

Status and Progress in the U.S. RERTR Fuel Development Program

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In 2004, U.S. Energy Secretary Abraham established the Global Threat Reduction Initiative (GTRI). This program set goals for the conversion of many of the world's research and test reactors to low-enriched fuels, including those for which suitable fuels are currently not available.

Development of fuels for reactors that cannot currently be converted requires an aggressive program of fuel fabrication development, out-of-pile testing and characterization, irradiation testing, post-irradiation examination, and fuel performance modeling. Both dispersion and monolithic versions of a uranium-molybdenum based fuel are being developed in conjunction with strong international partnerships. The development is being carried out with the intent to qualify a low-enrichment, high-density fuel suitable for utilization in these reactors by the end of 2011, allowing conversion of the U.S. reactors by 2014. An overview of program progress and plans leading to fuel qualification will be presented.