



International Isotopes submits license application

INTERNATIONAL ISOTOPES INC. announced on December 31 that it has submitted an application to the Nuclear Regulatory Commission for a license to construct a depleted uranium deconversion and fluorine extraction processing facility near Hobbs, N.M. The company had announced the selection of a 640-acre site for the facility in March 2009, and the completion of the conceptual design report for the project in June 2009.

Steve Laflin, president and chief executive officer of International Isotopes, said, "We are very pleased with the quality and pace of licensing and design work on this project by company personnel and our licensing and engineering subcontractor, Advanced Process Technology Systems. APTS assembled an excellent team of personnel highly experienced in many important aspects of licensing, such as integrated safety analysis. The extensive experience of that team has helped to produce a high-quality license application document."

The NRC license review process is expected to take 18 to 24 months. The company plans to select a design-and-build con-

International Isotopes has submitted a license application to the NRC to build a uranium deconversion and fluorine extraction plant.

tractor this year and may initiate some pre-license construction activities at the Hobbs site, subject to NRC approval. The project schedule calls for the completion of construction by the end of 2012.

The new plant will use the company's fluorine extraction process (FEP) technology to process depleted uranium tails resulting from uranium enrichment.

Depleted uranium hexafluoride (DUF_6) is generated in large quantities in the process of enriching natural uranium for use in nuclear fuel. International Isotopes said that it will deconvert DUF_6 to depleted uranium tetrafluoride (DUF_4) and then use the FEP technology to extract high-value specialty gases from the DUF_4 . The remainder of the uranium tails will then be converted into a stable chemical form that could be safely stored or disposed of, the company said.

Fluorine extraction also produces prod-

ucts for microelectronics, fiber optic cable, and thin film photovoltaics manufacturing, according to the company.

Since late in 2006, International Isotopes has been operating an FEP demonstration plant at its facility in Idaho Falls, Idaho. The patented FEP technology extracts fluorine from uranium tetrafluoride (UF_4) by heating a mixture of UF_4 and a metal oxide such as germanium, boron, or silicon. The metal oxide then combines with the fluorine, resulting in the production of a specialty, high-value fluoride gas, such as germanium tetrafluoride, boron trifluoride, or silicon tetrafluoride. The uranium from the UF_4 is then converted into uranium oxide, which is chemically stable and can be safely stored, disposed of, or converted for use as a feedstock for mixed-oxide nuclear fuel fabrication, the company said.