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

Prairie Island Nuclear Generating Plant Units 1 and 2
Dockets 50-282 and 50-306
License Nos. DPR-42 and DPR-60

Clarification of Cooling Water System Emergency Intake Line Minimum Flow Capacity

References:
1. License Amendment Request Dated January 29, 1997, Amendment of Cooling Water System Emergency Intake Design Bases.
2. Supplement 8 to License Amendment Request Dated January 29, 1997, Amendment of Cooling Water System Emergency Intake Design Bases, dated April 29, 1997.
3. Supplement 13 to License Amendment Request Dated January 29, 1997, Amendment of Cooling Water System Emergency Intake Design Bases, dated June 22, 1998.
4. Prairie Island Nuclear Generating Plant, Units 1 and 2 – Issuance of Amendments RE: Cooling Water System Emergency Intake Design Basis (TAC Nos. M97816 and M97817), dated November 4, 1998.
5. Prairie Island Nuclear Generating Plant, Units 1 and 2 – Issuance of Amendments (TAC Nos. MC3043 and MC3044), dated May 10, 2005, Accession Number ML051090159.

Reference 1 submitted a license amendment request (LAR) to resolve an unreviewed safety question relating to the Prairie Island Nuclear Generating Plant (PINGP) cooling water (CL) system emergency intake line (EIL) flow capacity. A recent NRC site inspection noted that the flow rates provided to the Nuclear Regulatory Commission (NRC) during the course of the LAR review and cited in subsequent NRC safety evaluations (SEs) differ from the flow rates in the current Updated Safety Analysis Report (USAR). This letter is to assure that the NRC Staff is aware of the actual EIL flow capacity.

During the review of Reference 1, an NRC request for additional information asked if "the minimum required capacity of the intake line [will] be 15,000 gpm". The reply in Reference 2 stated:

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> The minimum required capacity of the intake line to maintain safe shutdown is 10,643 gpm. This value is also within the measured test value of 11,600 gpm. As stated in response to Subquestion 2, above, the longer backflush provides good assurance that long term, the flow capacity will be close to 15,000 gpm,

Reference 3 provided the NRC with proposed USAR changes which stated, "Original design calculations predict a minimum supply capacity of 18000 gpm. However, preoperational testing, when extrapolated for minimum submergence, demonstrated that only 15,000 gpm is actually available."

Based on the information provided by the licensee, the NRC subsequently issued license amendments in Reference 4, for which the SE stated:

> The USAR changes state that this flow demand must be reduced (via operator actions) to within the emergency intake line capacity of 15,000 gpm before the intake canal volume is exhausted. This 15,000 gpm flow rate is more than adequate to supply the safe shutdown heat loads for both units following a DBE [design basis event].
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> The licensee has also revised the USAR to identify the minimum required flow capacity of the emergency intake line to ensure that it is well below the actual 15,000 gpm capacity of the line.
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> The 10,643 gpm minimum flow capacity is also less than the as-found actual flow capacity (11,600 gpm) of the emergency intake line that was identified in the staff's March 25, 1997, safety evaluation. Subsequent cleaning has restored the flow capacity of the emergency intake line to 15,000 gpm at the minimum river water level of 666.5 feet.

The NRC SE for license amendments 169 and 159, for PINGP Units 1 and 2 respectively, also cited 15,000 gpm as the capacity of the EIL.

A retest of the EIL capacity, performed in March 1999, determined that the capacity is 11,733 gpm at 666.5 feet river elevation. In 2007, the licensee recognized that the USAR statements implied an EIL capacity greater than the actual capacity and revised the USAR to state, "Original design calculations predicted a minimum supply capacity of 18000 gpm. However, new test results, when extrapolated for minimum submergence, demonstrated that only 11,600 gpm is actually available."

If there are any questions or if additional information is needed, please contact Mr. Dale Vincent, P.E., at 651-388-1121.

Summary of Commitments

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

Mark A. Schimmel
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Prairie Island Nuclear Generating Plant, Units 1 and 2
Northern States Power Company - Minnesota

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