Idaho Samizdat: Nuke Notes

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About Me

Dan Yurman
Idaho Falls, ID, United States

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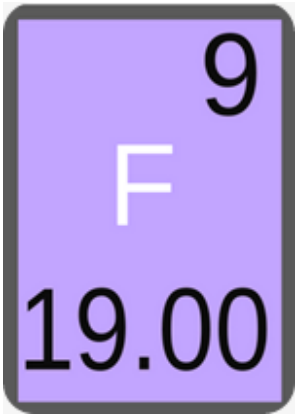
Intl' Isotopes inks five-year deal with LES



Plant will be located in Hobbs, NM, a short truck haul from Urenco's enrichment facility

This article is an edited version of a story published in Fuel Cycle Week, V9:N374 April 29, 2010 by International Nuclear Associates, Washington, DC

International Isotopes (OTC:INIS) based on Idaho Falls, ID, has entered into a five-year agreement with Louisiana Energy Services (LES), a wholly owned subsidiary of URENCO, to provide uranium deconversion services for the LES uranium enrichment plant in Eunice, NM. The LES plant is expected to start commercial uranium enrichment operations in June.

Steve Laflin, CEO of International Isotopes (INIS), told FCW in a wide ranging interview that the uranium deconversion plant, to be located in Hobbs, NM, is a first-of-a-kind facility because it will produce commercial products from the depleted uranium.

The key products which will be sold on wholesale markets are boron, fluorine, and silicon compounds. Two have uses in the manufacturing processes for electronic circuit boards and computer chips that involve chemical vapor deposition. The boron will also be sold for use by commercial nuclear reactors. Paradoxically, the fluorine extracted from the UF6 will be used by end-user customers to make solar cells.

Revenue streams

Laflin told FCW he will make money four ways. The business model developed by Laflin is interesting because he gets paid not only by his customers, but also by the supplier of his raw materials. LES will pay Laflin to take its depleted uranium and will even guarantee minimum volumes of depleted materials with options for process more if he has the ability to do so. The contract with INIS is slated to start-up in 2013 and will quickly grow to 75% of the capacity of the deconversion plant.

Laflin explained that after the depleted uranium hexafluoride is de-converted by INIS into uranium tetrafluoride, it can be used as the feedstock for INIS's fluorine extraction process (FEP). The FEP is a patented process that can produce high-purity fluoride gas products from the depleted uranium tetrafluoride.

"This agreement with LES represents one of four potential revenue streams we anticipate will be produced by the INIS facility. In addition to payment for de-conversion services under the LES agreement, and from other potential enrichment facilities, INIS intends to sell anhydrous hydrofluoric acid and valuable industrial fluoride gasses that are each extracted during the de-conversion and FEP processes, respectively. Those gasses can be used to make important products such as silicon for solar cells and computer chips."

The agreement with LES also calls for INIS to provide some related ancillary for-fee services, such as uranium hexafluoride cylinder cleaning, inspection, and re-testing.

The company purchased the patents for the FEP in 2004, and has been operating its FEP gas facility in Idaho. Since 2006 it has been testing components and analytical processes for the larger New Mexico facility.

"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."

Regulatory reviews

Additional signs of progress are that in early March of this year the U.S. Nuclear Regulatory Commission (NRC) docketed the firm's license application. Laflin told FCW requests for additional information (RAIs) are expected in June. A public scoping meeting on the environmental impact statement is also scheduled in June. He added that he expects a license from the NRC by January 2012. The company expects to take title to the site for the factory in about two months.

Disposal of the depleted uranium after the fluorine has been extracted will be at a licensed landfill. INIS expects to have two options. One will be the Energy Solutions site in Utah and another will be at a site just over the New Mexico border in Andrews, Texas.

There Waste Control Specialists expected to open a disposal facility to take depleted uranium once the NRC completes a regulatory review of environmental site characteristics for sites to do so. 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 Energy Solutions which currently is the only site licensed to take the material now.

More kinds of green

According to Laflin, his firm will be able to produce fluorine products at a fraction of the cost of similar products at other commercial facilities. The first reason is he is paid by his supplier to take the feedstock. Another reason is that energy efficiency and water conservation measures are built into the deconversion plant design. A key metric, Laflins said, "is that conventional methods require seven times more energy per pound to produce fluorine than is required by INIS methods."

"We will save 4.5 million kilowatt hours which is equal to six million pounds of CO_2 a year."

Saving energy means saving money Laftlin says. He's emphasizing the low cost of production and the profits earned as a means to drawing in new

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investors to help build the plant. An estimate provided by INIS in 2008 indicated the new plant will cost $55 million.

Laflin said the design of the deconversion plant re-uses all of the water in its treatment systems. It cuts down on the needs for water in the arid New Mexico climate and drastically reduces the plant's environmental impact in terms of waste discharges. The plant will have its own sewage treatment with tertiary processes. The output will be used to support a plant nursery.

The deconversion plant will have its own solar energy array to offset use of electricity from the local grid and a geothermal system to reduce energy requirements for heating and cooling systems.

Messages for investors

A reduced environmental footprint and energy savings are "a good message for investors" Laflin notes because many on Wall Street are "gun shy" of anything involving the nuclear industry.

INIS needs new investors to raise cash as just three insiders own 55% of the approximately 280 million shares of stock outstanding. However, according to financial reports, 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.

The contract with LES is a "springboard to having discussions with other enrichment plants" Laflin said. For instance, USEC's gaseous diffusion plant in Ohio has a huge inventory of depleted uranium. So far Laflin says he has not yet discussed contract opportunities with Areva even though the Eagle Rock Enrichment Facility is planned to be built just 18 miles west of INIS home town of Idaho Falls.

Asked if there is any competition on the horizon, 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.

Given the projected growth in uranium enrichment plants in the U.S., Laflin says his firm can only grow with the industry.

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