

NUPIC Vendor Conference

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NRC Inspection Overview and Update

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OUTLINE

- ✓ The VIPP and Vendor Center of Expertise
- ✓ Vendor Identification & Selection
- ✓ Recent NRC Vendor Inspections
- ✓ New Initiatives
- ✓ A plug for Safety Culture



The VIPP and Vendor Center of Expertise

- ✓ Roll-out of the Office of New Reactors (NRO) in Feb. 2007, all vendor inspection associated with Design Certification approval and New Plant Licensing activities conducted by NRO Vendor Inspection Branches. (SECY-2007-0105 – Enhancements to VIP)
- ✓ Staff developed a series of Manual Chapters and Inspection Procedures to formalize conduct of vendor inspections. (<http://www.nrc.gov/reactors/new-reactors/oversight/quality-assurance/vendor-insp/insp-procedures.html>,)

Procedure	Title
IP 36100	Inspection of 10 CFR Parts 21 and Programs for Reporting Defects and Noncompliance
IP 37805	Engineering Design Verification Inspections
IP 43001 & IP 43003	Reactive Inspection of Nuclear Vendors
IP 43002	Routine Inspections of Nuclear Vendors
IP 43004	Inspection of Commercial-Grade Dedication



The VIPP and Vendor Center of Expertise

- ✓ In 2010 NRC issued VIPP* to establish an overall approach, including goals, priorities, performance metrics, and resource management strategies for VIP activities. And to document the VIP performance metrics including:
 - VIP O-1: Verify that applicants and licensees are fulfilling their regulatory obligations to provide effective oversight of the supply chain for operating reactors and reactor design and construction through a strategic sample of vendor inspections.
 - VIP O-2: Effectively communicate with internal and external stakeholders.
 - VIP O-3: Perform timely and adequate allegation follow-up and closure.
 - VIP O-4: Ensure that vendor inspectors have the necessary knowledge and skills to successfully implement the VIP.

*Vendor Inspection Program Plan," Revision 5, dated December 2012 (Agencywide Documents Access and Management System Accession No. •ML 12341A532).



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 (12/13)
- ✓ NRC public web site (12/13)
- ✓ 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



Scope of NRC Vendor Inspections

- ✓ Emphasis on inspection of design, fabrication, testing, and inspection activities in the field as these activities are being conducted on specific SSCs or product lines of interest.
- ✓ Likened to a more “Vertical-Slice” approach as opposed to a broad programmatic review
- ✓ Increased use of technical specialists in areas of mechanical, structural, electrical, digital I&C
- ✓ More emphasis on specific qualification and type testing and detailed design work associated with Targeted ITAAC SSCs
- ✓ Increase inspection activity (20 inspections 2012 verses a projected 40+ inspections 2013)



Recent NRC Vendor Inspections

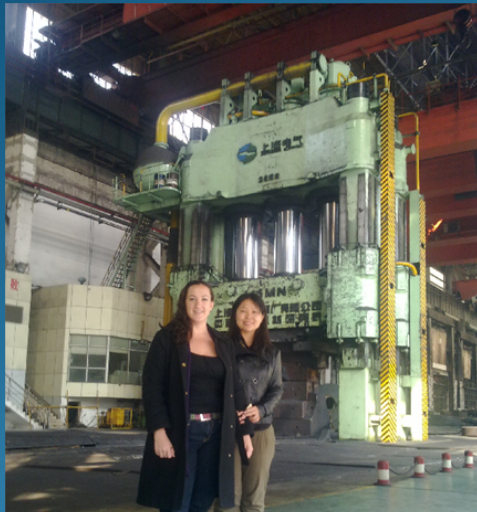
- DRS Consolidated Controls – 1/2013
- Weir Valves & Controls USA Inc. – 2/2013*
- Westinghouse – 2/13*
- Stern Labs – 3/13
- Scientech – 3/13*
- Dresser-Masoneilan – 3/13
- Meggitt Safety Systems – 3/13*
- ABB Inc. – 4/13
- Flowserve – 4/13
- MPR Associates – NUPIC Observation 4/13
- Westinghouse – 4/13*
- AREVA – 4/13
- Western Zirconium – 5/13
- General Atomics ESI – 5/13
- B&W Canada – 6/13
- Weed Instruments – 6/13

