

# THE OTHER FISSILE MATERIAL: RECOMMENDATIONS FOR STRENGTHENING PLUTONIUM MANAGEMENT

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# OVERALL STRATEGY

1. Limit Existing Reprocessing Programs and Their Risk
2. Limit the Risk of Existing Civil Stocks
3. Discourage New Reprocessing Programs

*Both Political and Technical Measures Needed*

## Limit Existing Reprocessing Programs and Risk:

- ❑ Encourage Japan to continue its reprocessing moratorium
- ❑ Encourage France to shift to greater use of non-plutonium based LEU fuels for its domestic nuclear power plants and not export a plant to China.

## Limit Risk of Existing Civil Stocks: Political Measures

- ❑ Establish a new multi-state forum or expand the mandate of an existing forum to develop strategies for the permanent disposition of civil plutonium
- ❑ To reduce proliferation risks, reexamine international plutonium storage concepts
- ❑ Bring all material under safeguards

## Limit Risk of Existing Civil Stocks: Technical Measures (Short Term)

- ❑ Minimize # of sites with separated Pu and # of transport movements; Conduct regular Security Reviews
- ❑ Maximize mixing of separated plutonium with uranium and conversion to more-processed forms – MOX pellets and fuel assemblies, include pu unsuitable for MOX

## Limit Risk of Existing Civil Stocks: Technical Measures (Medium and Long Term)

- ❑ Consider placing large stores of MOX fuel rods in the same dry casks as spent fuel rods
- ❑ US should share “dilute-and-dispose” with other Pu possessors and include them in unclassified aspects of US R & D activities.

## Discourage New Reprocessing Programs (1)

- ❑ Continue current restraints on transfers of reprocessing equipment and technology
- ❑ Continue to pursue “Gold” and “Silver” Standard commitments like those in the US-UAE and US-Taiwan nuclear agreements on E&R

## Discourage New Reprocessing Programs (2)

- ❑ Block clandestine activities and illicit procurement
  - ❑ Technology holders and others should declare that clandestine reprocessing-related (and enrichment-related) activities, including procurement activities, will mean sanctions.
  - ❑ Uranium enrichers (all government controlled) should include a provision in commercial contracts to this effect

## Discourage New Reprocessing Programs (3)

- ❑ Actively promote dry cask storage technology as an alternative
- ❑ Proliferation resistance and safeguards-by-design should be built into any new technologies and facilities that are deployed for plutonium processing and use.