

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