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# Vendor Inspection & Quality Assurance

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# TOPICS

- ✓ Center of Expertise
- ✓ The Vendor Inspection Program
- ✓ Refocusing NRC Vendor Inspections
- ✓ Recent Inspection Results
- ✓ Industry Implications





# Quality and Vendor Center of Expertise

## Vendor Inspection:

- Supports New and Operating Reactor Vendors
- 20 inspections in 2012, increasing to 30 in 2013
- Provides response to Emergent Issues and Allegations
- To assure the quality of materials, equipment, and services supplied to the commercial nuclear industry (Part 50 & 52)
- Leads efforts to address and deter the potential use of CFSI in safety-related applications

## QA:

- Conducts inspections to verify the effective implementation of vendor QA programs
- Reviews license applications and changes for New and Operating Reactors
- Supports Codes and Standards Organizations

# Vendor Inspection Program

- ✓ The VIP Plan
  - ✓ Overall Approach
  - ✓ Goals
  - ✓ Priorities
  - ✓ Performance Metrics
  - ✓ Resource Management Strategies
- ✓ Reorganization
- ✓ Identification of Vendors
- ✓ Selection of Vendors





# Vendor Identification

## Current NRC Sources of Vendor Information

- ✓ Reporting systems Part 21, 50.72, 50.73
  - ✓ Industry and standards organizations
  - ✓ Communication with licensees, applicants, and engineering, procurement, and construction (EPC) contractors
- ✓ Allegations

## Initiatives

- ✓ RIS requesting voluntary Identification
- ✓ NRC public web site
- ✓ NRC internal database



# Vendor Selection

- Consideration of....
  - ✓ Prior NRC Inspection Experience
  - ✓ NUPIC Results
  - ✓ Scope of Supply
  - ✓ Complexity of Product or Service
  - ✓ Susceptibility to Counterfeiting or Cyber Security Issues
  - ✓ Industry Experience with Product or Service
  - ✓ New or Advanced Technology
  - ✓ Oversight by Other Entities (ASME, Foreign Regulators)
  - ✓ Significance to Pending Regulatory Actions





# Refocusing NRC Vendor Inspections

- - ✓ Focus on inspection of activities in progress: including product design, fabrication, testing, inspection
  - ✓ Enhance disciplinary review (mechanical, structural, electrical, digital I&C)
  - ✓ Increased use of NRC technical specialists
  - ✓ More emphasis on Targeted ITAAC including detailed design work and qualification testing

# Recent Inspection Results

- ✓ Commercial grade materials are not adequately assessed
- ✓ Failure to meet design requirements
- ✓ Failure to appropriately control or dedicate software
- ✓ Failure to provide appropriate oversight of subcontractors
- ✓ M&TE used outside of their calibrated range for safety related testing
- ✓ Configuration changes to a component undergoing test without an assessment



# Recent Inspection Results

## SUMMARY

- ✓ Inadequate design control
- ✓ Inadequate dedication of software
- ✓ Inadequate technical evaluations of conditions adverse to quality
- ✓ Inadequate justification for substitution of materials of construction

## CHALLENGES

- ✓ Engineering Involvement
- ✓ Licensee Oversight



# Industry Implications

- ✓ More emphasis on assuring technical adequacy of items and services through enhanced auditing and oversight activities
- ✓ More emphasis on Technical Specialists resources supporting industry auditing and oversight activities
- ✓ Evaluating holding licensees accountable for vendor performance issues



# Summary



- The Quality and Vendor Inspection Center of Expertise is ready to support



- Findings indicate that licensees may not be adequately implementing quality oversight of vendors



- There is no substitute for effective licensee oversight



# Questions?

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<http://www.nrc.gov/reactors/new-reactors/oversight/quality-assurance/vendor-insp.html>