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L-PI-15-096
10 CFR 50.73

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

Prairie Island Nuclear Generating Plant Unit 1
Docket: 50-282
Renewed License No. DPR-42

LER 50-282-2015-005-00, Possible Misapplication of C18.1, Engineered Safeguards Equipment Support Systems

Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), encloses Licensee Event Report (LER) 50-282/2015-005-00, Possible Misapplication of C18.1, Engineered Safeguards Equipment Support Systems.

Summary of Commitments

This letter contains no new commitments and no changes to existing commitments.

Kevin Davison
Site Vice President, Prairie Island Nuclear Generating Plant
Northern States Power Company - Minnesota

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Prairie Island Nuclear Generating Plant (PINGP), USNRC
Resident Inspector, PINGP, USNRC
Department of Commerce, State of Minnesota

ENCLOSURE

LICENSEE EVENT REPORT 50-282/2015-005-00

4 Pages Follow

NRC FORM 366 (01-2014) | U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 | EXPIRES: 01/31/2017

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 Records and FOIA/Privacy Service Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Prairie Island Nuclear Generating Plant Unit 1	05000 - 282	1 OF 4

4. TITLE

Possible Misapplication of C18.1, Engineered Safeguards Equipment Support Systems

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
9	11	2015	2015	– 005	– 00	11	9	2015		05000
									FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE

Mode 1

10. POWER LEVEL

100%

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER
☐ 20.2203(a)(2)(vi)	☑ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER (Include Area Code)
Frank Sienczak	651-267-1740

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE). ☑ NO

15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On September 11, 2015, it was identified that 122 Control Room Chiller was removed from service and control valve CV-31837 (121/122 Control Room Chiller Outlet) and CV-31838 (121/122 Control Room Chiller Inlet) were closed. This isolated Train B Safeguards Chilled Water and rendered Bus 16 Unit Cooler non-functional, which will result in unacceptable temperatures in the associated bus room during a postulated High Energy Line Break (HELB). Bus 16 would not have performed its safety function and was inoperable for greater than the time allowed by Technical Specification (Tech Spec). Tech Spec 3.8.9 for Distribution Systems-Operating was not entered and the required actions were not taken to restore to an operable status within 8 hours or to enter MODE 3 in 6 hours and MODE 5 in 36 hours. This is a reportable event under 10 CFR 50.73(a)(2)(i)(b), Operation or Condition Prohibited by Tech Spec.

The apparent cause is that the procedure review process was not followed correctly to ensure that C18.1, Engineered Safeguards Equipment Support Systems was accurate and useable.

Corrective action for procedure change requests have been initiated to address the procedure deficiencies identified in C18.1.
Corrective action to revise JFG-FL-LDP-PH1-005G, Job Familiarization Guide – Use of Xcel Procedures and Practices Governing Plant Procedures with details to ensure that Validation Review responsibilities are covered during the appropriate discussions, using FP-G-DOC-04 as your guide.

NARRATIVE

On September 11, 2015, it was identified that 122 Control Room Chiller was removed from service and control valve CV-31837 (121/122 Control Room Chiller Outlet) and CV-31838 (121/122 Control Room Chiller Inlet) were closed. This separated the A and B trains of Safeguards Chilled Water. The 122 Control Room Chilled Water Pump had been stopped and the controlling breaker BKR 122G-12 had been opened. At this point there was no Train B Safeguards Chilled Water. This isolated Train B Safeguards Chilled Water and rendered Bus 16 Unit Cooler non-functional, which will result in unacceptable temperatures in the associated bus room during a postulated High Energy Line Break (HELB).

Bus 16 would not have performed its safety function and was inoperable for greater then the time allowed by Tech Spec. During the last three (3) years this occurred on five (5) separate occasions when 122 Control Room Chiller was isolated. Bus 16 was inoperable for approximately 52 days 21 hours.

Technical Specification (Tech Spec) 3.8.9 for Distribution Systems-Operating was not entered and the required actions were not taken to restore to an operable status within 8 hours or to enter MODE 3 in 6 hours and MODE 5 in 36 hours.

This is a reportable event under 10 CFR 50.73(a)(2)(i)(b), Operation or Condition Prohibited by Tech Spec.

Extent of Condition was performed on Bus 15 in response to Bus 16 inoperability. When 121 Control Room Chiller was removed from service, this isolated Train A Safeguards Chilled Water and rendered Bus 15 Unit Cooler non-functional. Once the unit cooler was non-functional Bus 15 was inoperable. This occurred on two (2) separate occasions when 121 Control Room Chiller was isolated. Bus 15 was inoperable for approximately 21 days 15 hours.

A review of the Operations Tech Spec Logs indicated that at no time were both Buses 15 and 16 out-of-service at the same time, therefore there was no loss of safety function.

EVENT ANALYSIS

The Safeguards Chilled Water System circulates chilled water to provide ambient air cooling to essential areas. These areas include the control room; safeguards switchgear (Unit 1 4160 VAC (4kV) and 480 VAC bus) rooms; the residual heat removal (RHR) pump pits; the relay room, including

[1] EIIS System Code – EA
[2] EIIS System Code – BI

the old P-250 computer room; and the event monitoring (EM) equipment room. The system functions during both normal plant operations and during accident conditions. Function of the system is to remove heat generated by safety related equipment an accident condition. The system provides sufficient ventilation and cooling to maintain equipment operability. It does this by controlling temperatures within design ratings of the installed safety related systems. The system performs a safeguard function in that it cools critical equipment.

If one loop of the Safeguards Chilled Water system is assumed to be disabled (single active failure) in an accident scenario with safety injection signal, the other loop is available. In the affected loop, several rooms would suffer a loss of, or degraded, cooling.

Cooling would be lost to one Unit 1 4kV bus room. Ambient temperatures would be unacceptable for continued operation of the load sequencer in that bus. However, the load sequencer may have completed its function prior to the room temperature exceeding acceptable levels. In any case the other bus would still be available. The loss of Safeguards Chilled Water to the Bus Room Unit Cooler will result in unacceptable temperatures in the associated bus room during a postulated High Energy Line Break (HELB).

SAFETY SIGNIFICANCE

There are no Industrial, Environmental or Radiological consequences from this event. The potential nuclear consequence is that when Bus 16 is declared inoperable, there is a potential for a loss of one train (B) safeguards loads to Unit 1 ensuring the core is cooled in an accident condition. Tech Spec 3.8.9 for Distribution Systems-Operating was not entered and the required actions were not taken to restore to available and operable status within 8 hours or to enter MODE 3 in 6 hours and MODE 5 in 36 hours.

The actual regulatory consequence is that this event is reportable to the NRC under 10 CFR 50.73(a)(2)(i)(B) Operation or Condition Prohibited by Technical Specifications.

There were no radiological, environmental, or industrial impacts associated with this event, and PINGP did not adversely affect the health and safety of the public.

CAUSE

The apparent cause is that the procedure review process was not followed correctly to ensure that C18.1, Engineered Safeguards Equipment Support Systems was accurate and useable.

CORRECTIVE ACTION

Procedure change requests have been initiated to address the procedure deficiencies identified in C18.1, Engineered Safeguards Equipment Support Systems.

Revise JFG-FL-LDP-PH1-005G, Job Familiarization Guide – Use of Xcel Procedures and Practices Governing Plant Procedures with details to ensure that Validation Review responsibilities are covered during the appropriate discussions, using FP-G-DOC-04 as your guide.

PREVIOUS SIMILAR EVENTS

None.