

**NUPIC Vendor Meeting**

**June 2016**

# **NRC Vendor Inspection Update**

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**Office of New Reactors**

# AGENDA

- New items
- Update on other initiatives
- Recent NRC vendor inspections
- Specific inspection insights
- Questions



# NEW ITEMS

## Topics

- Software-CGD (Regulatory Guide 1.231)
- Use of ILAC for services (RIS 2016-01 / Callaway SE)
- Vendor workshop overview - Thursday

# NEW ITEMS

## Software - CGD

- Existing CGD process was applied to software
- Need for software-specific guidance:
  - Coordination of EPRI, NEI, industry, NRC
  - Creation of original EPRI 1025243
  - Request for NRC endorsement
- Revision 1 of EPRI 1025243
- First software-specific CGD Guidance
- EPRI documents - <http://www.epri.com>

# NEW ITEMS

## DGs and RGs

- Purpose of Regulatory Guides (RG)
- Draft Regulatory Guides (DG)
- Applicability
- Staff Regulatory Guidance (regulatory positions)
- Implementation

# NEW ITEMS

## DG-1305 / RG 1.231

- DG-1305 application:
  - Design and analysis computer programs
  - Non-process computer programs
- Public comments complete
- RG 1.231 drafted
- Expected RG 1.231 next steps



# NEW ITEMS

## Regulatory Guide 1.231

- What regulatory requirements does it meet?
- What are the proposed regulatory positions?
- What is different / special about the guidance?
- What changes with existing programs when it is issued?
- Is it required to be implemented?
- More info - Track 1 at Vendor Workshop



# NEW ITEMS

## ILAC Accreditation

- Initial review and approval APS SE
- Use of accreditation in lieu of survey under CGD
- ILAC Task Force formed
  - Coordination of NEI, NUPIC, industry, NRC
  - Creation of original NEI 14-05
  - Use of domestic calibration labs
- NEI 14-05A accepted by SE

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

# NEW ITEMS

**RIS 2016-01**

## Regulatory Issue Summary (RIS) 2016-01

- Expansion of ILAC accreditation process:
  - Domestic and international labs
  - Calibration and testing services
- NRC expectations for use of expanded process:
  - NEI 14-05A acceptable methodology
  - Provides (2) conditions to use ILAC accreditation process in lieu of commercial-grade survey as part of dedication
- <http://www.nrc.gov/docs/ML1532/ML15323A346.pdf>

# NEW ITEMS

## Callaway SE

- Callaway Unit 1 SE
  - Change to operating QAM under 10 CFR 50.54(a)
  - Reduction in commitment for use of ILAC process
  - <http://www.nrc.gov/docs/ML1608/ML16089A167.pdf>
- Accepted QA alternative under 10 CFR 50.54(a)(3)(ii)
- May be applicable to other licensees - bases evaluation
- More info - Track 2 at Vendor Workshop





# UPDATES

## Topics

- Regulatory Guide 1.28 update (Draft DG-1326)
- Part 21 reporting guidance (Draft DG-1291)
- Use of EPRI guidance for CGD (Draft DG-1292)
- CFSI update
- SONGS major plant mod pilot inspections
- Communication initiatives

