
Sequoyah Nuclear Plant Unit 2

Pre-Submittal Meeting for Proposed Alternative Request 21-ISI-2

August 5, 2021

Agenda



Opening Remarks

Introduction

Background

Description of the Alternative Request

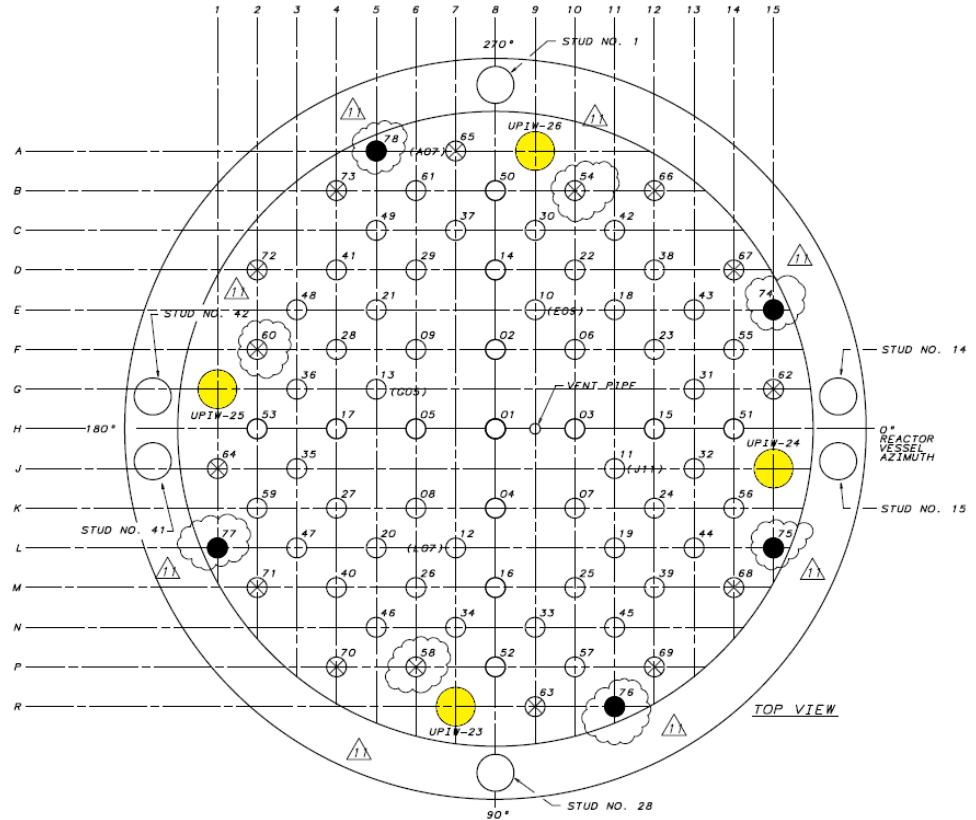
Schedule for Submittal

Closing Remarks

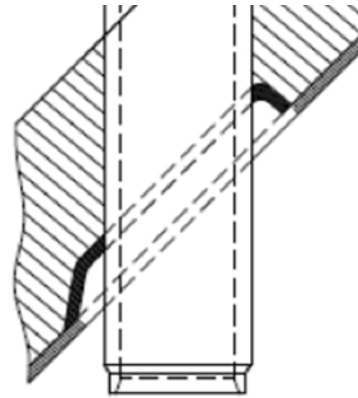
Introduction

- Purpose of the meeting is to brief the Nuclear Regulatory Commission (NRC) regarding Sequoyah (SQN) Unit 2 Alternative Request 21-ISI-2 regarding the Upper Head Injection (UHI) nozzles
- NRC approval is needed to support the upcoming SQN Unit 2 Cycle 24 Refueling Outage (U2R24) scheduled to commence October 2, 2021.
- TVA is requesting an alternative to the specified requirements of Code Case N-729-6, Paragraph -2500, pursuant to 10 CFR 50.55a(z)(2), as the provisions that require the qualification test specimen to contain the minimum and maximum examination diameter represents a hardship or unusual difficulty without a compensating increase in the level of quality and safety.

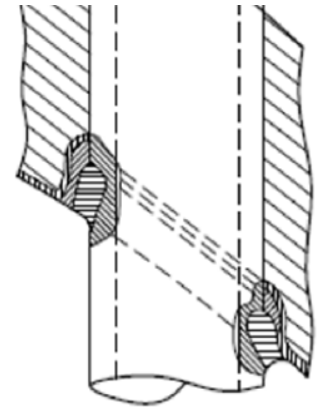
Overview



Overview



CONTROL ROD DRIVE
PENETRATION



UPPERHEAD INJECTION
STAND PIPE PENETRATION

Request Background

- The SQN Upper Head Injection (UHI) nozzles (for the abandoned UHI System) are a larger diameter than all other head penetrations; slightly larger than the diameter ranges covered by the Materials Reliability Program (MRP) reactor upper head penetration qualification program (ID of 3.943” versus the UHI 4.375”).
- The last time (2014/2015) SQN performed these exams, the rules applied (under Code Case N-729-1) were somewhat flexible, and allowed us to evaluate the size difference via a Technical Justification.

Request Background

- Under the currently endorsed Code Case (N-729-6) the Technical Justification is no longer allowed.
- TVA contracted EPRI to develop a UT qualification for the UHI exams. Initially, the schedule was adequate to ensure the examiners could qualify on the new procedures in time for the SQN U2R24 outage (starting 10/2/21).

Request Background

- EPRI had delays in their drawing reviews, material supply, and fabricators that are impacting the mock-ups, and could potentially impact the qualification. Given the current progress and maximum schedule compression, EPRI is projecting (at best) zero margin to be able to support the current outage schedule.
- In parallel, expedited EPRI qualification is still in-process in hopes that a post-examination qualification can be used to demonstrate full compliance prior to restarting from the outage.

Request Description

- Pursuant to 10 CFR 50.55a(z)(2)
 - SQN Unit 2 is requesting an alternative to the requirements of Code Case N-729-6, Paragraph -2500(b), that requires the qualification within the minimum and maximum nominal inside diameters of the demonstration mockups.
 - Alternative is based on a hardship without a compensating increase in the level of quality and safety.
 - The unique design of the UHI nozzles requires one of a kind specimen set for qualification
 - Fabrication and/or qualification delays could result in significant impacts to the outage duration. i.e., the unit could not restart unit until the Code could be met and no certainty for qualification completion (potentially months)
 - Approved alternative surface examination methods are dose-restrictive

Request Description

- Pursuant to 10 CFR 50.55a(z)(2)
 - TVA proposes the use of NDE procedures that meet Code Case N-729-1 Paragraph -2500, using the previous Technical Justification.
 - This alternative is expected to offer the same level of quality, compared to an examination conducted in compliance with ASME Code Case N-729-6.
 - A separate supplemental UT examination will also be performed using a procedure that employs the equipment and techniques that are currently under development and are planned to be qualified in accordance with Code Case N-729-6.

Schedule Milestones

- August 5, 2021 – Pre-submittal meeting with NRC
- August 20, 2021 – Expected Submittal of Request for Alternative
- October 2, 2021 – Scheduled Date for Commencement of SQN U2R24
- October 16, 2021 – Requested NRC approval date
- November 9, 2021 – Scheduled Date for Completion of SQN U2R24

Closing Remarks

TVA

**TENNESSEE
VALLEY
AUTHORITY**