The direct cause of this event was low pressure at the discharge of 12 DDCLP due to the isolation of the Cooling Water Strainer while 22 DDCLP was isolated during low CL system flow conditions.										
The corrective actions included securing the 12 DDCLP. In addition, procedure updates are planned.										



**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/>)

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 ail: [aira\\_submission@omb.eop.gov](mailto:aira_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		2. DOCKET NUMBER		3. LER NUMBER		
Prairie Island Nuclear Generating Plant, Unit 1		05000282		YEAR	SEQUENTIAL NUMBER	REV NO.
				2021	- 001	- 00

**NARRATIVE****EVENT DESCRIPTION**

On January 26, 2021, the Prairie Island Nuclear Generating Plant (PINGP), Units 1 and Unit 2, were both in Mode 1 (Power Operation) at 100 percent power. The total Cooling Water (CL) system operating flow rates were in the range that operation of only one CL pump was desired. Non-safety related train B 21 CL Pump was supporting all the CL system loads for both trains of CL while the train B 22 Diesel Driven Cooling Water Pump (DDCLP) was out of service for maintenance and the 121 Motor Driven Cooling Water Pump (MDCLP) was aligned as the train B replacement safety-related pump. At 1044 CST, the train A 12 DDCLP auto started on a sensed low header pressure following the isolation of 22 Cooling Water Strainer for maintenance and subsequent auto initiation of backwash of the other Cooling Water Strainers which reduced system pressure slightly. The 12 DDCLP is designed to start automatically if the CL discharge header pressure drops to 75 pounds per square inch gauge (psig) for 15 seconds.

This event is reportable under 10CFR 50.73(a)(2)(iv)(A) due to a valid Emergency Service Water system actuation per NUREG 1022, Revision 3.

**EVENT ANALYSIS**

The 12 DDCLP is a part of the PINGP CL System (EIS CODE: BI). The CL system is a ring header which is shared by Units 1 and 2 that provides a heat sink for the removal of process and operational heat from safety-related components during a design basis accident or transient. During normal and shutdown operation, the CL system also provides this function for various safety-related and non-safety related components. The CL system consists of a common CL pump discharge header for five CL pumps: two non-safety related pumps, two safety related DDCLPs, and 121 MDCLP that can be aligned as replacement for either DDCLP by realigning its power supply and administratively disabling the CL pump discharge header valves to direct flow to the appropriate train.

With 121 MDCLP replacing 22 DDCLP on train B, the operating 21 CL pump supplied the ring header via train B and back fed to train A, creating a lower pressure at the discharge of 12 DDCLP than what is indicated in the control room. The isolation of 22 Cooling Water Strainer and subsequent auto backwash of the other Cooling Water strainers further reduced pressure to the 12 DDCLP auto start setpoint.

**ASSESSMENT OF SAFETY CONSEQUENCES**

The auto start of 12 DDCLP did not challenge nuclear safety as all plant systems responded as designed. This event does not represent a safety system functional failure for Unit 1 or Unit 2. 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 direct cause of this event was low pressure at the discharge of 12 DDCLP due to the isolation of the Cooling Water Strainer while 22 DDCLP was isolated during low CL system flow conditions.

**CORRECTIVE ACTIONS**

Operations restored CL system pressure by returning 22 CL Strainer to service, securing 12 DDCLP, and operating 11 CL pump through the duration of the 22 DDCLP maintenance.

Procedure updates to perform mitigating actions while performing DDCLP and Cooling Water Strainer maintenance is a planned corrective action.

**PREVIOUS SIMILAR EVENTS**

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