



**Prairie Island License Amendment Request
to Revise TS 3.7.8, Cooling Water (CL) System
Required Actions**

04.14.2023

Agenda

- **Purpose**
- **Background**
- **Proposed Licensing Action**
- **Schedule**

Purpose

The purpose of this meeting is to discuss proposed license amendment for Prairie Island Nuclear Generating Plant (PINGP) Units 1 and 2 TS 3.7.8, which:

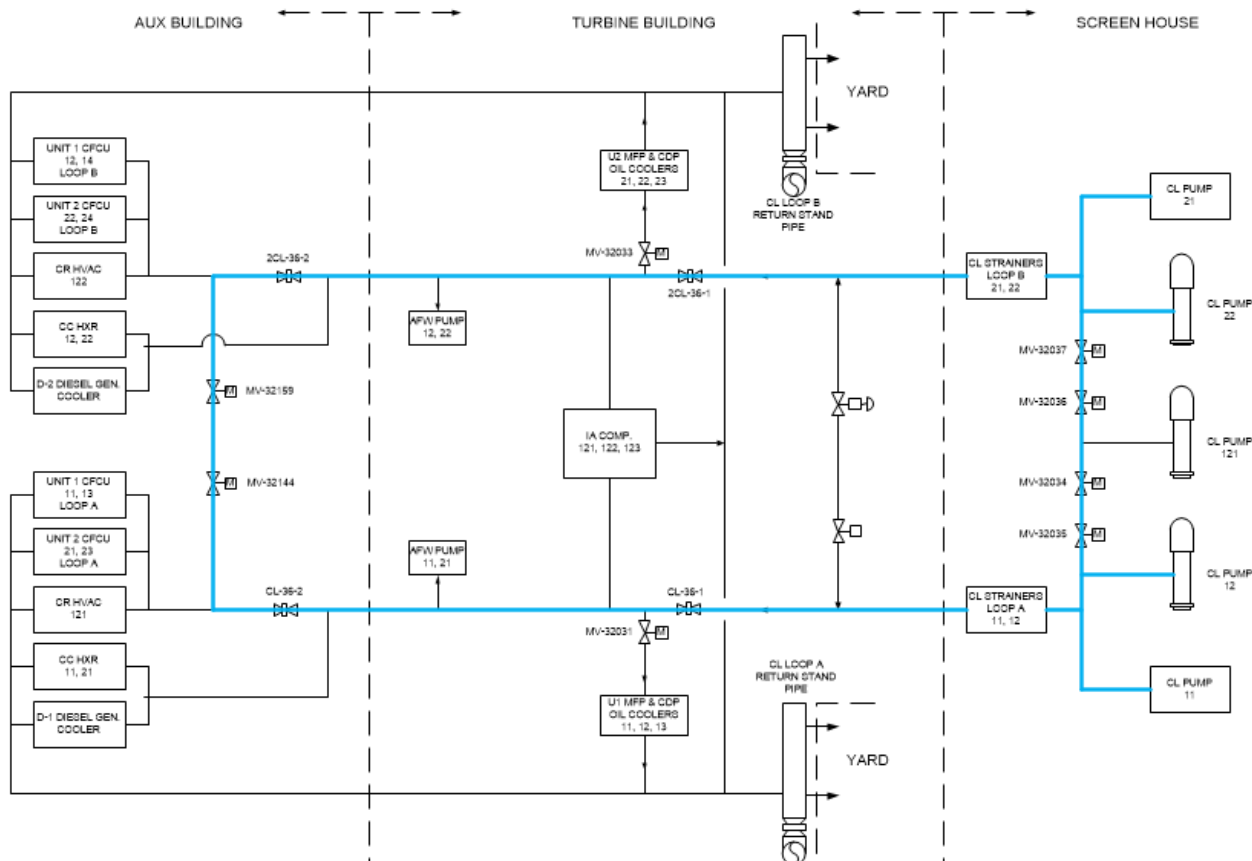
- Revises the Required Actions of TS 3.7.8, Cooling Water (CL) System, Condition B, to reduce from two to one the required number of safeguard CL pumps to be verified operable for the operable header when one CL header is inoperable.
- Deletes from TS 3.7.8, Condition B, a footnote from the one-time change of Amendments 237/225.

