

PROMISES, PROMISES: HEU MINIMIZATION IN MO-99 PRODUCTION AND THE NUCLEAR SECURITY SUMMITS

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2012 Nuclear Security Summit

Belgium-France-Netherlands-United States Joint Statement

“Belgium, the Netherlands, and France, in cooperation with the United States, reaffirm their determination to support conversion of European production industries to non-HEU-based processes by 2015, subject to regulatory approvals”

“As a result, in the longer term, the use of HEU will be completely eliminated for medical isotopes that are produced in Belgium, France, and The Netherlands and used in those countries and in the United States.”

2016 Nuclear Security Summit (1)

Joint Statement Signed by 22 Countries including the United States, and the Netherlands

Where technically possible convert existing molybdenum-99 (Mo-99) medical isotope production facilities to use 100% LEU targets by December 31, 2017

2016 Nuclear Security Summit (2)

Joint Statement Signed by 22 Countries including the United States, and the Netherlands

Focus efforts globally to expedite licensing approval of non-HEU-based Mo-99 and its daughter product technetium-99m (Tc-99m).

2016 Nuclear Security Summit (3)

Joint Statement Signed by 22 Countries including the United States, and the Netherlands

*Consistent with international trade agreements and the schedules of the major Mo-99 producers to convert to LEU targets, and subject to applicable domestic laws, **end imports and exports of HEU-based Mo-99 unless** the members of the Organization for Economic Cooperation and Development's Nuclear Energy Agency High Level Group on the Security of Supply of Medical Radioisotopes deem that the licensed global non-HEU production capacity of Mo-99 and its daughter product Tc-99m have become insufficient and unsustainable.*

Yet... HEU-based production continues

August 15, 2016

- *NNSA asked NRC to export 7.2 kilograms of HEU to France where fabricated into targets*
- *To be irradiated in **the Netherlands** and elsewhere*
- *To be processed to produce medical isotopes at IRE in Belgium*

Yet... HEU-based production continues (2)

- Similar export amounts as previous years—suggests countries will intend to meet NSS commitments.
- More than two dozen nuclear security experts have submitted a comment to the NRC calling for reducing the amount of material to be exported to ensure conversion process proceeds as pledged

Questions to be Answered

- What is behind the delay?
- When are expected to begin commercial shipments of LEU-based Mo-99?
- When expected to be irradiating 100% LEU targets?
- Otherwise hard to understand current license with similar export amounts as previous years—when spring reports the HLGMR report earlier this year said anticipated conversion this year.