

## Deconversion Plant Near LES: First-of-a-Kind Moneymaker?

By Dan Yurman, Contributing Reporter

International Isotopes (OTC:INIS) has entered into a five-year agreement with URENCO, to deconvert depleted uranium from the soon-to-be inaugurated Louisiana Enrichment Services uranium enrichment plant in Eunice, New Mexico.

CEO Steve Laflin told *FCW* that the plant, to be located in nearby Hobbs, is a first-of-a-kind facility, turning depleted uranium into commercial products. Boron and silicon compounds will be two key products to be sold on wholesale markets. Both have uses in the manufacture of electronic circuit boards and computer chips that involve chemical vapor deposition. Boron also has applications in commercial nuclear reactors.

### Money Streaming in, Beginning to End

Laflin told *FCW* his business model calls for him to collect pay not only from his customers, but also from his supplier of raw materials. That is, LES will pay Laflin to take its depleted uranium, even guaranteeing minimum volumes of depleted materials with options to process more if he can. The contract is slated to start in 2013 and will quickly take up 75% of the plant's capacity. Eventually he may perform the same services for other enrichment plants as well.

INIS will also provide some related ancillary for-fee services, such as uranium hexafluoride cylinder cleaning, inspection and re-testing. Plus it plans to extract and sell anhydrous hydrofluoric acid and valuable industrial fluoride gas, which can go into making silicon for solar cells and computer chips.

Laflin explained that INIS deconverts the depleted uranium hexafluoride to make uranium tetrafluoride, which it can then use as the feedstock for its patented extraction process that produces high-purity fluoride gas products.

The company purchased the patents for the fluorine extraction process in 2004, and has been operating its facility in Idaho. Since 2006 it has been testing components and analytical processes for the larger New Mexico facility. The company expects to take title to the site for the plant in about two months.

"We can show a half million pounds of production of fluorine," Laflin said, "and two million pounds of boron with our processes for this plant."

In early March the U.S. Nuclear Regulatory Commission docketed the firm's license application. Laflin expects the regulator's requests for additional information to come out in June. Later in the same month comes a public scoping meeting on the environmental impact statement. By January 2012 he expects to get his NRC license.

INIS can choose between two landfills for disposal of the depleted uranium after extracting the fluorine. One is the EnergySolutions site in Utah, with another coming along at the Waste Control Specialists site just over the Texas border. That will open for business after the Nuclear Regulatory Commission finishes reviewing the environmental site characteristics.

For his project, Laflin said he expects the NRC to complete its work, and the Texas Department of Environmental Quality to issue a permit, before he starts deconversion operations in 2013.

Having a second site to take depleted uranium, Laflin said, will create some pricing pressure on EnergySolutions which currently is the only U.S. site licensed to take the material.

### Energy Efficiency: Attracting Investors?

Laflin said his facility would be able to produce fluorine products at a fraction of the cost of other commercial facilities. Apart from being paid by his supplier to take the feedstock, he has invested in energy efficiency and water conservation measures that will be built into the deconversion plant design.

"Conventional methods require seven times more energy per pound to produce fluorine than is required by INIS methods," Laflin told *FCW*. "We will save 4.5 million kilowatt hours which is equal to six million pounds of CO<sub>2</sub> a year."

Saving energy means saving money, Laflin said. He believes the low cost of production and the profits earned will attract new investors.

The deconversion plant will reuse all of its treatment system water. That will help him keep down his water demand in arid New Mexico, plus reduce the plant's waste discharge. The plant will have its own sewage treatment with tertiary processes, and with the output will support a plant nursery.

The plant will also use a solar energy array to offset electricity it takes from the local grid, plus and a geothermal system to reduce heating and cooling energy consumption. In 2008 INIS estimated new plant would cost \$55 million.

INIS is looking for new investors, as only three insiders own 55% of the nearly 280 million shares of stock outstanding. But financial reports indicate that these insiders have also been putting more of their own money into the company since November 2008. At market close April 26 INIS stock stood at \$0.42/share against a 52-week range of \$0.24-\$0.85.

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Asked if he saw any competition arising, Laflin noted that AREVA in France and URENCO in the U.K. are building deconversion plants, but only to manage the waste and not to produce commercial products from it. ●