Minimizing HEU Utilization: Options for Setting Priorities

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Current Point of Departure

• 20 years ago HEU minimization was a vision, today it is happening
• There has been steady incremental progress
• Technical solutions have been found and others are under development
• Uncertain future of US-Russia collaboration
• Uncertain response of G-77/NAM
• Uncertain prospects for ‘multilateralization’
Setting Priorities

- Addressing Business Case
- Threat Assessment
- Unilateral Activities
- Bilateral Activities
- Multilateral Activities
Threat Assessment

Absent a serious event, can you convince the skeptics that HEU utilization represents a real problem?

- Perform threat assessment to explain HEU threats and put them in context
- Use the data bases: What do they tell us?
- Which HEU poses greatest threat?
- Where is the most threatening HEU?
Focus on the Business Case

• Pressure to convert reactors, restrict HEU supply is a distortion of business environment
• Some players see distortion as opportunity (supply of HEU targets, reprocessing price)
• Increasing isotope price doesn’t have to mean operators will pay to convert reactors
• Stakeholders need to see a business case for conversion including incentives, penalties, risks, opportunities
Unilateral Approaches

*Steps governments can take on their own to minimize utilization of HEU*

- US offer to buy foreign inventories of HEU?
- Unilateral initiatives will test political will of parliaments and central government agencies
- US conversion of HF reactor 2016 will make possible deal for EU HEU reactor conversions
Bilateral Approaches

• Framework for most US-Russian activities on HEU inventories and reactors—future funding and commitment?

• Uncertain US diplomatic efforts to persuade foreign governments to withhold US-origin HEU

• Bilateral opportunities to leverage Russia on HEU issues
Multilateral Approaches

• More countries will mean less consensus
• Development world equity issues on the horizon on HEU issues
• Be careful of double standards in US HEU management initiatives
• How to ‘multilateralize’ if US is paying?
• More non-US burden-sharing will make HEU issues less contentious
Level Playing Field for Isotopes

- *Price* will be most important variable in getting more suppliers into the market
- Develop mechanisms for incentivizing new isotope production
- *Governments must pay* for the research and development needed for LEU-based production
Three Priority Options

• Focus on where the greatest threats are (see above on risk assessment)
• Focus on where most HEU is located
• Focus on where it will be easiest to succeed (political will)

*No more low-hanging fruit left to pick?*
Priority Factors to Consider

• 150+ less secure reactors and associated HEU inventories, many in developing countries
• Where most effectively to spend money
• What will each option cost?
• How much political heavy lifting needed?
• Moly-99 market represents a small fraction of HEU inventories, reactor conversion cost is increasing
Compromise is a Virtue

Consider striking compromises on HEU utilization issues between LEU and WGU for confidence building and real threat reduction:

- High-flux reactors
- Propulsion reactors
- Russian installations and inventories