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NRC to Issue Construction Permit for SHINE Medical Isotope Facility

The Nuclear Regulatory Commission has authorized its staff to issue a construction permit for a first-of-a-kind facility dedicated to medical isotope production. The Commission, having completed a mandatory hearing, found the staff's review of the SHINE Medical Technologies, Inc. application sufficient to make the necessary safety and environmental findings. This will be the first construction permit issued for either a [non-power utilization or production facility](#) by the NRC since 1985.

Once issued the construction permit will allow SHINE to build a facility for the production of molybdenum-99 (Mo-99) and other radioisotopes. Mo-99 is used in medicine to create technetium-99m, an isotope used in millions of diagnostic procedures annually in the United States. The facility will be located in Janesville, Wis., approximately 40 miles southeast of Madison. The United States has not commercially produced Mo-99 since 1989. The facility will support U.S. Government [efforts](#) to establish a reliable domestic supply of this isotope.

SHINE submitted its construction permit application in two parts on March 26, 2013, and May 31, 2013. The NRC staff's construction permit review process included the examination of the [preliminary design](#) and [environmental impacts](#) of the SHINE facility. The Advisory Committee on Reactor Safeguards conducted an independent review of SHINE's preliminary safety analysis report and the staff's safety evaluation, and on Oct. 15, 2015, [recommended](#) that the Commission issue the SHINE construction permit.

SHINE must submit a separate operating license application for NRC approval before it can operate the facility. The operating license application will consist of a final safety analysis report, including SHINE's final facility design, plans for operation, emergency plan, physical security plan, and technical specifications.