



**U.S.NRC**

UNITED STATES NUCLEAR REGULATORY COMMISSION

*Protecting People and the Environment*

# Oversight of New Nuclear Reactor Suppliers

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Office of New Reactors

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## Overview

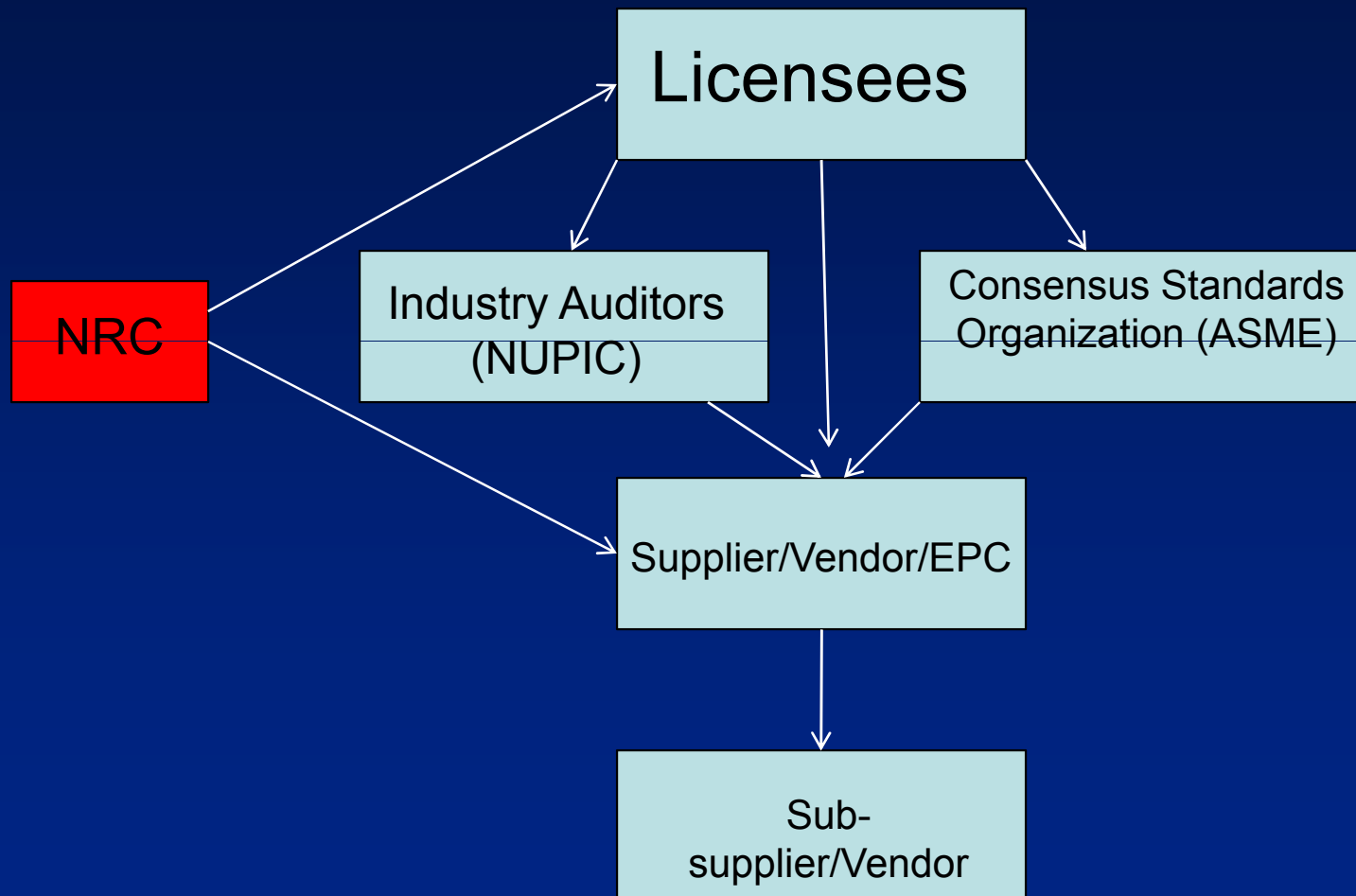
- New Build Issues, perspective, concerns, and good practices
- New Build oversight activities/results 2010/2011 (licenses and suppliers)
- Oversight of co-located supplier activities
- Q and A



