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Keeping it moving: New X-ray at SRS next step to waste removal

AIKEN, S.C. (February 16, 2022) - With the recent installation of equipment at the Solid Waste Management Facility at the Savannah River Site (SRS), newly generated transuranic (TRU) waste can now be characterized and certified by the National TRU Program, paving the way for off-site shipment and disposal at the Waste Isolation Pilot Plant (WIPP).

The equipment, a Real Time Radiography (RTR) unit, utilizes an x-ray system to allow the contents of waste containers (e.g., 55-gal drums or standard waste boxes) holding radioactive waste to go through a non-destructive examination (NDE).

WIPP has specific standards for the waste containers permitted for disposal in their underground repository. The NDE portion of characterization verifies and validates that the waste within each container matches the documentation provided by SRS and that it does not contain any WIPP prohibited items, without operators having to physically open the TRU waste container.

“The TRU waste we have shipped off-site in the past few years had already been characterized using equipment that was removed from the SWMF several years ago,” said Kerri Crawford, Solid Waste Programs Manager for Savannah River Nuclear Solutions (SRNS), the managing and operating contractor at SRS. “Operation of this equipment, in conjunction with other TRU waste characterization equipment installed at the Solid Waste Management Facility last year, will allow new TRU waste generated from SRS operations to be certified and ultimately shipped to WIPP.”

The term transuranic refers to elements with an atomic number greater than that of uranium (92). TRU wastes typically consist of protective clothing, tools, rags, equipment and miscellaneous items contaminated with small amounts of plutonium.
This equipment is owned by the Department of Energy’s Central Characterization Program for use throughout the DOE Complex. It was previously used by Lawrence Livermore National Laboratory, then sent for refurbishment before being provided to SRS for use in the Solid Waste Management Facility.

Remote operation allows for the characterization of a transuranic waste drum using the RTR unit.

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