"Report" ITAAC

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Equipment Qualification

- Background
- Staff feedback to industry proposal

Equipment Qualification – Background

- Equipment Qualification applies to the full qualification of components to perform their safety functions.
- Equipment Qualification is addressed in several sections in SRP Chapter 3, such as:
  - Functional Qualification (SRP 3.9.6),
  - Seismic Qualification (SRP 3.10), and
  - Environmental Qualification (SRP 3.11)
- IN 97-45 defines "EQ" as Environmental Qualification
- NRC staff uses "EQ" as the acronym for "Environmental Qualification" which is addressed in Standard Review Plan Section 3.11

Equipment Qualification – Licensing Basis

- AP1000 DCD Rev. 19, APPENDIX 3D:
  - METHODOLOGY FOR QUALIFYING AP1000 SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT (ML11171A437)
- Licensee FSAR:
  - APP. 3D METHODOLOGY FOR QUALIFYING AP1000, SAFETY-RELATED ELECTRICAL AND MECHANICAL EQUIPMENT
- 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants"
- ITAAC for Equipment Qualification (>80) are located in:
  - Column E Families – Qualification Criteria
  - Column F Families – Design/Fabrication Requirements

Equipment Qualification – Industry Proposal

- August 2012 Meeting Industry provided a proposal
- Presentation entitled “Equipment Qualification” Slides 19-23 of ML12228A629
- These slides were supported by the table of contents from the “EQDP” and “EQSR”, provided in ML12228A595

Equipment Qualification – Industry Proposal

- Use of “EQ” unclear (Equipment Qualification vs. Environmental Qualification)
- Table 1 of EQDP Page 3D-78 is titled as “Qualification Summary” – should the EQSR be a part of EQDP
- 10 CFR 50.59(j) requires EQ documentation be maintained in auditable form as long as components are installed in the plant or are stored for future use

Equipment Qualification – Industry Proposal

- The "EQDP" and "EQSR" contents must be consistent with the functional qualification documentation requirements specified in ASME Standard QME-1-2007 (Qualification Plan, Functional Qualification Report, and Application Report) as accepted in Revision 3 to RG 1.100
- Industry proposal suggests that qualification by analysis is acceptable although functional qualification by analysis alone is NOT acceptable per ASME QME-1-2007
- The EQDP and EQSR Tables of Content are not consistent with the documentation requirements in applicable standards for Equipment Qualification (e.g. IEEE 344 for seismic)

Questions