
The public meeting on NRC's efforts to modernize the Fuel Cycle and Materials Decommissioning Inspection Program will begin shortly

Audio for today's meeting is through telephone bridge line only

You must call (888) 942-9041 and use passcode 1937402# to hear today's meeting

Webex will show the slides but there is no audio

Modernization of the Fuel Cycle and Materials Decommissioning Inspection Program

Public meeting to discuss proposed changes
to the inspection program

June 9, 2021

Meeting logistics

- Participants are in listen-only mode until the public comment portion of the meeting
 - To comment by phone, press *1 and follow operator prompts
- Send short questions and comments via WebEx Chat to “all panelists” and facilitator will read them aloud
- Meeting will be recorded/transcribed to allow NRC staff to review questions and comments at later date
- Presentation slides are available for download from ADAMS at ML21155A051

Meeting Agenda

- Staff introductions
- Opening remarks
- Background information about working group
- Planned changes to inspection procedures
- Current schedule
- After formal presentation, NRC staff will accept questions and comments

Staff introductions

- Opening remarks
 - Mary Muessle, Director, Division of Nuclear Materials Safety, Region IV
- NRC staff presenters
 - Rob Evans, Working Group Chair, Region IV Office
 - Jenni Dalzell, Region III Office
 - Marti Poston, Office of Nuclear Materials Safety and Safeguards (NMSS)
- Meeting Facilitators
 - Maurice Heath, Kellee Jamerson, NMSS

Opening Remarks

Mary Muessle, Director, Division of Nuclear Materials Safety, Region IV Office

- Formation of working group (WG)
- Agreement State support
- Tribal, non-Agreement State, industry, public notifications

Scope

In January 2021, NRC formed a joint NRC-Agreement State WG to update Inspection Manual Chapter (IMC) 2602, *Decommissioning Oversight and Inspection Program for Fuel Cycle Facilities and Materials Licensees*

- Goal is to update the inspection program to be more risk-informed, performance-based

Scope, cont.

- Applies to 10 CFR Parts 30, 40, and 70 licensed sites in decommissioning
 - Will include uranium recovery decommissioning which is currently addressed in 2 different IMCs
- Doesn't include:
 - Reactor decommissioning (Part 50 licenses)
 - Independent Spent Fuel Storage Installations (Part 72 licenses)
 - Materials, fuel cycle, and uranium recovery sites not in decommissioning

Objectives of WG

Develop a risk-informed, performance-based decommissioning inspection program

- Redesign the fuel cycle and materials decommissioning inspection programs
- Revise IMC 2602 and associated inspection procedures (IPs) to include uranium recovery decommissioning
- Provide training and support during rollout of revised inspection program

WG Membership

- Eight subject matter experts from NRC's headquarters office, four regional offices, and Agreement States
- A steering committee provides management level oversight, includes:
 - Trish Holahan, NMSS
 - Mary Muessle, RIV
 - Bill vonTill, NMSS
 - William Irwin, State of Vermont
- A coalition of supervisory level staff provides guidance, support and change management

Planned changes to IMC 2602

- Identify risks by program area (uranium recovery, fuel cycle, complex materials and non-complex materials sites)
- Describe process for conducting risk-informed, performance-based inspections
- Allow inspector to use a risk-informed process to make decisions for each inspection based on site conditions

Be riskSMART

- Working group is using *Be riskSMART* process
 - Guidance for integrating risk insights into the NRC's decision-making processes
- *Be riskSMART* framework was developed to assist working group with decisions
- Revised inspection procedures will include concepts of *Be riskSMART* to help focus inspector attention on risk-significant activities during an inspection

What are the radiological risks?

- Quantity of radioactive material present
 - Higher quantities may present higher risks
- Form of radioactive material present
 - Loose, dispersible material has higher risk of becoming airborne and inhaled or ingested
- Properties of radioactive material
 - Half-life
 - Radiation energy
 - Type of radiation (e.g., alpha, beta, or gamma)

Risk Modules

- IMC 2602 will use risk modules
 - Used to focus inspector attention on the most important aspects of an inspection
 - Will be included in the core procedures
 - Consistent with proposed changes that will be made to IMC 2800, *Materials Inspection Program*

Proposed risk modules

- Security and control of licensed material
- Observation of decommissioning activities
- Occupational radiation protection
- Waste generation, storage, and transportation
- Public dose, effluent releases, and environmental monitoring
- Management organization and controls
- Final status/confirmatory surveys

Inspection procedures

- Includes a manual chapter, core procedures, and discretionary procedures
- IMC 2602 will provide high level requirements and guidance for decommissioning inspection program, will include”
 - Inspection objectives, definitions, responsibilities, authorities, requirements and guidance
 - Lists of core and discretionary IPs for each major decommissioning program area

Inspection procedures, cont.

- Core IPs will be developed for each of the following program areas:
 - Uranium recovery
 - Fuel cycle facilities
 - Complex materials sites
 - Non-complex materials sites
 - Final status/confirmatory surveys
- Core IPs will provide:
 - Minimum inspection requirements to meet objectives of that IP
 - Risk modules applicable to that program area

Inspection procedures, cont.

- Discretionary IPs provide detailed instructions as needed to supplement core procedures
- Discretionary IPs include:
 - Radioactive materials security
 - Radiation protection
 - Groundwater remediation
 - Transportation
 - Radioactive waste management, effluent control, and environmental monitoring

Inspection frequency

Inspection frequency will be added to IMC 2602

- IMC currently does not provide a routine inspection frequency
- Will consider 1 year (+/- 3 months) frequency for projects that last greater than 1 year
 - Core IPs will be completed at least annually
 - Discretionary IPs will be completed as necessary

NRC initiatives

Various NRC initiatives will be reviewed and included in the revised inspection program as needed:

- Managing changes in inspection frequencies
- Benchmarking with other working groups
- Managing issues of low safety significance
- Maintaining consistent terminology across NRC
- Managing changes in technologies over time

Communication strategy & outreach

- Agreement State support
 - Changes will be implemented by both NRC and Agreement State staff
 - Both are represented on oversight groups
 - Both will provide comments on draft documents
- Stakeholder outreach
 - State & Tribal Communications letter issued May 13th
 - Today's public meeting
 - 2nd public meeting will be held at procedure rollout

Current schedule

- Submit draft IMC 2602 and IPs for internal and external stakeholder review by August or September 2021
- Incorporate all comments by end of year
- Issue revised IMC and IPs by end of 2021 or early 2022
- Host public meeting to introduce new program concurrently with issuance of procedures
- With NRC technical training center support, provide training to inspectors on new program

Status of other inspection programs

- IMC 2561, *Decommissioning Power Reactor Inspection Program*, reissued January 2021
- IMC 2545, *Research and Test Reactor Inspection Program*, revised May 2020
- IMC 2801, *Uranium Recovery and 11e.(2) Byproduct Material Facility Inspection Program*, has been revised and will be reissued soon
- IMC 2800, *Materials Inspection Program*, revised in 2020, IPs being updated now
- IMC 2600, *Fuel Cycle Facility Operational Safety and Safeguards Inspection Program*, reissued January 2021

Questions and comments?

References:

- Working group charter, ML21061A344
- State and Tribal Communications Letter dated May 13, 2021, STC-21-025, ML21125A033
- *Be riskSMART*: Guidance for Integrating Risk Insights into NRC Decisions, NUREG/KM-0016, March 2021, ML21071A238
- Issues of Low Safety Significance, presentation dated March 24, 2021, ML21082A515