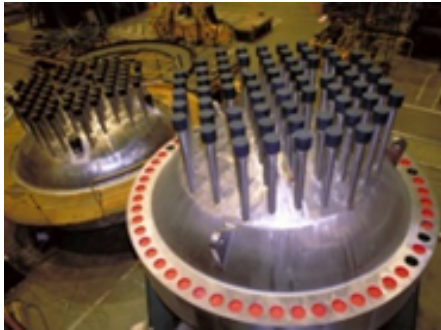




NRC UPDATE

January 28, 2020

NUPIC General Membership Meeting
St Petersburg, FL



Nicholas Savvoir and Greg Galletti

Quality Assurance and Vendor Inspection Branch, Office of Nuclear Reactor
Regulation



TOPICS

- Vendor Inspection and Findings
- MDEP - ENSA Inspection
- Fisher Controls Inspection
- SCWE & Vendor Inspection
- OpE Reviews
- SAFER Update
- ISO 17025-2017 Update
- EQ Initiatives
- 2020 Vendor Workshop
- IQVB Public Outreach



NRC Vendor Inspections & Findings

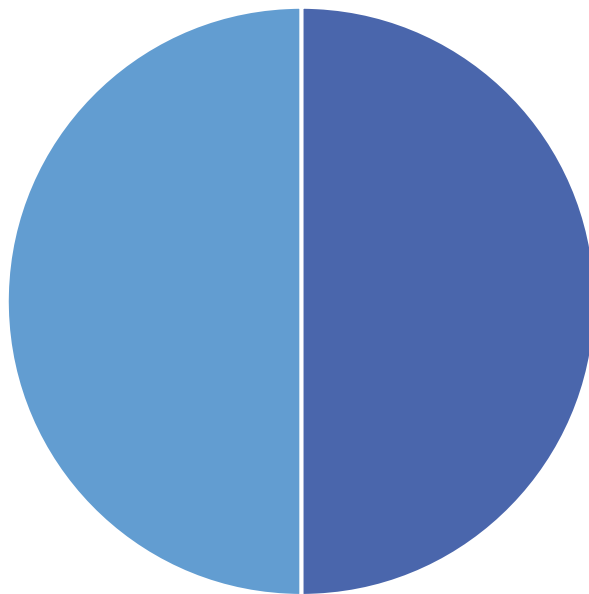
Since October 2019 Meeting:

- GE Hitachi, Wilmington, NC 09/16-19/2019 (ML19303D572)
 - ENSA Equipos Nucleares S.A. S.M.E., Cantabria, Spain 10/21-25/2019 (ML19331A615)
 - Fisher Controls International, LLC, Marshalltown, IA 11-04-08/2019 (ML19339F625)
-
- Rosemount Nuclear Instruments, Inc., Chanhassen, MN 12/09-13/2019
 - Bechtel Power Corporation, Reston, VA 12/09-13/2019
 - Westinghouse Electric Company, Hopkins, SC, 01/13-17/2020
 - No NUPIC Audit Observations during this time period



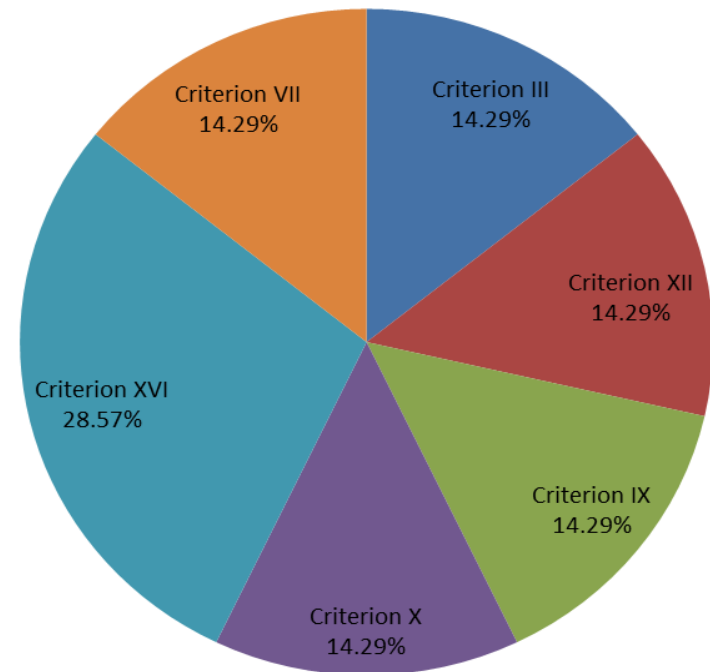
NRC VENDOR INSPECTIONS & FINDINGS

**Recent Findings
(10/19 – 12/19)**



■ Criterion III ■ Criterion IX

**FY2019 - 7 NONs issued
FY 2019 NOVs and NONs**





INSPECTION

- ❑ Oct. 21-25, 2019 Cantabria, Spain (ML19331A615)
- ❑ Multinational Inspection NRC-lead, United Kingdom Office for Nuclear Regulation (ONR) and French L'Autorité de Sûreté Nucléaire (ASN) comprised team
- ❑ One NON
 - Failure to perform adequate NDE (PT)
- ❑ Reinforce the value of observing work in progress
- ❑ Reinforce Expectations for Quality and Inspection Personnel tasked with oversight
- ❑ Finding also independently addressed by ONR & ASN under their respective programs



