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January 19, 2009

L-PI-08-108
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
License No. DPR-42

LER 1-07-04, Technical Specification Required Shutdown Due to Both Emergency Diesel Generators Being Inoperable, Supplement 2

Northern States Power Company, a Minnesota corporation (NSPM) herewith encloses Supplement 1 to Licensee Event Report (LER) 1-07-04. After further review of the 10 CFR 50.73 reporting criteria under which this LER is reportable, NSPM determined this LER should have been reported per 10 CFR 50.73(a)(2)(v) as a safety system functional failure.

Summary of Commitments

This letter contains no new commitments and completes the existing commitment to supplement this LER upon completion of the root cause evaluation for this event.

Michael D. Wadley
Site Vice President, Prairie Island Nuclear Generating Plant
Northern States Power Company - Minnesota

Enclosure

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

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ENCLOSURE

LICENSEE EVENT REPORT 1-07-04
SUPPLEMENT 2

3 Pages Follow

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES: 08/31/2010

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 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0066), 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 reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Prairie Island Nuclear Generating Plant Unit 1	05000282	1 of 3

4. TITLE
Technical Specification Required Shutdown Due to Both Emergency Diesel Generators Being Inoperable

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
12	21	2007	2007	– 04 –	2	01	19	2009	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE
3

10. POWER LEVEL
0

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

NAME	TELEPHONE NUMBER (Include Area Code)
Jeff Kivi	651.388.1121

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
E	EB	PMC	A160	Y					

14. SUPPLEMENTAL REPORT EXPECTED

O 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 December 21, 2007, with the Unit 1 Train B emergency diesel generator (D2) out of service for planned maintenance, Nuclear Management Company, LLC (NMC) staff were conducting a required surveillance test on the Unit 1 Train A 4kV Bus (Bus 15) load sequencer. The load sequencer failed the surveillance and the Unit 1 Train A emergency diesel generator (D1) was declared inoperable as a result. With both D1 and D2 inoperable, Technical Specifications requires the affected Unit to be shutdown. Shutdown to Mode 3 was completed at approximately 0700 on December 21, 2007. Thus, this event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(A) as a Technical Specification required shutdown.

Unit 1 resumed Mode 1 power operation at approximately 1600 on December 24, 2007, after the Bus 15 load sequencer (and D1) and D2 were returned to service.

A root cause evaluation has been completed. The equipment cause is age related degradation of load sequencer input/output cards. The organizational root cause is lack of a comprehensive preventive maintenance strategy for the load sequencers and their subcomponents.

EVENT DESCRIPTION

On December 21, 2007, with the Unit 1 Train B emergency diesel generator[1] (D2) out of service for planned maintenance, Nuclear Management Company, LLC (NMC)[2] staff were conducting a required surveillance test on the Unit 1 Train A 4kV[3] Bus[4] (Bus 15) load sequencer[5]. The load sequencer failed the surveillance and the Unit 1 Train A emergency diesel generator (D1) was declared inoperable as a result. With both D1 and D2 inoperable, Technical Specifications requires the affected Unit to be shutdown. Shutdown to Mode 3 was completed at approximately 0700 on December 21, 2007.

EVENT ANALYSIS

The event resulted in Unit 1 being brought to Mode 3, thus, this event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(A) as a Technical Specification required shutdown.

Impact on Safety System Functional Failure Performance Indicator

Unit 1 Train A 4kV Bus 15 could not be automatically powered from D1 because its load sequencer was inoperable, which resulted in D1 being declared inoperable. Unit 1 Train B 4kV Bus 16 could not be powered from D2 because D2 was inoperable while maintenance was being performed. D1 was considered available, but would not have started automatically on a loss of offsite power (LOOP) concurrent with a loss of coolant accident. Since the Unit 1 onsite power supplies could not have provided power to systems required to mitigate an accident in the event of a concurrent LOOP, this represents a loss of safety function. Consequently, this event is reportable per 10CFR 50.73(a)(2)(v).

SAFETY SIGNIFICANCE

Unit 1 emergency AC buses remained energized throughout the event. D1 was available for powering Bus 15 using manual operator actions had offsite sources to the Unit 1 emergency AC buses been lost during the event. Additionally, the cross-ties between Unit 1 and Unit 2 emergency AC buses were available to repower Unit 1 emergency AC buses from the Unit 2 emergency diesel generators. Thus, this event did not affect the health and safety of the public and the safety significance of this event is considered minimal.

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[1] EIIS System Identifier: EK; EIIS Component Identifier: DG
[2] On September 22, 2008, NMC transferred its operating authority to Northern States Power Company, a Minnesota Corporation (NSPM), a wholly owned subsidiary of Xcel Energy. By letter dated September 3, 2008, NSPM assumed responsibility for actions and commitments previously submitted by NMC.
[3] EIIS System Identifier: EB
[4] EIIS Component Identifier: BU
[5] EIIS Component Identifier: PMC

CAUSE

The causes of the Bus 15 load sequencer failure are:

- Age related degradation of the input/output cards of the load sequencer (Equipment Root Cause), and
- No preventive maintenance strategy established for the load sequencers and their subcomponents (Organizational Root Cause).

CORRECTIVE ACTION

NMC staff conducted troubleshooting and replaced an input/output card on the Bus 15 load sequencer, after which the Bus 15 load sequencer successfully passed the surveillance. As a result, the Bus 15 load sequencer and D1 were returned to operable status. D2 was returned to operable status after completion of the planned maintenance.

Corrective actions to prevent recurrence include:

1. Replace input/output cards for Bus 16, 25, and 26 load sequencers.
2. Establish the appropriate preventive maintenance strategy for the load sequencers and their subcomponents.
3. Develop a spare parts list for the load sequencers and their subcomponents, and issue stocking analysis worksheets for the load sequencers. Procure and stock the identified spare parts.

PREVIOUS SIMILAR EVENTS

Review of Licensee Event Reports for Unit 1 and Unit 2 since 2005 found three previous Technical Specification required shutdowns. However, none of these were the result of a failed bus sequencer (two were for Unit 2 emergency diesel generator issues and one was for containment fan coil unit leakage.)