## Oversight of Suppliers

- The ultimate responsibility lies with licensees
- NRC verifies that licensees meet their responsibilities
- Supplier oversight of sub-suppliers is key to new build success

# Oversight of Suppliers



## Oversight of Suppliers

- ▶ NUREG-1055, “Improving Quality and the Assurance of Quality in the Design and Construction of Nuclear Power Plants”
- ▶ Key lessons learned from last nuclear build
- ▶ Sub-suppliers do not provide full access to customers when necessary to assess or otherwise provide oversight of quality-related activities



## Oversight of Suppliers

- Based on NRC vendor inspection results, NRC is concerned with the perceived lack of oversight of sub-suppliers
- Recent examples of a lack of rigor in the process relied on for qualification of suppliers
- Regulatory compliance issues are being identified at new suppliers and “seasoned” suppliers

## Oversight of Suppliers

Licensee's role on the oversight process should include the following elements

- Consider the safety significance of the product or service
- Qualifications of the supplier and their sub-suppliers
- Adequate oversight of supplier and sub-suppliers work
- Periodic assessment



## Regulatory Requirements

- Licensee oversight of suppliers performed under Appendix B program
- Licensee must retain control of suppliers
- Safety-related suppliers must implement Appendix B requirements





## Regulatory Requirements

- Commercial Grade Dedication is an Appendix B activity
- Procedure adherence and documentation

## Licensee and Supplier Oversight

- Audit Checklist, i.e., NUPIC and NIAC
  - Are the questions asked sufficient to determine that the PO requirements and regulatory requirements are being met?
  - Is the objective evidence sufficient to demonstrate acceptability of quality?

## Licensee and Supplier Oversight

- ISO 9001 does not meet the requirements of Appendix B
- SECY-03-0117 reviewed ISO 9001-2000 against the existing framework of Appendix B
- SECY-03-0117 available at the NRC website at <http://www.nrc.gov/reactors/new-reactors/oversight/quality-assurance/qual-assure-regs.html>

## Regulatory Oversight for New Reactors

- Unlike the operating Reactor Oversight Program (ROP), which focuses on monitoring and evaluating the *performance* of existing nuclear power plants, regulatory oversight for new reactors focuses on the *construction* of reactor facilities (cROP).
- cROP covers all aspects of construction including the results of vendor inspections as described in Inspection Manual Chapter (IMC) 2506, “Construction Reactor Oversight Process General Guidance and Basis Document”

