



U.S. DEPARTMENT OF
ENERGY



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Partnership using nuclear material slated for disposal to advance cancer research and treatment

Oak Ridge, Tenn. – Nov. 22, 2019 – Isotek Systems, TerraPower, and the U.S. Department of Energy (DOE) today announced an innovative public-private partnership agreement that is providing extremely rare and unique isotopes for next generation cancer research and treatment.

DOE Deputy Under Secretary for Science T.L. Cubbage was joined by Senator Marsha Blackburn, U.S. Representative Chuck Fleishmann and senior leadership from TerraPower, Isotek, and Isotek’s parent companies— Atkins and SNC-Lavalin— at an event announcing this new beneficial and impactful arrangement.

Isotek is the DOE contractor tasked with eliminating the inventory of uranium-233 currently stored at the Oak Ridge National Laboratory. Through the agreement, Isotek personnel are extracting thorium from the uranium-233 inventory that TerraPower will use to support cancer treatment research through the medical application of radioisotope technologies. This is a key project under TerraPower’s nuclear innovation mission.

“As a nuclear innovation company, TerraPower seeks work that is both challenging and of great importance to humankind,” said TerraPower President and CEO Chris Levesque. “We are excited to partner on this effort and expect positive health outcomes as a result. And I’m proud of the TerraPower Isotopes team making it possible.”

This partnership is not only producing vital material for future cancer research, it is also expediting the removal of legacy nuclear material currently stored at the Oak Ridge National Laboratory at a cost reduction to the federal government. Isotek is using the funds it receives from the sale of these rare materials to accelerate one of DOE’s highest priority projects in Oak Ridge.

“This partnership is a success for all involved,” said Jay Mullis, manager of DOE’s Oak Ridge Office of Environmental Management. “Through Isotek’s innovative approach, we are able to accelerate one of our highest priority projects, spend less taxpayer dollars to complete the project, and provide material that will greatly benefit the public in the future.”

Isotek President Jim Bolon added, “This partnership has created an additional rewarding mission for us. Everyone at Isotek has been impacted or knows someone impacted by cancer, and this opportunity to provide a rare isotope in the fight against cancer while accelerating the disposition of Cold War legacy materials inspires everyone working on the U-233 Disposition Project.”

Highlights of the public-private partnership:

- **Significantly increases the number of cancer treatment doses available annually:** Isotek will extract and provide Thorium-229 to TerraPower for the production of Actinium-225. This arrangement provides TerraPower the capacity to produce 100 times more cancer treatment doses per year than the 4,000 currently available world-wide.
- **Provides availability of rare isotopes and recycles portions of the uranium-233 inventory for beneficial reuse:** This arrangement allows the beneficial reuse of material that would otherwise be irretrievably lost during downblending operations to convert the remaining inventory of uranium-233 into a disposal-ready form.
- **Saves \$90 million taxpayer dollars and accelerates a high-priority DOE project:** Isotek is using the proceeds from the sale of the Thorium-229 to privately fund portions of the Uranium-233 Disposition Project. This approach allows downblending operations to begin a year ahead of schedule, accelerates the overall project schedule, and saves approximately \$90 million taxpayer dollars.
- **Removes a significant risk from Oak Ridge:** Completing the Uranium-233 Disposition Project removes a significant risk by eliminating the inventory of highly enriched fissile material stored in a 1940’s-era building at a world-leading scientific research site.

About Isotek/Atkins/SNC-Lavalin

Isotek Systems, LLC is a DOE contractor under Atkins Nuclear Secured. Since 2003, Isotek has been responsible for safely and securely overseeing the inventory of U-233 and preparing its removal from the Oak Ridge National Laboratory. Since then, employees have transferred and dispositioned approximately half of the inventory. The remaining inventory requires processing and downblending prior to disposal, which began in October 2019.

Atkins Nuclear Secured, a subsidiary of WS Atkins, is a leading provider of specialized, technology based, Q-cleared, nuclear services to government customers. SNC-Lavalin acquired WS Atkins on July 3, 2017. www.atkinglobal.com

Founded in 1911, SNC-Lavalin is a global fully-integrated professional services and project management company. Its teams provide comprehensive end-to-end project solutions – including capital investment, consulting, design, engineering, construction management, sustaining capital and operations and maintenance – to clients across the EDPM (engineering, design and project management), infrastructure, nuclear, and resources businesses. www.snclavalin.com

About TerraPower

TerraPower is a leading nuclear innovation company that strives to improve the world through nuclear energy and science.

TerraPower has emerged as an incubator and developer of ideas and technologies that offer energy independence, environmental sustainability, medical advancement and other cutting-edge opportunities. It accepts and tackles some of the world's most difficult challenges.

Behind each of its innovations, technologies and programs, TerraPower actively works to bring together the strengths and experiences of the world's public and private nuclear research and energy sectors. This approach takes root in our original impetus: TerraPower was founded when Bill Gates and a group of like-minded visionaries decided that the private sector needed to take action in developing advanced nuclear answers for pressing global needs. <https://terrapower.com/>

About DOE's Oak Ridge Office of Environmental Management

DOE's Oak Ridge Office of Environmental Management is responsible for removing environmental legacies resulting from more than 50 years of nuclear weapons development and government-sponsored nuclear energy research. The program conducts environmental cleanup at three diverse sites—the East Tennessee Technology Park, the Oak Ridge National Laboratory, and the Y-12 National Security Complex. Its projects are protecting the region's health and environment, enabling DOE's ongoing research and national security missions locally, and making clean land available for future use. www.energy.gov/orem

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