

Safeguards and Security (Gaps 4, 8, 17, and 18)

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Gap Summaries

- Gap 4—Exclusion of reprocessing facilities from Category I Material Control & Accounting (MC&A) requirements
 - Current exemption in 10 CFR 74.51 excludes reprocessing facilities from Category I MC&A requirements
 - A reprocessing facility is likely a Category I site
- Gap 8—Risk informing NRC’s Safeguards and Security Requirements
 - Current quantity-based categorization scheme in existing regulations (Parts 73 and 74) may not appropriately address different attributes and risk levels of nuclear materials handled at a reprocessing facility



Gap Summaries

- Gap 17—Diversion Path Analysis (DPA)
 - DPA would provide an effective detection and response program to mitigate safeguards vulnerabilities and security system weaknesses
 - Safeguards requirements would be more risk informed
- Gap 18—Improvements to Material Accounting Management
 - Predefined limits on inventory difference determinations, frequency of inventory periods, and other accounting requirements could pose challenges for a reprocessing facility



NRC Proposed Position—Gap 4 Exclusions from Cat I MC&A

- The Commission directed staff to remove this exemption via the ongoing Part 74 MC&A rulemaking (SRM-SECY-08-0059)
 - The draft Part 74 rule is expected to be released for public comment in December 2011
 - A preliminary copy of the rule text is on regulations.gov



NRC Proposed Position—Gap 8 Risk Informing Parts 73 and 74

- The Commission approved staff's development of revised categorization scheme (SRM-SECY-09-0123)
 - Part 73 rulemaking should not focus on the categorization of material associated with reprocessing
 - Separate effort/lower priority = Analysis of material categorization approach for potential reprocessing facility
 - Staff currently developing technical/regulatory basis to support rulemaking



NRC Proposed Position—Gap 17

Diversion Path Analysis

- The Commission directed staff to consider incorporating DPA into the reprocessing regulatory framework (SRM-SECY-08-0059)
 - The staff plan to add a requirement to conduct a diversion path analysis to the MC&A regulations for reprocessing



NRC Proposed Position—Gap 18

Improving Material Accounting Management

- The staff are considering changes to inventory frequency, limits on inventory difference, limits on error measurements, and other material accounting aspects for a reprocessing facility



Previous Stakeholder Input

- Gaps 4, 17, and 18—Agreement with staff approaches to
 - Make reprocessing facilities subject to Cat I regulations
 - Require diversion path analysis
 - Adjust material accounting limits
- Gap 8—Agreement with staff approach to revise material categorization; some stakeholders have stressed importance for treatment of MOX



Gap Integration

- Gap 8—Revision of the material categorization approach for physical protection will drive decision on approach for MC&A
- Gaps 4, 17, and 18—The removal of the exemption for reprocessing facilities under the current Cat I rules will place reprocessing facilities under Subpart E of Part 74
 - If the Commission allows NRC to proceed with rulemaking for reprocessing, staff will add a new subpart to Part 74 that will be similar to Subpart E but incorporate the changes necessary to regulate MC&A at a reprocessing facility, including resolutions to Gaps 17 and 18
 - Changes resulting from Gap 8 would be included

Questions for Stakeholders

- What problems, if any, are created by development of the regulatory basis for risk informing 10 CFR Parts 73 and 74 separately from the regulatory basis for a potential rulemaking for licensing of reprocessing facilities?
- What should a diversion path analysis include?
- Which documents should NRC staff consider in developing the rule language and guidance for conducting a diversion path analysis?
- What specific challenges does the potential licensee community foresee in meeting the material accounting requirements for Category I facilities?