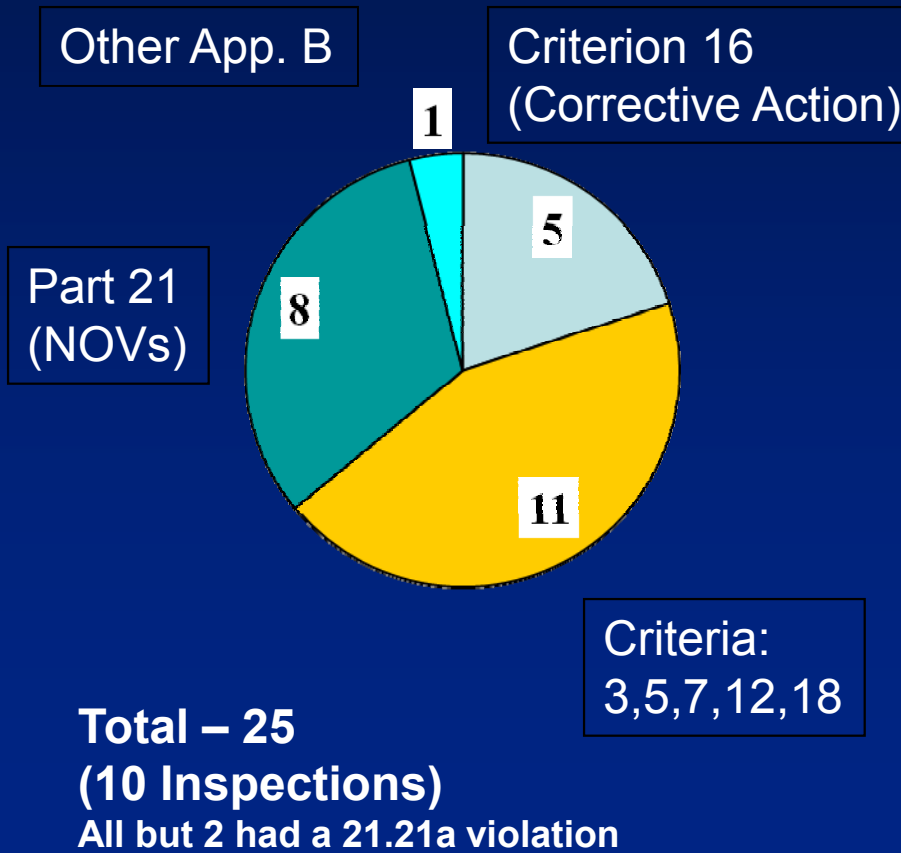


## VENDOR INSPECTIONS

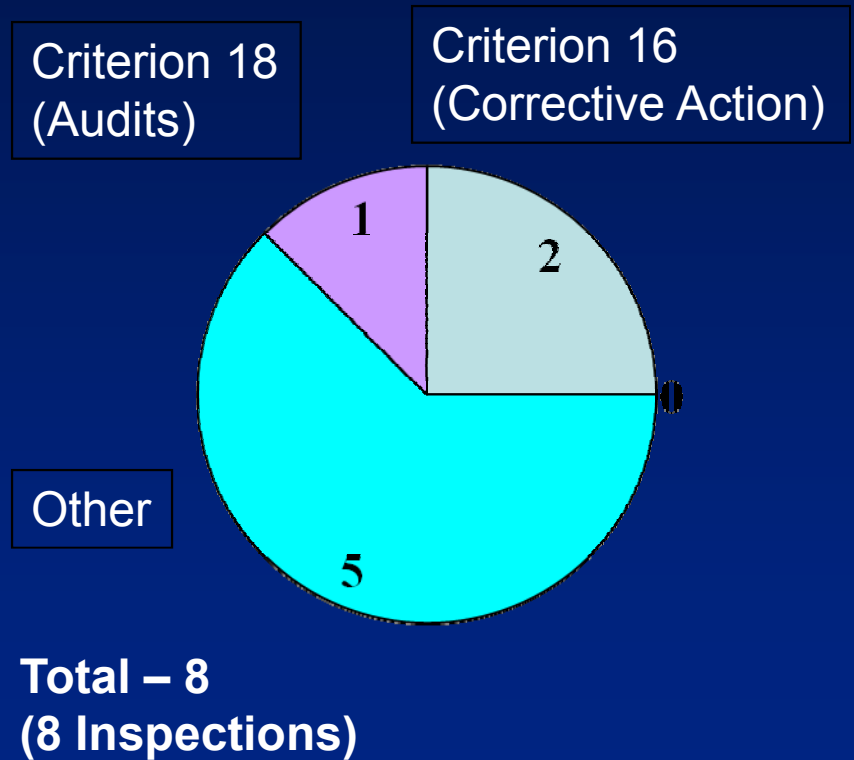
- Vendor inspection program for new reactors was established in 2007
- To verify effective implementation of
  - Appendix B to 10 CFR Part 50 quality assurance requirements
  - 10 CFR Part 21 reporting requirements
- Conducted 24 inspections FY2011
  - 6 QA Implementation Inspections, 17 Vendor Inspections, and 1 Engineering Design Verification Inspection
- Inspections will increase to 15-20 by FY2012
- Inspections will increase to 30 by FY2013