* AP-1000 testing, design, or fabrication

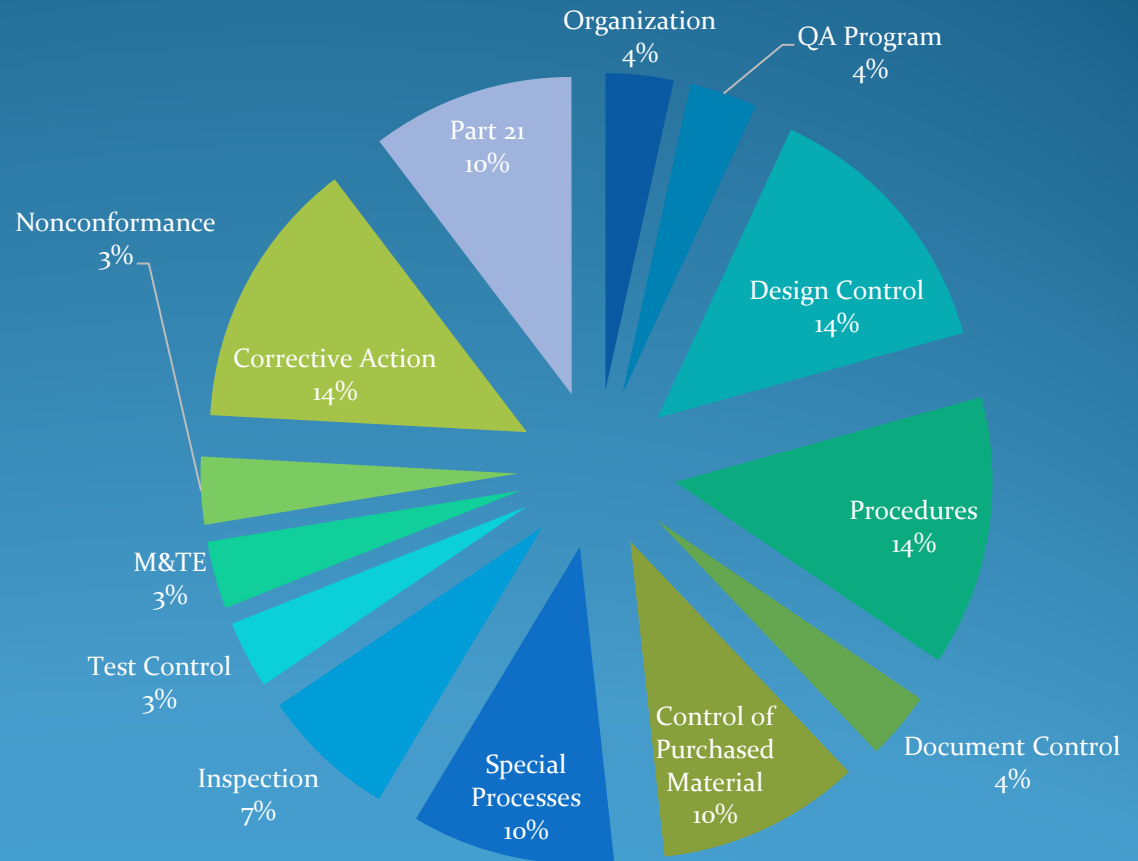
RELEASED REPORTS



Recent Inspection Results



Recent NOV and NONs



Recent Inspection Results

Most Common issues:

- Design Control (Dedication)
- Instruction, Procedures, Drawings
- Control of Purchased Material, Equipment, and Services (Supplier Control)
- Special Processes
- Corrective Actions
- Part 21

Summary:

NRC is performing more detailed inspections of vendors that focus on the detailed design, procurement, fabrication, and testing of SR SSCs.

Recent results indicate findings more broadly spread among QA Criteria and a more noticeable leveling of findings.



