

Other runners

SHINE is not the only company making real progress in pursuing commercial Mo-99 production using LEU. About 13 miles south of Janesville, in Beloit, Wis., NorthStar Medical Radioisotopes, another partner in the NNSA's Mo-99 program, is pursuing a non-uranium production system using naturally occurring molybdenum. In February, the U.S. Food and Drug Administration approved NorthStar's Tc-99m generator, the RadioGenix System (NN, Mar. 2018, p. 94).

According to NorthStar, its processes are based on proven, well-established principles yet mark a significant technological advancement over current technology. The company's production process involves the use of solid targets of natural Mo, containing about 24 percent Mo-98, which are irradiated at the University of Missouri Research Reactor (MURR) in Columbia, Mo., to produce Mo-99 through neutron capture. The irradiated targets are then dissolved and placed in source vessels, which upon arrival at the radiopharmacy are mounted into the RadioGenix System to extract the Tc-99m.

NorthStar said that it expects to have the capability to supply up to 10 percent of U.S. Mo-99 demand by the end of 2018 and is planning to scale up production to increase capacity over the coming years. In



Photo: NorthStar Medical Radioisotopes

The RadioGenix System Tc-99m generator from NorthStar Medical Radioisotopes was approved by the FDA in February.



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