U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

ORGANIZATION OF AGREEMENT STATES (OAS)

Annual Meeting
August 16-19, 2021 Philadelphia

By Amy Ford (TN), Augustinus Ong (NH), Steve Mack (AR), and Leira Cuadrado (NRC)

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

What is the Phase 3 Materials Inspection Working Group up to?

What is the Approach Used to Further Risk Inform the Nuclear Materials Inspection Program?

The revised nuclear materials inspection procedures contain different numbers of risk modules depending on the risks and the types of materials, their use, and the radiation hazards. Inspection procedures use a risk-informed approach to assist performing inspections of nuclear materials, such as choosing the activities that carry the highest risk to inspect first.

The order of the risk modules is not indicative of its relativ importance to other risk modules, as some risk modules w be equally important to complete. Inspectors will determi which module(s) carries the highest risk and therefore be performed first and/or prioritized for completion.

Additional inspection elements that carry less risk, relati to the selected risk modules, are included as an appendix to the inspection procedure. These additiona elements are not required to be reviewed as part of a informed inspection approach but serve as a resource to be used if inspectors determine those eleme are related to safety issues identified in the risk module(s), or to expand the scope of the inspection when multiple violations are identified through review of the risk modules.

Example of a Revised Procedure Incorporating Risk Modules

IP 87130: Nuclear Medicine Programs

RM-1: OBSERVATION OF ACTIVITIES
Attention to observe ongoing higher risk activities, such as PET studies and therapy treatments. Also, added discussions regarding PET radionuclides and Rubidium-82 generators.

RM-2: SAFETY AND SECURITY OF LICENSED MATERIAL
Attention to common security problems with use and storage a , and material accountability issues.

RM-3: THERAPY PROCEDURES AND WRITTEN DIRECTIVES
Attention is drawn to written directive completion and compliance.

RM-4: ASSESSMENT OF DOSE TO WORKERS AND THE PUBLIC
Attention to ensuring the maintenance of a robust monitoring program. Also, proper monitoring for contamination after spills and clean-up.

RM-5: SURVEYS FOR CONTAMNATION AND EXPOSURE CONTROL
Attention to proper survey procedures and instrumentation. Also, maintenance of a decay-in-storage waste program.

RM-6: MANAGEMENT OVERSIGHT
Attention to effective performance of RSO's duties and responsibilities, oversight of contract personnel, audit program, and reporting of events.

Our Collective Knowledge in the National Materials Program Shaped the Inspection Guidance Revisions

Inspection Procedures

- Revised to include more risk and compliance insights from experienced materials inspectors to provide the most common performance issues for a specific inspection area.

Example:

Inspectors have identified licensee staff; (1) using uncalibrated or inoperable instruments, (2) using the wrong scale or misreading the scale, and (3) performing surveys too quickly or at too great a distance from surfaces.

Inspection Manual Chapter 2800 will be revised to include:

- Description of how to inform a decision to inspect an Agreement State licensee or not, considering enforcement history.
- Emphasizing the coordination with the Agreement States, among the U.S. Nuclear Regulatory Commission regional offices, and enhancing guidance on how to transmit inspection reports with violations to Agreement States.

Working group members: Tara Weidner (NRC), Ryan Craffey (NRC), James Thompson (NRC), Auggie Ong (NH), Amy Ford (TN), Brian Goretzki (AZ), Steve Mack (AR), Maria Arribas-Colon (NRC), Duncan White (NRC), Betsy Ullrich (NRC), and Leira Cuadrado (NRC) Project Manager.