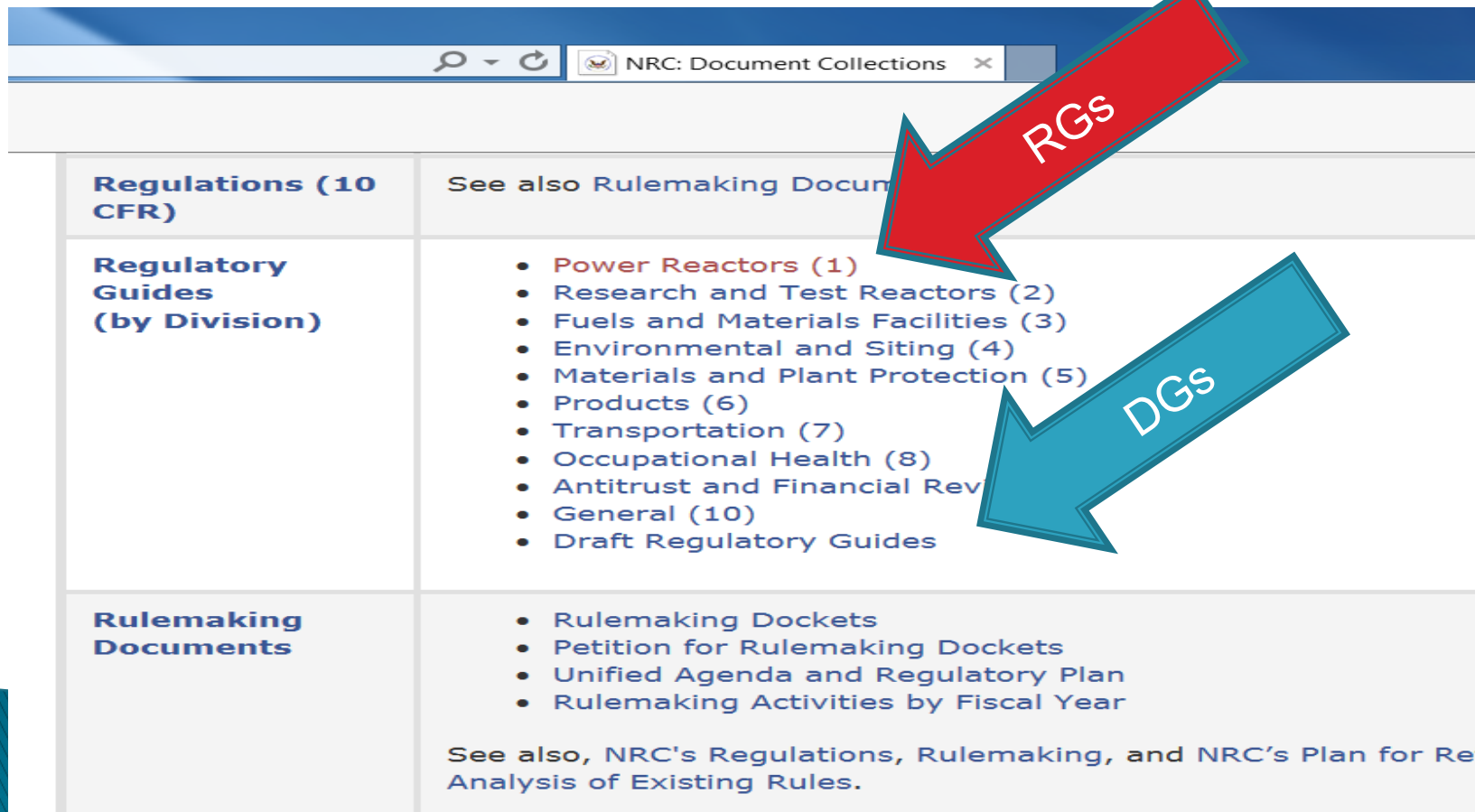
# UPDATES

## All the Draft DGs

- Draft DG-1326:
  - Update of RG 1.28, Rev 4 (NQA-1-2008 with 2009a)
  - Use of NQA-1-2011b, 2012, and 2015
- Draft DG-1291:
  - Accepts NEI 14-09, Rev 1 for Part 21 reporting
- Draft DG-1292:
  - Accepts EPRI NP-5652 / TR-102260, Rev 1 (aka - EPRI 3002002982) for CGD
  - Proposed regulatory positions

# UPDATES

## Finding the DGs



The screenshot shows a web browser window with the title 'NRC: Document Collections'. The page is divided into three main sections. A red arrow labeled 'RGs' points to the 'Regulatory Guides' section, and a blue arrow labeled 'DGs' points to the 'Draft Regulatory Guides' section.

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Regulations (10 CFR)</b>            | See also Rulemaking Documents                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Regulatory Guides (by Division)</b> | <ul style="list-style-type: none"><li>• Power Reactors (1)</li><li>• Research and Test Reactors (2)</li><li>• Fuels and Materials Facilities (3)</li><li>• Environmental and Siting (4)</li><li>• Materials and Plant Protection (5)</li><li>• Products (6)</li><li>• Transportation (7)</li><li>• Occupational Health (8)</li><li>• Antitrust and Financial Review (9)</li><li>• General (10)</li><li>• Draft Regulatory Guides</li></ul> |
| <b>Rulemaking Documents</b>            | <ul style="list-style-type: none"><li>• Rulemaking Dockets</li><li>• Petition for Rulemaking Dockets</li><li>• Unified Agenda and Regulatory Plan</li><li>• Rulemaking Activities by Fiscal Year</li></ul> <p>See also, NRC's Regulations, Rulemaking, and NRC's Plan for Retrospective Analysis of Existing Rules.</p>                                                                                                                    |

