



NUCLEAR PROLIFERATION
PREVENTION PROJECT

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NPPP Hails U.S. Ban on Bomb-Grade Uranium Exports for Medical Isotope Production
Cites “Model” for Ending Global Commerce in Nuclear Weapons-Usable Material

AUSTIN – The U.S. Secretaries of Energy, and Health and Human Services, today triggered a statutory ban on exports of nuclear weapons-usable, highly enriched uranium (HEU) for foreign production of the most commonly used medical isotope, Mo-99, by [declaring](#) that a sufficient supply of such isotopes already is produced with safer, low-enriched uranium (LEU).

This decision aligns with a [recommendation](#) two months ago to the Department of Energy (DOE) by Prof. Alan J. Kuperman, the NPPP’s coordinator, who at the time argued that “All four of the major foreign producers of Mo-99 – Curium in the Netherlands; IRE in Belgium; ANSTO in Australia, and NTP in South Africa – have developed and qualified LEU targets, which they use to produce Mo-99. . . . [so] no further U.S. license to export HEU for use in targets is needed for foreign production of Mo-99. Moreover, domestic producers do not utilize HEU targets. This means that all U.S. demand for Mo-99 will be satisfied by domestic and foreign production that avoids use of HEU targets.” Writing in October 2021, he emphasized the “national security imperative of this decision,” warning that HEU can be diverted or stolen to make nuclear weapons by states or terrorists.

Today, Kuperman, who is a professor at the LBJ School of Public Affairs, University of Texas at Austin, and editor of [Nuclear Terrorism and Global Security: The Challenge of Phasing out Highly Enriched Uranium](#) (Routledge, 2013), issued the following statement:

“The Secretaries’ bold action puts one dangerous nuclear genie back in the bottle, and brings to fruition more than three decades of efforts – including the 1992 [Schumer Amendment](#)* that initially restricted export of HEU for targets to produce medical isotopes, the Argonne National Laboratory’s [research](#) on LEU targets led by George Vandegrift, the 2012 American Medical Isotopes Production [Act](#) spearheaded by then-Rep. Ed Markey (D-MA), and DOE’s [cost-sharing](#) for domestic companies to produce Mo-99 without HEU targets. The achievement also is a model for phasing out other remaining worldwide non-weapons uses of HEU, sector by sector, to reduce risks of nuclear proliferation and nuclear terrorism. Significant progress already has been made in eliminating HEU as fuel in [research reactors](#) and [space reactors](#). The DOE’s office of Defense Nuclear Nonproliferation also is [researching](#) whether the United States can switch to powering its naval propulsion reactors with LEU fuel, as France and China already do, and as Brazil and S. Korea aim to. Together these efforts show how the world can utilize the atom for science, medicine, and energy – without needlessly risking the spread of nuclear weapons.”

– NPPP –

*Kuperman at the time was Legislative Director to then-Rep. Charles Schumer (D-NY). In that capacity, he drafted the amendment and guided its enactment in the Energy Policy Act of 1992.