Background

- The Prairie Island CL system design includes:
 - Two redundant headers in independent trains,
 - Two diesel driven cooling water pumps (12 and 22, one dedicated to each train),
 - One safety related motor driven cooling water pump (121) that is backed by Unit 2 emergency diesel generators and can be aligned in safeguards mode to either train, and
 - Two non-safety related motor driven pumps (11 and 21) for normal operation.
- In the event of a safeguards actuation, the normal ring header configuration automatically splits into two trains.

Background (continued)

CL System Simplified Diagram – Figure 1 – Ring Header Operation



Background (continued)

- A single CL pump can provide sufficient cooling for both:
 - one unit during the injection and recirculation phases of a postulated loss of coolant accident
 - maintaining a second unit in a safe shutdown condition.
- Sufficient cooling is provided by either:
 - the diesel driven cooling water pump (DDCLP) associated with the operable CL header or
 - the safeguards motor driven cooling water pump (121 MDCLP) aligned for safeguards on the operable CL header

Proposed Licensing Action

- Current PINGP TS 3.7.8, Condition B, requires more equipment to be operable than needed for a CL train to meet its safety function.
 - This could lead to a potential dual unit shutdown when a single CL pump on the operable CL header would meet the CL safety function.
- NSPM proposes to revise the Required Actions of TS 3.7.8, Condition B, to verify that either:
 - the DDCLP on the operable CL header is operable or
 - the 121 MDCLP is operable (in support of the operable CL header)

Proposed Licensing Action (continued)

- NSPM also proposes to remove the footnote from TS 3.7.8 for the one-time change to Completion Time implemented with Unit 1 and Unit 2 Amendments 237 and 225, respectively.
- The TS 3.7.8 Bases will be revised accordingly.

Proposed Licensing Action (continued)

- The LAR will be not be risk-informed, but NSPM will include risk insights with the LAR
 - The equipment associated with the operable CL train increases in importance due to loss of redundancy.
 - Risk is managed under the Maintenance Rule (a)(4) program prior to exceeding the front stop of 72 hours for TS 3.7.8, Condition B.
 - After exceeding the front stop, the risk is managed using both the Maintenance Rule (a)(4) and Risk-Informed Completion Time programs.
 - Both programs evaluate the increase in risk and implement risk management actions.

Proposed Licensing Action (continued)

Summary of Proposed Technical Specifications Changes

<p>B. One CL supply header inoperable.</p>	<p style="text-align: center;">-----NOTES-----</p> <p>1. Unit 1 enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources-MODES 1, 2, 3, and 4," for emergency diesel generator made inoperable by CL System.</p> <p>2. Both units enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops-MODE 4," for residual heat removal loops made inoperable by CL System.</p> <p style="text-align: center;">-----</p> <p>B.1 Verify vertical motor driven CL pump OPERABLE.</p>	<p>4 hours*</p>
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OR



AND

~~* As a contingency and if needed to support an adequate isolation boundary, the vertical motor driven CL pump is allowed to remain inoperable for up to 36 hours to support blind flange installation and for up to 36 hours to support the blind flange removal during the time frame of 11/28/2021 through 12/28/2021 to Support the A and B train CL Supply Header piping replacement project.~~

Proposed Licensing Action (continued)

Summary of Proposed Technical Specifications Changes

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2 Verify opposite train diesel driven CL pump OPERABLE.	4 hours
	<p style="text-align: center;"><u>AND</u></p> B.3 Restore CL supply header to OPERABLE status.	72 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program

Schedule

- NSPM plans to submit the LAR in May 2023 and request NRC approval 12 months from acceptance with implementation within 90 days of approval.

