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
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
• 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?