

unique capabilities

# Analytical Laboratories

SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC



*Accountability*

*Nuclear Safety*

*Process Control*

*Chemical Makeup Validation*

*Liquid Waste Analyses*

*Quality Control Verification*

## Thermal Ionization Mass Spectrometry

### Overview

The distribution of isotopes within uranium and plutonium materials, are precisely and accurately measured using Thermal Ionization Mass Spectrometers (TIMS). In addition to isotopic abundance measurements, isotope dilution techniques are applied to measure uranium and plutonium concentration on a wide variety of materials processed at the SRS.

### Features

- Precise and accurate measurements
- Automated instrumentation
- Calibrated electronically with no certified reference materials needed
- Flexible sample preparation techniques for different sample types and content
- Participation in a variety of external programs, including the NBL Safeguards Measurement Evaluation Program; the LANL Plutonium Metal Standards Exchange Program; and the Regular European Inter-laboratory Measurement Evaluation Program