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**FOR USE: *Immediate***

## **Savannah River National Laboratory Qualified Under Network of Analytical Laboratories for Reference Materials and Quality Control to Support IAEA**

AIKEN, S.C. (April 25, 2023) – The Savannah River National Laboratory (SRNL) recently qualified for an additional mission within the International Atomic Energy Agency (IAEA), Department of Safeguards, U.S. Network of Analytical Laboratories (NWAL), specifically for the production of microparticle reference materials suitable for evaluating measurement quality.

With this achievement, SRNL joins a small and select group of NWAL members dedicated to the provision of particle reference materials, which provide fundamental and sustainable support to the IAEA's verification mission. The NWAL is a group of laboratories in IAEA member states officially qualified for the analysis of nuclear material and environmental samples, as well as the provision of reference materials for the Safeguards Analytical Laboratory (SAL).

Particle reference materials are essential to laboratories performing particle analysis of environmental samples for the IAEA. The materials are used for quality assurance, method development, and traceability of measurement results. Production of particle reference materials has been an IAEA Department of Safeguards' priority for many years because challenges in reliable production of particle reference materials have limited their availability.

As the world's center for cooperation in the nuclear field, promoting the safe, secure and peaceful use of nuclear technology, IAEA has a responsibility under the Treaty on the Nonproliferation of Nuclear Weapons to verify that nuclear materials and activities in non-nuclear weapon states are not diverted to nuclear weapons or other explosive devices. By detecting early the misuse of nuclear material or technology, the IAEA is able to provide credible assurances to the international community that countries are honoring their safeguards obligations. As part of this mission, the IAEA Safeguards Analytical Laboratories analyze a variety of samples collected by IAEA inspectors. To enhance and extend the IAEA Safeguards Analytical Laboratories capabilities, the IAEA coordinates a worldwide Network of Analytical Laboratories that includes 24 laboratories from 11 member countries, which provide support in:

- Environmental Sample Analysis,
- Nuclear Material Analysis,
- Material Characterization,
- Heavy Water Analysis, and
- Reference Materials and Quality Control.

## *Ad1\_SRNL\_NWAL\_Qualification*

The qualification is the culmination of more than six years of research and development and technology maturation sponsored by the National Nuclear Security Agency (NNSA) of the U.S. Department of Energy, Office of Nonproliferation and Arms Control, Office of International Nuclear Safeguards, Safeguards Technology Development program. The project was initially seeded as part of the SRNL Laboratory Directed Research and Development program in mid-2010s. Work with the IAEA was supported through the U.S. Department of State, Bureau of International Security and Nonproliferation. This work was conducted in collaboration with Pacific Northwest National Laboratory and Los Alamos National Laboratory.

SRNL was previously qualified to the IAEA NWAL for Nuclear Material Analysis in February 2016 for Thermal Ionization Mass Spectrometry of plutonium. In 2022, SRNL added qualifications for Davies-Gray uranium assay and Isotope Dilution Mass Spectrometry for uranium and plutonium, also under the Nuclear Material Analysis area of support.

Savannah River National Laboratory is a multi-program federally funded research and development center that's managed and operated by Battelle Savannah River Alliance, LLC ([BSRA](#)) for the United States Department of Energy's Office of Environmental Management. SRNL puts science to work to protect the nation by providing practical, cost-effective solutions to the nation's environmental, nuclear security, nuclear materials management, and energy security challenges (<https://srnl.doe.gov/>).

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