FISHER CONTROLS INSPECTION

- Nov. 4-8, 2019 Marshalltown, IA (ML19339F625)
- Unannounced Inspection
- Turkey Point NCV (ML19274C217)
 - Fisher testing was not adequate to support qualification of the transducers.
- Two NONs
 - Failure to environmentally qualify the design of the 546NS electro-pneumatic transducers through suitable qualification testing under the most adverse design conditions to verify the adequacy of the design IAW IEEE 323-1983.
 - Failure to adequately seismically qualify the design of the 546NS electro-pneumatic transducers through suitable qualification testing to verify the adequacy of the design IAW IEEE 344-1975/1987



SCWE & VENDOR INSPECTION

- Agency Transformation and Reorganization
 - Updating IMCs, IPs, and Guidance
 - Added Safety Conscious Work Environment (SCWE) into the Vendor Inspection Plan
 - Under Revision - IMC0617 *“Vendor Quality Assurance Implementation Inspection Reports”* to include guidance on SCWE
 - Does not change expectations or past practices
 - Document identified strengths and weaknesses



OPERATING EXPERIENCE (OPE) REVIEW

- Part 21 was designed to implement Section 206 of the Energy Reorganization Act of 1974.
 - ▣ Provides mechanism for reporting and ultimately sharing industry information regarding defects with a focus is on highly safety significant items or services.
 - ▣ Easily accessible at: <https://www.nrc.gov/reading-rm/doc-collections/event-status/part21/>
- Examples
 - ▣ Failure to prevent installation of defective components identified in a Prior Part 21 report (Relays)
 - ▣ Failure to account for potential age-related degradation of equipment (EDG Governors)
 - ▣ Failure to control nonconforming parts (Relays)



OpE REVIEW (CON'T)

- ❑ Part 21 2009-01-00, dated January 26, 2009, Ametek Tyco/Potter & Brumfield Relays - age degradation
- ❑ The licensee installed the defective AMETEK board, PC201, with the defective relay identified on the Part 21 above into the Unit 2 control room indicating and display (CRID) 3.
- ❑ On March 2017, the defective relay in CRID 3 inverter failed and subsequently resulted in the inverter transferring to the alternate power supply.
- ❑ Part 21 2001-21-00, dated June 19, 2001, Engine Systems, Inc. - Woodward electronic controls with electrolytic capacitors
- ❑ Installed capacitors were found beyond industry and vendor recommended useful life. Degradation, would impact safety-related functions of the EDGs.
- ❑ The licensee had an opportunity to identify the condition in March 2011, when researching the acceptability of the capacitors in the EGAs during the 2011 EDG outage
- ❑ Part 21 2016-19-00, dated May 10, 2016, Electroswitch - Various Electroswitch products
- ❑ The Licensee received information from a vendor that more than 124 relays installed in SR applications did not potentially conform to Appendix B QA requirements.
- ❑ 2018, the NRC identified that the licensee failed to take appropriate steps to accept these commercial-grade relays as basic components by dedicating the relays for use in their safety-related applications.



OpE REVIEW (CON'T)

□ Conclusion

- It is important to consider evaluating Part 21 reports to make a determination if your plant is affected and take preventive action in a timely manner.
- Part 21 reports provide industry with information that could increase the level of safety by the reducing the probability of a failure in a basic component while it is performing a safety function.



FLEX EMERGENCY RESPONSE (SAFER)

- National SAFER Response Centers: Memphis, TN and Phoenix, AZ
- NRC Mitigation Strategies Order EA-12-049.
- NEI 12-06 “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide” and NEI White Paper Assessment
- NRC issued 10CFR 50.155 “Mitigation of beyond-design-basis events”
- NRC issued RG 1.226 “Flexible Mitigation Strategies for Beyond-Design-Basis Events”
- NRC SAFER Inspections:
 - Alternating SAFER facility
 - Triannual basis
 - IP 43006, Revision 2





ISO 17025-2017 UPDATE

- NUPIC Observation for Accreditation Renewal Assessment of Technical Safety Services (ML19253C411)
- NRC's provisional recognition expires November 30, 2020
- Received fee billable review exemption
- NRC Point of Contact: Yamir.Diaz-Castillo@NRC.gov



EQ INITIATIVES

- Regulatory Guide 1.89, “Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plants”
 - Revision 2 is coming soon
 - NRC Point of Contact: Matthew.McConnell@nrc.gov
- Regulatory Guide 1.180, Revision 2 “Guidelines For Evaluating Electromagnetic And Radio-Frequency Interference In Safety-Related Instrumentation And Control Systems”) (ML19175A044)
- Unaccounted for Error Terms with Irradiation and EQ
 - Steris Isomedix, April 2014 (ML14128A117)
 - Information Notice 2015-12 (ML15215A502)
 - Rosemount, December 2019 (ML20024G416)



2020 VENDOR WORKSHOP

- On June 18, 2020 (Baltimore, Maryland)
- Seventh Vendor Oversight Workshop
- “Bringing it Back to Basics”
- Online and onsite registration

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



IQVB PUBLIC OUTREACH

• NRC 2019 VENDOR TIMES NEWSLETTER

- <https://www.nrc.gov/docs/ML1932/ML19324F291.pdf>

• 32nd Annual Regulatory Information Conference (RIC)

- March 10-12, 2020
- Online Registration is NOW OPEN

- VIDEO:

<https://www.youtube.com/watch?v=Vx5HndUxvL0>

• Quality Assurance and Inspection Website

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



QUALITY ASSURANCE VENDOR INSPECTION BRANCH

- Vendor Inspection Program (VIP) Plan

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

- Vendor Quality Assurance (QA) Inspection Reports for New Reactors

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

- Quality Assurance (QA) Inspections for New Reactor Licensing

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



QUESTIONS