NEW Initiatives Update

The Procurement Initiative

NRC Vendor Inspections identify commercial grade dedication (CGD) issues at many of the vendors inspected

In FY 2012, 27 vendor inspections were conducted with 60 findings. 40% off those dealt with CGD issues

Proposed Inspection:

The inspection will be conducted following Inspection Procedure IP 43004 “Inspection of Commercial Grade Dedication Programs”, which is currently undergoing a revision to integrate IP 38703

The inspection will be conducted by three to four inspectors for one week onsite.

Site Selection:

The Region would identify the reactor sites for CGD inspection based upon known or potential issues with CGD at those sites. Initially 1 – 2 inspections per region.



NEW Initiatives Update

CGID and Software Dedication

EPRI 5652: (NP-5652 + TR 102260)

March 2013 – NRC participated in 5th CGID guidance revision technical advisory committee (TAG) meeting – Charlotte, NC

- Address areas needing additional content
- Perform initial review of working drafts
- Identify Key EPC issues for inclusion

Good discussion and table development comparing/contrasting design and manufacture under 10 CFR Part 50 Appendix B with commercial grade item dedication.



EPRI 1025243 - Software

- July 2012 – Received NEI letter and submittal
- February 2013 – NRC issued 6 RAIs
- May 2013 – Met with EPRI to discuss status
- Current – NRC developing Draft RG 1305 to endorse guideline should be completed in 2013



NEW Initiatives Update

Regulatory Guidance Activities

Draft RG-1300, “Quality Assurance Program Requirements (Operations)”

Endorses 2012 edition of ANSI/ANS-3.2-2012, “Managerial, Administrative, and Quality Assurance Controls for Operational Phase of Nuclear Power Plants,” will be issued in final within a few weeks. DG-1300 is the proposed Revision 3 to Regulatory Guide 1.33, dated February 1978.

The ANS-3.2 standard has changed its format to more closely align with the latest version of NQA-1 and to reduce duplicative requirements

RG-1.28, Revision 4, July 2010

NRC recently endorsed American Society of Mechanical Engineers NQA-1-2008/2009 Addenda), “Quality Assurance Requirements for Nuclear Facility Applications,” via RG 1.28 in July 2010.

A clear delineation of quality assurance requirements is now available for the new generation of plants as well as for consideration of existing licensees who may want to migrate to a consistent set of requirements for their fleet of reactors within their company.



NEW Initiatives Update

Communication Outreach

<http://nrcweb.nrc.gov/400/reactors/new-reactors/oversight/quality-assurance/vendor-insp.html>.

2012 Annual Vendor Newsletter is now available on our public website at the below link. Topics of interest include news on the 10 CFR Part 21 rulemaking activities, Counterfeit, Fraudulent, and Suspect Items (CFSI), commercially procured software dedication, and vendor inspection finding data.

<http://www.nrc.gov/reactors/new-reactors/oversight/quality-assurance/qual-assure-faqs.html>

The Frequently Asked Questions FAQ page addresses Quality Assurance for New Reactors and currently has three main categories: 10 CFR Part 21 FAQs, Commercial Grade Dedication FAQs, and Enforcement FAQs.

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

This page is to serve as a categorization tool and provides a list of all applicable QA Inspections for New Reactor Licensing and Vendor QA Inspection reports that have either a Notice of Nonconformance (NON) or Notice of Violation (NOV) within a specific criterion of 10 CFR 50 Appendix B or 10 CFR Part 21 related issue.

<http://phadupws.nrc.gov/docs/ML1200/ML12006A008.pdf>

This link describes the vendor inspection program (VIP).



A Plug for Safety Culture

The Commission defines **Nuclear Safety Culture** as the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment.(1)

Recent issuance of Chilling Effect Letter and proposed Imposition of Civil Penalty to CB&I (Formerly Shaw Power Group) for two violations of 10 CFR 52.5 “Employee Protection.”

Based on the conclusion that portions of the SMS workforce, especially employees with nuclear and quality control backgrounds have the perception that they were not free to raise safety concerns using all available avenues. (2)

(1) <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>

(2) ADAMs Accession number - ML13092A077



Questions

