



Monticello Nuclear Generating Plant
2807 W County Road 75
Monticello, MN 55362

July 5, 2012

L-MT-12-064
10 CFR 50.73

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

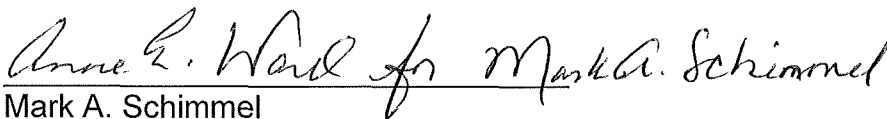
Monticello Nuclear Generating Plant
Docket 50-263
Renewed Facility Operating License No. DPR-22

LER 2012-001 "Degraded Voltage Transfer Scheme Not in Compliance with T.S. 3.3.8.1"

A Licensee Event Report (LER) for this occurrence is attached.

Summary of Commitments

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



Mark A. Schimmel
Site Vice-President
Monticello Nuclear Generating Plant
Northern States Power Company-Minnesota

Enclosure

cc: Regional Administrator, Region III, USNRC
Project Manager, Monticello Nuclear Generating Plant, USNRC
Resident Inspector, Monticello Nuclear Generating Plant, USNRC
State of Minnesota

1. FACILITY NAME: Monticello Nuclear Generating Plant
 2. DOCKET NUMBER: 05000 - 263
 3. PAGE: 1 OF 3

4. TITLE: Degraded Voltage Transfer Scheme Not in Compliance with T.S. 3.3.8.1

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
05	08	2012	2012	001	00	07	05	2012		05000
										05000

9. OPERATING MODE: 1

10. POWER LEVEL: 100%

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

<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input checked="" type="checkbox"/> 50.73(a)(2)(vii)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(ix)(A)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER
 NAME: Carrie Fosaaen, Licensing Engineer
 TELEPHONE NUMBER (Include Area Code): 763-295-1357

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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

14. SUPPLEMENTAL REPORT EXPECTED: YES (If yes, complete 15. EXPECTED SUBMISSION DATE) NO

15. EXPECTED SUBMISSION DATE: MONTH: N/A, DAY: N/A, YEAR: N/A

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

At approximately 0900 CDT on May 8, 2012, it was determined that the Monticello Nuclear Generating Plant did not meet Technical Specification (TS) Limiting Condition for Operation 3.3.8.1 because the requirement of Table 3.3.8.1-1 for the 4.16 KV Essential Bus Degraded Voltage function time delay transfer to the Emergency Diesel Generators (EDGs) of <=9.2 seconds could not be met under all postulated conditions. The degraded voltage transfer scheme has the ability to transfer to a standby offsite source (1AR Transformer) which, under a degraded voltage condition, would delay the transfer to the EDGs an additional 5 seconds. Both EDGs were subsequently declared inoperable.

During the development of the 1980's modification that added the 1AR time delay degraded voltage requirements, the TS submittal did not include the total time delay required to disconnect the Essential Buses from all Offsite Sources.

The interim corrective action was to remove 1AR Transformer from service which disabled the additional 5 second degraded time delay and restored TS compliance. A license amendment request has also been submitted which, pending NRC approval, would remove the 5 second time delay for 1AR Transformer and directly transfer the Essential Buses to the EDGs under a degraded voltage condition. This would allow 1AR Transformer to be returned to service.

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Monticello Nuclear Generating Plant	05000-263	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 3
		2012	- 001	- 00	

NARRATIVE

EVENT DESCRIPTION

Monticello Nuclear Generating Plant (MNGP) was in Mode 1 at 100% power prior to the event. There were no systems, structures, or components that were inoperable at the start of the event that contributed to the event.

At approximately 0900 CDT on May 8, 2012, it was determined that the Monticello Nuclear Generating Plant (MNGP) did not meet Technical Specification Limiting Condition for Operation (LCO) 3.3.8.1 because the requirement of Table 3.3.8.1-1 Function 2.b. for the 4.16 KV Essential Bus Degraded Voltage time delay transfer to the Emergency Diesel Generators (EDGs) [DG] of ≤ 9.2 seconds could not be met under all postulated conditions. The degraded voltage transfer scheme has the ability to transfer to a standby offsite source (1AR Transformer [XFMR]) which under a degraded voltage condition would delay the transfer to the EDGs an additional 5 seconds. Both EDGs were subsequently declared inoperable.

