



U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

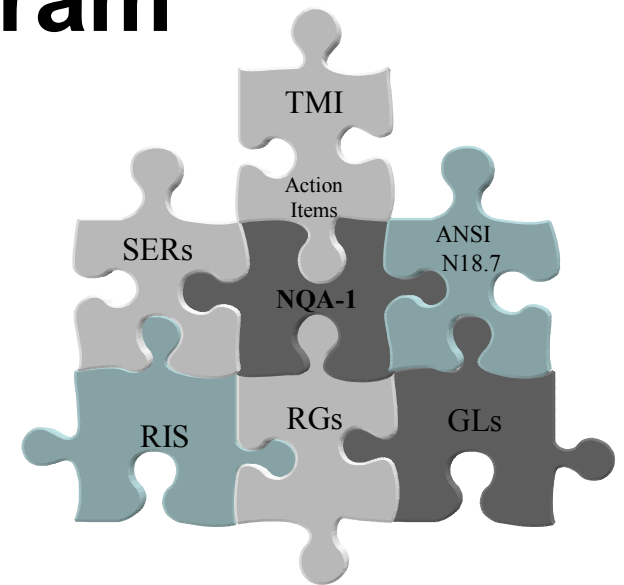
Protecting People and the Environment

**Quality Assurance
Review and Inspection
Process for
New Reactors**

NEI Public Meeting
May 23, 2007

Quality Assurance Program

- NUREG 0800 – SRP 17.5
 - Issued March 2007
 - Covers :
 - Design certification
 - Early site permit
 - Combined license
 - Follows ASME NQA-1-1994
 - Attempted to consolidate all quality assurance guidance into one document
 - Recent reviews done using SRP 17.5:
 - NEI Topical Report (NEI 06-14, Rev. 3)
 - UniStar
 - Areva





Review and Approval Process for COL Applications

- 10 CFR 2.101(a)(5) allows the applicant to submit the information required by 10 CFR Part 50 in two parts
- The regulations do not allow for an early submittal of any specific section of the COL application
- Staff will review the quality assurance program submitted with the application
- Staff is considering issuance of an early safety evaluation for approval



QA Inspection Activities

- Integral part of Construction Inspection Program
 - IMC 2501 – Early Site Permit
 - IMC 2502 – Combine License
 - IMC 2508 – Design Certification



IMC 2501 and IMC 2502

- **Currently under revision**
 - Incorporate changes to 10 CFR Part 52
 - Clarify responsibilities based on Construction Inspection Program (CIP) Commission Paper (SECY 07-49)
 - Enhance inspection procedures with SRP 17.5 guidance



IMC 2508 – Design Certification

- Pre-Docket
 - Development of the application consistent with 10 CFR Part 52
- Post-Docket Inspection
 - Implementation of QA program
- Qualification Testing Inspection(s)
 - Verify test activities performed to support the design certification application
 - Thermal hydraulic testing to support code validation
 - Prototype component tests



Current QA Inspection Activities

- Pre-COL Audit
 - Verify that the development of the application consistent with 10 CFR Part 52 (IP35005)
 - For COL applications that do not reference an ESP, additional areas related to applicant's QA controls for site characterization activities will be reviewed (IP35004)
- 7 Pre-COL audits planned
 - South Texas Project - May 21-25, 2007
 - Bellefonte – June 2007



Vendor Inspection Program For New Reactors - Update -

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Pilot Audit at JSW – April 2007

- Purpose:
 - To become knowledgeable of the scope of supply, manufacturing processes, and quality activities that JSW performs in support of the supply of safety-related and ASME-certified components for US utilities
 - Gain insight on NRC's vendor inspection program through draft inspection procedures
 - Review ASME Section III Code data package assembled by JSW for April 2007 ASME Nuclear renewal survey demonstration purposes



Pilot Audit at JSW – April 2007

- Results and Lessons Learned
 - NRC has reasonable assurance that JSW is supplying components that meet ASME Code and NRC quality requirements.
 - Having available the level of information needed to support an ASME recertification (ASME Code Data Report and supporting documentation) enhances the efficiency and effectiveness of NRC inspection of vendor quality assurance programs.
 - Understanding and implementation by vendors of 10 CFR Part 21 requirements may not be consistent with NRC requirements and staff guidance.
 - NRC vendor inspections should include the verification that Codes and Standards are implemented consistent with NRC's acceptance.



Other Topics

- Commission Paper on Vendor Inspection Program
- IMC 2507 – Construction Vendor Inspection Program for New Reactors
- Oversight of industry vendor activities (e.g., NUPIC)



Future Vendor Inspection Activities

- Allegation-related inspections
- 2 additional pilot inspections