NEI 08-01, Rev. 5 - Corrected

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Overview

- NEI will address the NRC comments which must be corrected for endorsement
- Three NRC comments to further discuss on:
  - D-2
  - D-47
  - Demo-3

D-2

- Understand NRC comment and will address
- Use as an example of one cover letter for multiple ICNs
  - As described in Section 6.0
- Inspection results: will specify that “all results are greater than or equal to [numerical acceptance value]”

D-47

- NRC Comment:
  - …the description should identify items such as the functional qualification report and application report required by ASME QME-1-2007 for NRC review…
- Industry Response:
  - The Equipment Qualification Document Packages which is identified as the ICN closure document summarize the applicable testing, analyses, functional qualification reports and application reports that demonstrate the bases of the qualification program for the MOV valves. The individual test reports, analyses, application and functional reports will be made available for NRC inspection. The ICN has been updated to clarify this.

D-47

- NRC Comment (Continued):
  - …The ICN should indicate whether the specific MOVs were qualified by direct testing, application of a test-based methodology, or extrapolation from other MOV tests.
- Industry Response (Continued):
  - The ITAAC requires that "Tests or type tests of MOV's be performed that demonstrate the capability of the valve to operated under its design conditions." The description in the ICN about compliance with ASME QME-1 2007 as the basis for demonstrating this capability provides sufficient information for a knowledgeable person to understand the basis for concluding the ITAAC was met, since QME-1 is a publically available standard. Detailed descriptions of the individual type testing and results for each valve (or valve part) for QME-1 compliance is beyond the level of detail for an ICN, and should be addressed via inspection.
  - The differentiation between "testing" or "type testing" is necessary based on the wording of the ITAAC, and is already done within the text of the IDB.

D-47

- NRC Comment:
  - …The ICN should indicate whether the specific valves are closed to isolate blowdown flow conditions, or opened to blow down the RCS. If either of these conditions are met, then end-loading valve qualification is required. ASME QME-1-2007 did not anticipate an AP1000 design that opens valves (such as 14-inch ADS squib valves) to blow down the RCS. Valves that operate under blowdown conditions must satisfy end-loading qualification.
- Industry Response:
  - The valve design specification requires the valve supplier to demonstrate valve end-loading compliance per ASME QME-1-2007 Section QV-7441(c) to be stronger than the attached piping system. Any nozzle loads that exceed the allowances in the valve design specification are reconciled by end-load testing or additional analysis. The qualification documentation will include a discussion on the end load compliance for all valve functions required. The ICN has been updated to reflect this clarification.

D-47

Functional qualification was performed under the design conditions identified in the design specification for the valves (Reference 4) to demonstrate that each motor-operated valve changes position as required. The qualification of active valve operability was performed in accordance with ASME QME-1-2007 (Reference 6). The ASME QME-1 qualification included the following type-tests where applicable:

- Natural frequency determination of the valve assembly
- Side load (static deflection) testing
- Final static seat and stem leakage testing at operating pressures (no flow)
- Steam Testing
- Water Testing

End-loading qualification was performed via analysis in accordance with ASME QME-1 2007 Section QV-7441(c) to demonstrate that the valve is stronger than the attached piping system. {If testing was required, describe end-load testing.} Additional information about the methods used to qualify safety-related equipment is provided in Section 5.4.8 of the AP1000 DCD (Reference 3).

Attachment A identifies the Equipment Qualification Document Packages XXX (Reference 5) for each applicable valve. The Equipment Qualification Data Package summarize the applicable test methodology, , environmental qualification, seismic qualification and the ASME QME-1 2007 functional qualification and application reports that demonstrate that each motor-operated valve changes position as indicated in DCD Table 2.1.2-1 under design conditions.

Demo-3

- Because Demo-3 was submitted under SNC letterhead as part of the demonstration project, the following alternative is proposed for functional arrangement ICNs:
  - Insert a note at the end of the 1st paragraph under ITAAC Determination Basis stating, "[Based on guidance in NEI 08-01, Section 10.5, that was developed subsequent to the ITAAC Demonstration Project, the following sentence should be added here to the ITAAC Determination Basis for functional arrangement ITAAC: "This inspection encompassed all SSCs identified in the Tier 1 design description, including those in referenced tables and figures."] "

Potential staff clarifications in RG 1.215

- 7.0: Please clarify the NRC concern
- D-30, 44, & 47: citing specific ASME or QME code sections/articles
  - Current level of detail is consistent with CLB.
- No #: Comment on 10 CFR 52.103 Scheduled Fuel Load Notification content:
  - Where would this go in NEI 08-01? Why does NRC need to know the reason? What is the NRC guidance on timeframes for completion of its review and the making of the 10 CFR 52.103(g) finding?

Additional item that NEI will clarify

- E-1: We agree and will incorporate this in NEI 08-01, Rev. 5 – Corrected
  - [With this letter, {Licensee} has provided the entire set of notifications for ITAAC that will not be completed 225-days prior to initial fuel load. OR {Licensee} will at a later date provide additional notifications for ITAAC that will not be completed 225-days prior to initial fuel load.]

Next Steps

- NEI will incorporate corrections to address items that cannot be endorsed as written
- NEI will submit NEI 08-01, Revision 5 – Corrected, for endorsement in early June
- NRC begin the Regulatory Guide endorsement process