The plant non-essential 4.16 KV buses may be supplied from either of two sources. The normal source is 2R Transformer supplied from the 345 KV Substation. The alternate source is 1R Transformer supplied from the 115 KV Substation. The 2R Transformer and 1R Transformer have two separate secondary windings designated as x and y. The y winding of each transformer supplies Bus 13 and Bus 14. Buses 15 and 16 are normally supplied by Buses 13 and 14, respectively. In the event of degraded or loss of voltage to Buses 15 and 16, an essential bus transfer separates the Essential Buses from Buses 13 and 14 and switches them to an alternate source. These sources include the voltage regulated 1AR Transformer or the EDGs if 1AR Transformer is not available.

Technical Specification 3.3.8.1 is the specification for Loss of Power Instrumentation (LOP). LCO 3.3.8.1 states, "The LOP instrumentation for each Function in Table 3.3.8.1-1 shall be Operable." Table 3.3.8.1-1 gives the required function for the time delays to be Operable as being able to fulfill their functions of separating from the offsite sources in as little as 8.8 seconds or as long as 9.2 seconds. Although the entire transfer scheme is tested under a TS surveillance procedure, there is no mention in Table 3.3.8.1-1 of the 5 seconds that it takes to check bus voltages while the logic checks 1AR Transformer as an acceptable offsite source.

Following installation in 1981, the degraded voltage scheme would directly transfer to the EDGs after 10 seconds of persistent degraded voltage. In 1984, the MNGP installed a modification that transferred essential buses to 1AR Transformer for 5 seconds prior to transferring to the EDGs under degraded voltage conditions, resulting in a total potential 15 second time delay to separate from Offsite power. During the 2012 Component Design Bases Inspection, it was determined that the MNGP was not compliant with Technical Specification 3.3.8.1 time delay for Function 2.b. This led to both EDGs subsequently being declared inoperable and entry into LCO 3.8.1.E on May 8, 2012 at 1000. 1AR Transformer was removed from service at 1014, removing the additional degraded voltage time delay of 5 seconds and restoring Technical Specification compliance.

EVENT ANALYSIS

This event is being reported in accordance with 10 CFR 50.73(a)(2)(v)(A-D) Event or Condition that Could Have Prevented Fulfillment of a Safety Function; 10 CFR 50.73(a)(2)(i)(B) Operation or Condition Prohibited by Technical Specifications; 10 CFR 50.73(a)(2)(ii)(B) Unanalyzed Condition; 10 CFR 50.73(a)(2)(vii) Common Cause Inoperability of Independent Trains or Channels; and 10 CFR 50.73(a)(2)(ix)(A) Single Cause that Could Have Prevented Fulfillment of the Safety Function of Trains or Channels in Different Systems. This event was considered a safety system functional failure.

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NARRATIVE

SAFETY SIGNIFICANCE

The total transfer time from offsite power to EDGs, including the additional time to transfer to 1AR Transformer, is within SAFER/GESTAR Loss Of Coolant (LOCA) Analysis for MNGP of 15 seconds. Additionally, to satisfy the Technical Specification compliance issue related to the degraded voltage logic timing, 1AR Transformer was removed from service. As determined by Probabilistic Risk Analysis, this reduction in offsite AC power redundancy leads to a continuous estimated Core Damage Frequency increase of approximately 1 E-07/year.

CAUSE

During the development of the 1980's modification that added the 1AR time delay degraded voltage requirements, the TS submittal did not include the total time delay required to disconnect the Essential Buses from all Offsite Sources.

CORRECTIVE ACTION

The interim corrective action was to remove 1AR Transformer from service which disabled the additional 5 second degraded time delay and restored Technical Specification compliance.

A license amendment request has also been submitted which, pending NRC approval, would remove the 5 second time delay for 1AR Transformer and directly transfer the Essential Buses to the EDGs under a degraded voltage condition. This would allow 1AR Transformer to be returned to service.

PREVIOUS SIMILAR EVENTS

A review of Licensee Event Reports determined there have been no previous similar events in the last three years.

ADDITIONAL INFORMATION

Energy industry identification system (EIIIS) codes are identified in the text within brackets [xx].