Xcel Energy®

JAN 28 2014

L-PI-14-006
10 CFR 50.46

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

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

Technical Evaluation to Support LOCA 10 CFR 50.46 30 Day NRC Submittal

Pursuant to 10 CFR 50.46, Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), submits the 30 day report for Prairie Island Nuclear Generating Plant (PINGP) Unit 2. This report is generated from the Nuclear Analysis Department's (NAD) assessment of the new Loss-of-Coolant Accident (LOCA) analysis for Unit 2, which is documented in WCAP 17783-P "Best Estimate Analysis of the Large-Break Loss-of-Coolant Accident for Prairie Island Units 1 and 2 with Replacement Steam Generators Using ASTRUM Methodology," dated June 2013.

The PINGP Unit 2, Westinghouse model 51 steam generators were replaced with AREVA model 56/19 steam generators during the Unit 2 Cycle 28 outage. With the installation of the model 56/19 steam generators, PINGP Units 1 and 2 are analytically identical. The PINGP Unit 1 LOCA analysis documented in WCAP-16890-P was re-written as WCAP-17783-P to indicate that the analysis is now applicable to both PINGP units.

WCAP 17783-P is now part of PINGP Licensing Basis, and is the analysis of record following the completion of Unit 2 Cycle 28 fuel reload outage. The enclosure to this letter addresses changes to the Unit 2 large break loss of coolant accident (LBLOCA) peak clad temperature (PCT) analysis associated with the new analysis of record documented in WCAP 17783-P.

Enclosure 1 contains a history for the current analysis of record of both the small break LOCA (SBLOCA) and LBLOCA analysis for both units.

Summary of Commitments

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

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

Enclosure (1)

cc: Regional Administrator, Region III, USNRC
Project Manager, PINGP, USNRC
Resident Inspector, PINGP, USNRC

ENCLOSURE 1

NAD Technical Content for 30 Day Report

2 Pages Follow

PCT SUMMARY

	PI1 LBLOCA	PI1 SBLOCA	PI2 LBLOCA	PI2 SBLOCA
Analysis of Record Date	11/30/07	1/21/08	11/30/07	1/21/08
Analysis of Record PCT	1765	959	1765	965
Old Changes and Errors (absolute sum)	227	0	227	0
Last NRC Notification Date	8/29/13 (1)	8/29/13 (1)	8/29/13 (1)	8/29/13 (1)
Projected PCT From the Last NRC Notification	1992	959	1992	965
New Errors or Changes (from this Notification Only)	-2	0	-2	0
Total of Changes and Errors (absolute Sum)	229	0	229	0
New Projected PCT	1990	959	1990	965

(1) These dates reflect the last LBLOCA and SBLOCA 30 day report L-PI-13-086.

Westinghouse LOCA Peak Clad Temperature Summary for ASTRUM Best Estimate Large Break

RSG

Plant Name: Prairie Island Unit 2
Utility Name: Xcel Energy, Inc
Revision Date: 7/15/2013

Analysis Information

EM:	ASTRUM (2004)	**Analysis Date:**	11/30/2007	**Limiting Break Size:**	Split
FQ:	2.5	**FdH:**	1.77		
Fuel:	422 Vantage+	**SGTP (%):**	10		
Notes:					

	Clad Temp (°F)	Ref.	Notes
LICENSING BASIS			
Analysis-Of-Record PCT	1765	1	
PCT ASSESSMENTS (Delta PCT)			
A. PRIOR ECCS MODEL ASSESSMENTS			
1 . Evaluation of Fuel Pellet Thermal Conductivity Degradation and Peaking Factor Burndown	227	2	(a), (b)
B. PLANNED PLANT MODIFICATION EVALUATIONS			
1 . None	0		
C. 2013 ECCS MODEL ASSESSMENTS			
1 . Revised Heat Transfer Multiplier Distributions	-2	3	
D. OTHER*			
1 . None	0		
LICENSING BASIS PCT + PCT ASSESSMENTS	**PCT =** 1990		

* It is recommended that the licensee determine if these PCT allocations should be considered with respect to 10 CFR 50.46 reporting requirements.

References:

1 . WCAP-17783-P, "Best-Estimate Analysis of the Large-Break Loss-of-Coolant Accident for Prairie Island Units 1 and 2 with Replacement Steam Generators Using ASTRUM Methodology," June 2013.

2 . LTR-LIS-12-414, "Prairie Island Units 1 and 2, 10 CFR 50.46 Notification and Reporting for Fuel Pellet Thermal Conductivity Degradation and Peaking Factor Burndown," September 20, 2012.

3 . LTR-LIS-13-366, Revision 1, "Prairie Island Units 1 and 2 10 CFR 50.46 Report for Revised Heat Transfer Multiplier Distributions," July 2013.

Notes:

(a) This evaluation credits peaking factor burndown, see Reference 2.
(b) The reporting text and line item originally identified for Unit 1 in Reference 2 is applicable to Unit 2 with RSGs.