



Non-Power Production and Utilization Facility (NPUF) Oversight

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US Nuclear Regulatory Commission

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NPUF Oversight Topics

- Staffing
- Covid-19 Public Health Emergency
- Inspection Program – FY2021
- Operator Licensing Program – FY2021
- Operator Licensing Transformation Project
- Security – next session



NPUF Oversight Branch

Travis Tate, Branch Chief

- Craig Bassett – Inspector
- Kevin Roche – Inspector
- Phil O’Bryan – Inspector
- **Mike Takacs – Security Specialist**
- Bill Schuster – Inspector/Examiner/
Security
- John Nguyen – Examiner
- Michele DeSouza – Examiner
- **Amy Beasten – Examiner**
- **Andrew Waugh – Inspector**
- Tuan Le – Examiner
- Dan Hoang – Examiner
- **Beth Reed – Advanced
Reactors**
- Nicole Parker – Licensing
Assistant
- Zarva Taru – Op Licensing
Assistant
- **Paulette Torres - RTR
Examiner (support)**
- **Michael Balazik, RTR
Inspector (support)**



Covid-19 Public Health Emergency

- NRC inspectors/examiners will follow all CDC, agency, state, local and facility restrictions and protective guidelines
- Facility physical conditions for social distancing, as well as local Covid-19 transmission rates considered in the number of NRC staff on-site
- Priority of program goals will be placed on the operator licensing program
- Inspections will be prioritized using risk considerations.



NPUF Inspection Program FY 2021 in Review

- Completed all baseline inspections within the frequency specified in Inspection Manual Chapter 2545, “Research and Test Reactor Inspection Program” with 3 exceptions due to COVID-19 restrictions and impacts
 - MIT, RINSC, UC-Davis (safety inspections)
- Completed a total of 37 routine inspections
 - Security (7)
 - Safety (30)
- Initiated 3 reactive inspections
 - Purdue overpower event (Special Inspection)
 - NIST Alert and Fuel cladding safety limit violation (Special Inspection)
 - Purdue 2nd overpower event (Event Response Inspection)



NPUF Inspection Program FY 2021 in Review

Timeliness

- **Reactive inspections (30 days)**
 - 100% (1 on-going and 1 recently completed)
 - 1 completed: 30 days
- **Routine inspections (45 days)**
 - 46%
 - Avg: 69 days



NPUF Inspection Program FY 2021 in Review

Enforcement

- **Non-cited (licensee identified) Violations (5)**
 - MURR: reactor operations w/ inoperable regulating blade
 - TAMU: failure of safety oversight board to conduct audit
 - GE: failure to complete annual operating exam
 - Reed: failure to complete requalification training
 - AFRRI: failure to meet TS staffing requirements
- **Severity Level III Violations (1)**
 - Purdue: exceeded license power level / failure to perform appropriate surveillance testing prior to declaring NI operable



NPUF Inspection Program FY 2021 in Review

Enforcement (cont.)

- **Severity Level IV Violations (7)**
 - Utah: startup without reactor supervisor present
 - Purdue: failure to post radiation area
 - New Mexico: security
 - MS&T: failure to conduct Ar-41 release verification per TS
 - Purdue: failure to report Ar-41 released in annual operating report per TS
 - Purdue: security
 - Idaho State: failure to complete biennial medical examination



NPUF Inspection Program Activities

- **Guidance**
 - IMC-2546 – Radioisotope production facility inspection program
 - IMC-2550 – NPUF Construction Inspection
 - MD 8.3 revision – NPUF guidance
 - IMC 0615 “Research and Test Reactors Inspection Reports” revision
- **Other Initiatives**
 - Inspection follow-up item tracking
 - Tracking/trending violations
 - Coordination across offices/regions
 - Continue to refine performance metrics
 - Streamline inspection reports
 - Support for reactor oversight process for advanced reactors



NPUF Inspection Summary

- No common safety themes
- Challenges
 - 3 reactive inspections in FY2021
 - Inspection of digital I&C implementation under 50.59
 - Safety oversight committee meeting documentation
 - Operator license documentation



NPUF Operator Licensing Program FY 2021 in Review

- Active licenses - 295
 - Reactor operators (RO) - 126
 - 180 senior reactor operators (SRO) - 169

Type	Total # of Written Exams	# of Written Exam Failures	(%)	Average Written Exam Grade	Average Written Failure Grade	Total # of Operating Exams	# of Operating Exam Failures	(%)
NEW	63	15	23.81%	82.82	70.29	63	2	3.17%
REAPP	5	1	20.00%	78.18	71.60	0	0	0.00%
RO	68	16	23.53%	82.54	70.37	63	2	3.17%
NEW	6	0	0.00%	88.42		6	0	0.00%
REAPP	1	0	0.00%			1	0	0.00%
UPGRADE	9	0	0.00%			9	0	0.00%
SRO	16	0	0.00%	88.42		16	0	0.00%
Total for HQ:	84	16	19.05%	83.03	70.37	79	2	2.53%



NPUF Operator Licensing Program FY 2021 in Review

Facility Examinations – 19

Examination Timeliness

- Examination Results (90 days)
 - 74% (Goal: 90%)
 - Avg: 85 days



NPUF Operator Licensing Program Activities

- **Guidance**
 - NUREG 1478, Rev. 3
 - Radioisotope production facility operator licensing
- **Other initiatives**
 - White Paper: Risk-insights for operator licensing medical examinations (RROAR)
 - Operator licensing FAQs
 - Operator training workshop
 - Operator licensing examination modernization
 - Collaborative Learning Environment (CLE) demo



NPUF Operating Licensing Summary

- Licensee staffing prioritized during recovery from Covid-19 shutdown
- Increase in the number of failures
- Challenges
 - Receipt of application materials
 - Cold licensing of operators
 - Changes to timeline for NRC MRO review
 - NIST root cause



NPUF Operator Licensing Transformation

Goal

- Improve efficiency of examination preparation, administration, and examination results
- Address challenges with NRC IT security restrictions

Capabilities

- Electronic tool to prepare, administer, and grade written examinations
- Flexibility for variety of situations and needs
- Maintain examination integrity and security
- Ability to analyze quality of written examinations
- Ability to analyze examination results



NPUF Operator Licensing Transformation

Current Status

- Collaborative Learning Environment (CLE)
 - currently being used for on-line training
 - demonstrated ability to create written examinations
 - structure to NUREG-1478
 - training of examiners

Next Steps

- Demo
- Pilot

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