



**Monticello License Amendment Request
Revise PTLR to Incorporate New
Surveillance Capsule Data
September 21, 2023**

Agenda

- Purpose
- Background
- License Amendment Request (LAR)
- Technical Specification (TS) Changes
- Summary

Purpose

Discuss proposed LAR for the Monticello Nuclear Generating Plant (MNGP) to revise the existing Pressure Temperature Limits Report (PTLR) to use the newer analytical methods and to incorporate new surveillance capsule data.

Background

- Northern States Power Minnesota (NSPM) revised the TS to incorporate a PTLR in February 2013 (Am. 172).
- The PTLR is applicable through the License Renewal period – 54 Effective Full-Power Years (EFPY).
- The PTLR has minimal margin to the 212°F operating restriction for reactor vessel pressure testing.
- The 120° surveillance capsule was pulled during the 2021 refueling outage and submitted in October 2022.

Background

- The current PTLR is based on the 2007 Structural Integrity Associates, Inc. (SIA) report – SIR-05-044-A, “Pressure-Temperature Limits Report Methodology for Boiling Water Reactors,” Revision 0.
- Reactor pressure vessel (RPV) fluence was determined based on NEDC 32983P-A, “Licensing Topical Report, General Electric Methodology for Reactor Pressure Vessel Fast Neutron Flux Evaluations.”

Background

- NSPM chose TransWare Enterprises, Inc., Radiation Analysis Modeling Application (RAMA) fluence methodology as the new MNGP fluence methodology.
- RAMA methodology has generic NRC approval.
- RAMA has been applied to generate fluence results through 72 EFPY (end of the projected Subsequent License Renewal (SLR) period).
- To be implemented under 50.59 process – no NRC approval required.

License Amendment Request

- Revise the TS to reflect the newer SIA (Revision 1) PTLR methodology report.
- Updated PTLR developed using:
 - Revision 1 PTLR methodology
 - New 120° surveillance capsule data
 - Projected fluence through SLR period determined applying the RAMA fluence methodology

TS Changes – PTLR

- Revise MNGP TS administrative specification, Specification 5.6.5 – “Reactor Coolant System Pressure and Temperature Limits Report” to state:
 - SIR-05-044-A, “Pressure-Temperature Limits Report Methodology for Boiling Water Reactors,” Revision 1, dated August 2013

Summary

- NRC approval is needed to apply the updated SIA methodology and update the PTLR curves based on new surveillance capsule data
- Projected date for LAR submittal – October 2023
- Requested for the spring 2025 refueling outage (RFO)
- Approval will provide increased operational margin for reactor vessel pressure testing during RFOs.