# UPDATES

## CFSI

- Proactive approach to CFSI
- NRC coordinating with other federal agencies
- Coordinated effort within the industry
- Resources:
  - SECY 15-0003 (NRC staff activities)  
<http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2015/>
  - RIS 2015-08 (NRC oversight)  
<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2015/>
- More info - Vendor Workshop (AM session)



# UPDATES

## Major plant mod pilot

- Recommendation from SONGS Lessons Learned
- Five pilot design-aspect vendor inspections
- First inspection completed April 2016
  - Design and fabrication of Steam Generators
  - 3 findings (Criterion III, IX and VII)
- Control of sub-suppliers:
  - International suppliers
  - Evaluation of supplier Part 21 programs



# UPDATES

## Communications

### Annual vendor newsletter:

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

### Quality Assurance FAQ:

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

### Categories of Notice of Nonconformance (NON) or Notice of Violation (NOV):

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

### Vendor Inspection Program (VIP) Plan:

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



#### NRC QA website:

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

# UPDATES

## Communications

Vendor inspection information:

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

NRC Vendor Workshops:

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

Trip reports issued for the NUPIC audit observations:

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

Advanced reactors and small modular reactors:

<http://www.nrc.gov/reactors/advanced.html>

# 2016 VENDOR INSPECTIONS

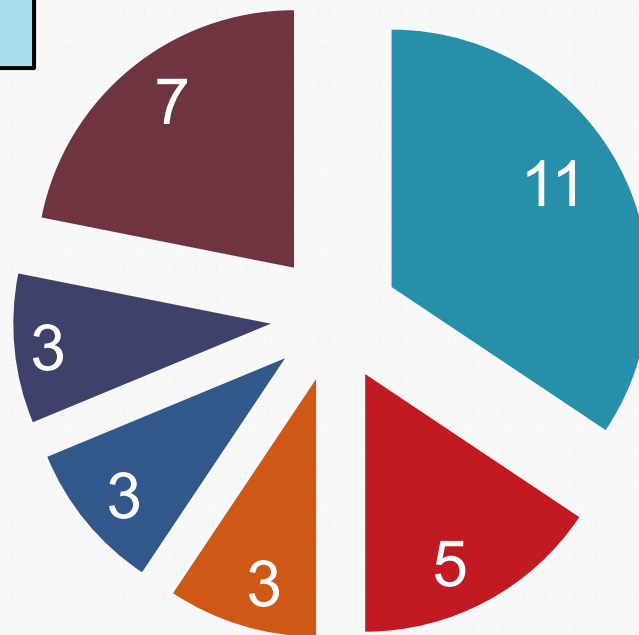
- Cameron Measurement Systems, City of Industry, CA – February 2016
- Westinghouse Electric Company, Warrendale, PA – February 2016\*
- ASCO Valve, Inc., Aiken, SC – February 2016
- Carboline Corporate, St. Louis, MO – March 2016
- Exelon Power Labs, Coatesville, PA – March 2016
- Electros witch, Weymouth, MA – April 2016
- Equipos Nucleares, S.A. (ENSA), Cantabria, Spain – April 2016^
- Lisega, Inc., Kodak, TN - April 2016\*
- GE Oil & Gas, Pineville, LA – May 2016\*



# ONE YEAR INSPECTION FINDING SUMMARY

26  
Inspections

## Findings



- III: "Design Control"
- VII: "Control of Purchased Material"
- IX: "Special Processes"
- XVI: "Corrective Actions"
- Part 21
- Other

# INSPECTION RESULTS

## Common Areas

- Part 21:
  - Timeliness of evaluations
  - Thorough evaluations and documentation
- Commercial-grade dedication (Criterion III)
  - Use of Commercial-grade Surveys (Method 2)
  - Inadequate critical characteristic verification
  - Sample selection methodology
- Maintaining design qualification (Criterion III)
  - Continued adherence to industry standards
  - Sub-supplier material change control

# INSPECTION RESULTS

## Inspection insights

- Early identification in NUPIC audits:
  - CGD deficiencies
  - Corrective action program deficiencies
- Continued identification in NRC inspections:
  - CGD deficiencies
  - Qualification deficiencies
  - Corrective actions / Part 21 deficiencies
- Thoroughness of vendor corrective actions
- Thoroughness of vendor internal audits



