

# Standards Development for NDE

## STATUS AND FUTURE of NDE in SECTION XI

17<sup>th</sup> Regulatory Information Conference - 2005

Session C3 - Research Activities Materials Degradation Panel

Bethesda, MD

March 9, 2005

**Presented by:** Gary Park

NMC-Chairman Section XI

Co-authored by: Jack Spanner

EPRI NDE Center-Chairman Subgroup NDE

# Recent Major Revisions

- Revisions to Appendix VIII, UT Performance Demonstration, due to rulemaking completed
  - Limitations and modifications of 10CFR50.55a incorporated
  - Cast stainless steel & corrosion resistant cladding in course of preparation
- Central certification of NDE personnel permitted
- RPV UT
  - Outer 85% inspected from 2 directions or radial direction
  - Inner 15% inspected from 4 directions

# Recent Major Revisions

- Revisions to Appendix I due to rulemaking
  - Included/incorporated coverage requirements from 10CFR50.55a and expanded it to include overlays and nozzle inner radii
  - By request revised to allow use of Appendix VIII on all components

# Recent Major Revisions

- VT-2 and VT-3 Personnel Certification
  - Limitations of 10CFR 50.55a incorporated
  - VT-2 plant personnel for hydrostatic & system leakage tests meet experience and training requirements
  - VT-3 plant personnel meet experience and training requirements & written tests

# Recent Major Revisions

- NDE training
  - Annual UT training is 8 hours
  - Virtual training systems using data from cracks can be used
- Developed performance demonstration requirement guidelines
  - Incorporated by Section V, Appendix 14
  - Three levels of demonstration rigor

# Future Directions for NDE

- Alloy 600/182
  - Participating in TG that recently produced Code cases N-729 (RPV head penetrations) & N-722 (Other penetrations)
  - Industry responding in short term
  - SC XI responding with long term requirements
    - NDE will likely depend on performance demonstrations
    - Coordinate efforts with other SC XI committees

# Future Directions for NDE

## NDE Workforce Shortage

- Requirements for **Performance Based** NDE personnel certification
  - Training-No minimum hours
    - Distance learning or computer based or classroom training
    - Pass test
  - Experience-No minimum hours
    - Examine flawed mockups
    - Perform examinations
    - Master method specific skills
  - Third party qualification (ASNT's Central Certification Program)
  - Recertification by annual hands-on training or practical examinations
- These draft requirements not approved and may change

# Future Directions for NDE (cont'd)

- Considering demonstration requirements for remote visual examinations
- Considering demonstration requirements for combined ET and UT procedures
- Developing a UT in lieu of RT Code case
- Reviewing Sect. V revision of ET requirements



# Future of NDE

- Questions?