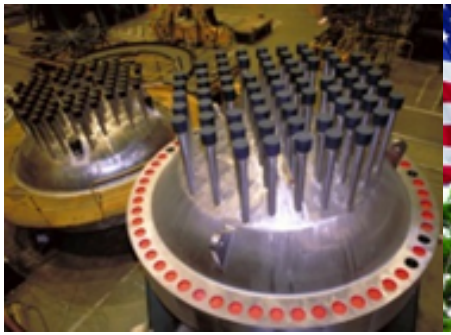



NRC UPDATE

January 29, 2019

NUPIC General Membership Meeting

St. Petersburg, Florida

Taylor Lamb and Greg Galletti

Quality Assurance Vendor Inspection Branch, Office of New Reactors

Topics

- Vendor Inspection Findings
  - Hayward Tyler, Inc.
- Advanced Manufacturing (3-D Printing)
- ILAC Update
- NUPIC Audits of SAFER FLEX Facilities

NRC Vendor Inspection Findings

- 1 Observation was conducted in 1st quarter FY2019
- 4 inspections were performed in 1st quarter FY2019
- 2 Notices of Nonconformance were issued:
  - 1 Appendix B, Criterion IX, “Control of Special Processes”
  - 1 Appendix B. Criterion X.

NRC 1st Quarter FY2019

- Observation:
  - Target Rock (KINS Observation) – 12/10 to 12/14
- Inspections:
  - NuScale Power (at ARES) – 10/1 to 10/5
  - Westinghouse Electric Sweden AB – 10/15 to 10/19
  - Transware Enterprises, Inc. – 10/22 to 10/25
  - Applied Technical Services – 12/3 to 12/6

Vendor Inspection Planning and Trends

- Decrease in overall inspections for FY19 to approximately 20
- Announcement letters for 2nd quarter FY19:
  - Hydroaire Service, Inc. (Chicago, IL) – 1/28 to 2/1
  - Westinghouse Electric Company (New Stanton, PA) – 1/28 to 2/1
  - Westinghouse Electric Company (Cranberry, PA) –

Hayward Tyler, Inc. Inspection

- Inspection was conducted on July 16-20, 2018 to assess HTI's compliance with 10 CFR Part 21 and 10 CFR Part 50, Appendix B.
- Based on the results of this inspection, the NRC staff determined that the implementation of the QA program failed to meet certain NRC requirements imposed on HTI by their customers. HTI was not fully implementing its QA program in the following areas:
  - procurement document control
  - control of purchased material, equipment, and services
  - control of measuring and test equipment
  - corrective action

Hayward Tyler, Inc. Inspection

- Hayward Tyler responded via letter on October 11, 2018 (ML18291A926)
- The NRC staff issued a response letter on January 9, 2019 (ML18334A289)
  - Provided an evaluation of HTI's response and
    - 1 NON was clarified
    - 2 examples were removed from another NON

Hayward Tyler, Inc. Inspection

- Control of Purchased Material, Equipment, and Services (Criterion VII) – 01/03
  - HTI failed to adequately qualify a material organization (MO) (i.e. castings) as an approved supplier in accordance with the requirements of NCA-3842.2.
  - audit checklist did not provide sufficient objective evidence to support the conclusion that the MO had met the controls and applicable requirements of subsection NCA-3850, "Quality System Program Requirements."
  - The quality manual did not contain additional attachments or appendices to address the gaps between a Quality Systems Program based on the International Organization for Standardization (ISO) 9001:2008, "Quality Management System – Requirements" and an ASME B&PV NCA-3800 Quality Systems Program.
  - HTI performed limited-scope audits of its commercial supplier's QA program rather than commercial-grade surveys, to verify how the identified critical characteristics were controlled, specific to the service procured (i.e. machining services).
  - HTI procured welding material from a commercial supplier, in October 2017 and used the commercial welding material in safety-related applications without reviewing the suitability of the material or assuring that the material conformed to the purchase requirements of the customer.
- Procurement Document Control (Criterion IV) – 02
  - Specifically, HTI did not impose the requirements of Appendix B to 10 CFR Part 50 in its safety-related procurement documents for materials and services procured as basic components. Procurement documents shall specify compliance with the requirements of Appendix B to 10 CFR Part 50 to ensure that adequate quality assurance is applied and passed down to the sub-suppliers.

Hayward Tyler, Inc. Inspection

- Control of Measuring and Test Equipment – 04
  - HTI failed to establish adequate controls to ensure that the pressure gauges used in hydrostatic testing of safety-related components affecting quality were properly calibrated and adjusted at specified periods to maintain their accuracy within necessary limits using a written calibration procedure.
  - were not calibrated within the tolerance range of 0-400 pounds per square inch gauge (PSIG)
- Corrective Action – 05
  - As a result of the ineffective corrective actions, the NRC inspection team identified the following similar examples:
    - HTI did not ensure that verification of the suitability of material to be used in a safety-related application was verified;
    - The QA director was not independent of work being inspected; and
    - Weld material issued from weld storage by welders for use on safety-related without adequate objective evidence of meeting procedural requirements

ILAC Update

- In a letter dated October 1, 2018, NEI/NUPIC requested NRC's endorsement of the recently published 2017 version of ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories."
- Requested interim review and approval by NRC.
- NRC staff intends to issue a provisional endorsement in Spring 2019.
- NEI/NUPIC plans to subsequently submit a revision to NEI 14-05A for staff evaluation.

Additive Manufacturing Update

- The 31st Regulatory Information Conference (RIC) will feature a technical session on additive manufacturing (3-D printing): "Use of Advanced Manufacturing Technology for Power Reactors"
  - Wednesday, March 13, 2019 from 1:30 p.m. – 3:00 p.m.
- Registration for the RIC can be found at the NRC public webpage:

NUPIC Audit of SAFER FLEX Facilities

- NUPIC: Is NUPIC supposed to audit SAFER? – No
- NRC: NUPIC is supposed to audit safety-related supplier PIM
- NRC is responsible for inspection of SAFER FLEX sites
- More information about the SAFER Response Center can be found in NEI white paper to NRC, “National SAFER Response Center Operational Status” dated September 11, 2014 (ML14259A222)

For More Information…

- The Quality Assurance for New Reactors Website offers a variety of information including:
  - 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
  - The Vendor Times

    https://www.nrc.gov/docs/ML1831/ML18312A422.pdf