# FUTURE INSPECTIONS

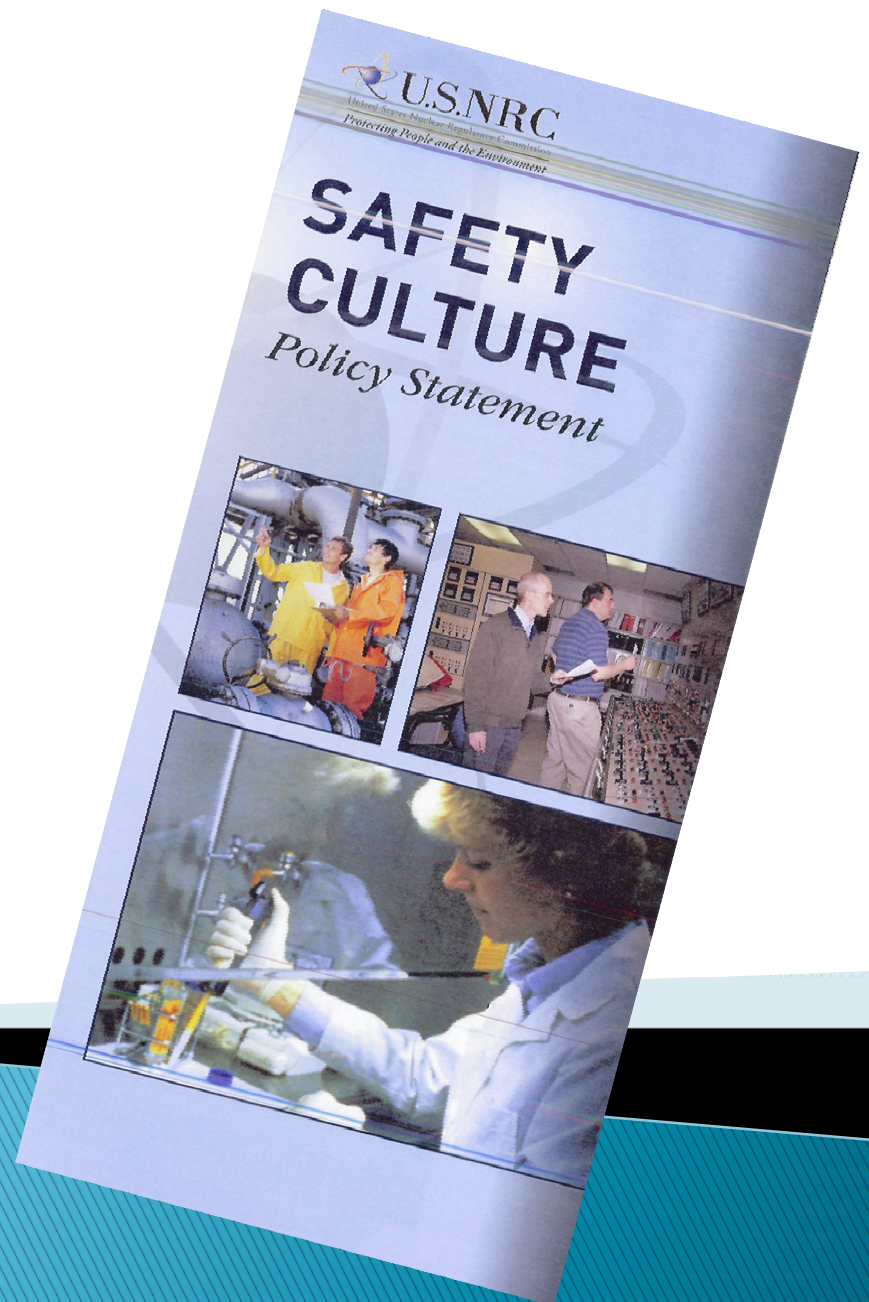
Technically-focused vendor inspections of design, procurement, fabrication, and testing of safety-related SSCs:

- AP1000 piping and electrical system design
- AP1000 electrical and qualification testing
- AP1000 digital instrumentation and control
- AP1000 modules
- Valve and pump manufacturing
- Commercial-grade dedication organizations
- Reverse engineering organizations



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.

NUREG/BR-0500, Rev. 3, March 2015





# Questions