# 2010 Vendor Inspections

## Vendor

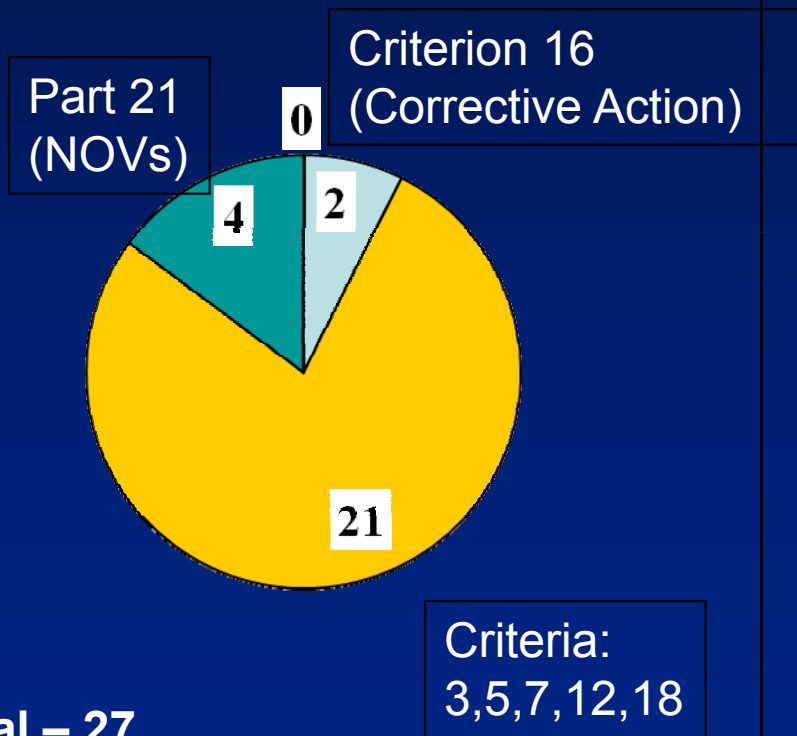


## QA Implementation



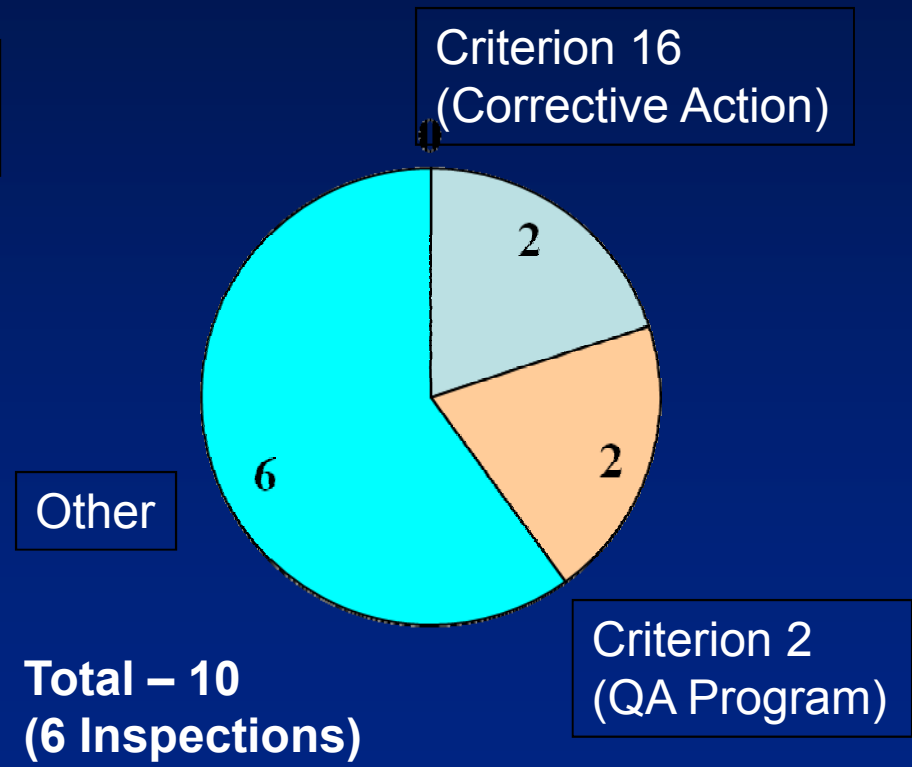
# 2011 Vendor Inspections

## Vendor



**Total – 27**  
**(12 Inspections)**  
 Data from only 7 Inspections

## QA Implementation



**Total – 10**  
**(6 Inspections)**

## Noticed Issues for Vendors

- Part 21
- Modifying ISO 9001 to meet App B requirements
- Commercial Grade Dedication is an Appendix B
- Imposing proper requirements on sub-suppliers POs





## Noticed Issues for Licensees

- Design Control
- Imposing proper oversight of suppliers
- Licensee must retain control of suppliers



# Oversight of “Co-Located” Supplier Activities

- Documented in IMCs 2502, “Construction Inspection Program: Pre-Combined License (Pre-COL) Phase” and 2506
- Generally inspections will be conducted by Region II personnel using IP 35007, “Quality Assurance Implementation During Construction and Pre-Construction Activities”
- Inspections will focus on pre-construction activities associated with proposed ITAAC that are included in the license application or in the certified design, where applicable.

## Conclusions

- Licensees should work with their suppliers to ensure that vendor Appendix B and 10 CFR Part 21 programs adequately implement the requirements imposed in the procurement documents
- Suppliers should be fully knowledgeable of all regulatory requirements and technical specifications imposed by licensees and/or other suppliers in procurement documents



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**Questions ??**