

Fuel Cycle Operating Experience (OpE) Program

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Presentation Outline



- Importance of fuel cycle OpE
- OpE Sharing Mechanisms
- Materials OpE Program Interface
- Regions and fuel cycle OpE
- OpE Examples
- Path Forward



Why is fuel cycle OpE important?



OpE provides:

A valuable source of information for lessons learned and improving the safety and reliability of the fuel facility

OpE includes regulatory experience

- No formal structured program across the fuel facility industry
- Operating fuel facility community size is relatively small*
- Facility designs are different (includes proprietary information)
- OpE feedback can identify issues or prevent future events
- NRC is raising awareness about OpE in this forum

*- Compared with operating reactors

OpE Sharing Mechanisms





Systematic sharing of OpE information is key to preventing events or issues



Materials OpE Program Interface



Materials OpE Program includes:

- Analysis of reported materials events
- Review of event reports from Agreement States
- Annual Material Performance Reports with trends (includes fuel cycle events)
- Input to agency Abnormal Occurrence reports
- Identification of events or trends for agency action
- Agency actions: NMED* newsletter, generic communications, rulemaking, etc.



Radiopharmaceutical dose



Regions and fuel cycle OpE



Key functions include:

- Review of specific events
- Inspection debriefs
- Review/ assess generic issue implications
- Knowledge Management sessions





Fuel Cycle OpE Examples 10 CFR Part 21 Issues

- Implementation of Part 21 among fuel cycle facilities (FCFs) is inconsistent
- Opportunity for enhanced communication of potential safety concerns among FCFs and between FCFs and other NRC stakeholders
- NRC is working to clarify the rule and provide guidance for material licensees





Weld Indications



Counterfeit Fraudulent and Suspect Items (CFSI)



- Majority cases in newly manufactured items
- CFSI is hard to detect due to: commercially manufactured parts, QA programs not focused on CFSI, etc.
- Transition from analog to digital technology a factor for NRC to evaluate CFSI
- NRC is working on a Commission paper which will communicate the next steps on CFSI



Electronic Wire

NRC is working on a Regulatory Issue Summary

Embedded Digital Devices (EDD)



- Use of EDD likely to become more widespread
- Increased EDD use in new components
- Licensees encouraged to identify EDD and address the resultant hazards
- NRC Regulatory Issue Summary- to raise awareness





Path Forward



- NRC is enhancing its fuel cycle OpE program
- Identify safety, security and safeguards issues early
- Tackle generic issues proactively- e.g., CFSI, 10 CFR Part 21 issues

What can we do to leverage OpE?



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