



Material Control and Accounting Future Challenges

2014 Fuel Cycle Information Exchange (FCIX)

June 11, 2014

Peter Habighorst, Branch Chief

Material Control and Accounting Branch

Division of Fuel Cycle Safety and Safeguards

Office of Nuclear Material Safety and Safeguards

Overview

- History
- Purpose and Approach
- Industry and External Challenges
- Internal NRC Challenges



History of Material Control and Accounting

- Early Years
- Material Control and Accounting (MC&A) requirements for licensees were contained in 10 CFR Part 70, *Domestic Licensing of Special Nuclear Material* until 1985
- 10 CFR Part 74, *Material Control and Accounting of Special Nuclear Material* created in 1985
 - Moved requirements for facilities possessing special nuclear material of low strategic significance out of 10 CFR Part 70
 - In 1987, requirements for facilities possessing formula quantities of strategic special nuclear material were moved out of Part 70 into Part 74

Purpose and Approach

- Prevent, deter, or detect loss, theft, diversion, or production of unauthorized production of nuclear materials
 - Material Control
 - Control of Access and Monitoring Status
 - Material Accounting
 - Maintain knowledge and location
- Regulations include requirements to detect unauthorized activity by an individual or collusion between two individuals
- Requirements are graded based on quantity of material and level of enrichment
 - Category I, II, III
 - Greater than 350g

Industry and External Challenges

- On-going vigilance on “insider threats”
- Reduction in human errors
- Knowledge Management

Internal NRC Challenges

- Current Environment
 - Shutdown and/or Decommissioning of Nuclear Facilities
 - Recovery/cleanup of old disposal sites
 - New applications (Medical Isotopes Applications, Small Modular Reactors)
 - MC&A and International Safeguards
- Updates to guidance documents and rulemaking
- Knowledge Management
- Incorporate Internal Lessons Learned Review

Questions?

*Peter Habighorst, Branch Chief
Material Control and Accounting Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards*