



License Amendment Request For Reclassifying Quality Group Of Low Temperature Portions Of Reactor Water Cleanup (RWCU) System

Energy Northwest

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Participants

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Presentation Outline

- ✦ Proposed Change
- ✦ RWCU System Description
- ✦ Reason for Request
- ✦ LAR Approach
- ✦ Technical Evaluation
- ✦ Changes to Licensing Basis
- ✦ Conclusion

Proposed Change

- ✦ Change the Quality Group designation for hold pumps, piping, valves and mechanical modules located in low temperature portions of the reactor water cleanup (RWCU) system located in the radwaste building from Quality Group C to Quality Group D

RWCU System Description

- ✦ Continuously purifies reactor water during all modes of reactor operation
- ✦ Takes suction from the inlet of each reactor recirculation pump and from the reactor pressure vessel bottom head and returns processed water to reactor pressure vessel (via reactor feedwater), main condenser, or radwaste
- ✦ Equipment located in the reactor building includes main system pumps and regenerative and non-regenerative heat exchangers
- ✦ Equipment located in the radwaste building includes filter-demineralizers and supporting equipment

Reason for Request

- ✦ This amendment request is submitted as a corrective action in response to a non-cited violation documented in NRC Inspection Report 2013-003.

LAR Approach

- ✦ Information provided will be in a format compatible with current Standard Review Plan (SRP) 3.2.2, 5.4.8, other interfacing SRPs and applicable General Design Criteria (GDC)
 - SRP review areas and acceptance criteria will be addressed
 - Detailed discussion for areas where there will be changes to the current licensing bases for system acceptability

Safety Analysis of Proposed Changes

- ✦ The existing licensing basis in the following areas is not impacted by the proposed reclassification:
 - Interconnections with primary coolant and radwaste systems
 - Resin management and component venting
 - Reactor coolant pressure boundary and its integrity
 - Controls for release of radioactive material
 - Control of radioactivity
 - RWCU availability, capability, reliability
 - Environmental qualification of equipment
 - RWCU safety functions
 - Safe shutdown capability
 - Mitigation of accident consequences

Safety Analysis of Proposed Changes

- ✦ Detailed consideration of the reclassified system is being performed for the following areas:
 - Generation of internal missiles
 - Internal flooding
 - High energy line considerations
 - Control room habitability impact
 - Seismic requirements

SRP 3.2.2 Consideration

- ✦ Regulatory Guide 1.26 exceptions should be supported with adequate justification to proposed quality group classification.
 - GDC 1 specifies quality commensurate with importance of safety function performed by the SSC [refer to GL 84-01]
 - Extent of proposed reclassification has no safety function
 - Functional separation between system safety importance established by RWCU isolation valves

Changes to Licensing Basis

- ✦ Limited to FSAR changes only (markups will be submitted with LAR for information)
- ✦ Reactor coolant pressure boundary isolation not affected
 - Automatic system isolation function not affected
 - Pipe break detection instrumentation not affected
- ✦ Classification of Structures, Components and Systems
 - FSAR Table 3.2-1 will be updated

Changes to Licensing Basis

- ✦ Protection Against Dynamic Effects Associated with the Postulated Rupture of Piping
 - FSAR Table 3.6-1 expanded to include RWCU in radwaste building as high energy system
 - FSAR Tables 3.6-3 & 3.6-6 new break locations/nodes added
 - Figures depicting high energy RWCU lines in radwaste added
 - Additional changes to Chapter 3.6 figures, tables and text to quantify pipe break effects

Changes to Licensing Basis

- ✦ Additional changes to address the following
 - Discussion of exception to system classification guidance per SRP 5.4.8 and Regulatory Guide 1.26
 - Updated discussion of role of existing RWCU isolation features in response to postulated break in reclassified portion
 - Updated discussion of HELB impacts to radwaste building
 - Expansion of equipment qualification discussion in section 3.11
 - Update of RWCU system figures in Chapter 5 of FSAR

Conclusion

- ✦ RWCU system external to reactor building will be reclassified as Quality Group D
- ✦ No adverse impacts to required safety functions associated with reactor pressure boundary, accident consequences or accident mitigation
- ✦ Quality designation is commensurate with overall role of the reclassified portion of the system
- ✦ LAR submittal, targeted September 2016

Questions