

Mackenzie McNabb

Savannah River Nuclear Solutions
(803) 952-8179, mackenzie.mcnabb@srs.gov

For Immediate Release

SRNS Interns Inventory the Geological Core Repository

The Site's Unique, Irreplaceable, and Tangible Rock Library

AIKEN, S.C. – (July 19, 2024) Savannah River Nuclear Solutions (SRNS) interns recently performed an inventory of the Geological Core Repository, a warehouse of sediment and rock cores from across the Savannah River Site (SRS).

The SRS Geological Core Repository represents a unique and irreplaceable archive of subsurface investigations at SRS and the surrounding region. The rock “library” is home to over 1,200 cores stored in 22,000 boxes that create 35 miles of geological core.



Two Savannah River Nuclear Solutions (SRNS) interns help perform inventory verification at the Geological Core Repository. Harrison Powell, intern; Courtney Green, SRNS Geotechnical Engineer; Lilli Walker, intern; and James Williams, SRNS Construction Laborer.

News from Savannah River Nuclear Solutions

SAVANNAH RIVER SITE • AIKEN • SC 29808

“The core is a unique, irreplaceable, and tangible archive of over 50 years of subsurface investigation,” said Patti Bennett, SRNS Geotechnical Engineer. “The replacement value of the cores is estimated to be well over \$60 million.”

Core is used to understand sediment heterogeneity and physical properties; seismic hazard analysis; predict groundwater movement and the behavior of contaminants and mitigants; and add geotechnical rigor to facility siting and foundation design. In the broader scientific community, core can also be used for university research, studies conducted by state and federal geologic surveys, and for museum display.

“Over the years, sunlight and other environmental factors have degraded the cardboard boxes containing sediment cores,” continued Bennett. “It is so important to have a complete and accurate core listing for SRS and the community. The interns have done a fantastic job under difficult conditions to make this possible.”

SRS Design Engineering interns Lilli Walker, a sophomore at Georgia Southern University, and Harrison Powell, a senior at University of Georgia, were hired to work with Structural Mechanics and Geotechnical Engineering this summer.

“This was great hands-on fieldwork where I learned about the unique attributes of the core library,” said Walker. “Learning about the processes of drilling and collecting core samples was both interesting and rewarding. This inventory creates better access to geological core.”

“I really enjoyed learning about this hidden resource at SRS,” said Powell. “My favorite part was getting to look inside some of the boxes. It was hard to conceptualize that the core sample I was looking at was sometimes over 200 feet below the surface and millions of years old.”



SRS Geological Core Repository is home to over 1,200 cores stored in 22,000 boxes.

During the inventory process, the student interns worked with Geotechnical Engineer Courtney Green and Construction Laborer James Williams to digitally log each item. Each log included the shelf location, core name, box color, box condition, and core depth. Discrepancies from previous inventories were noted, and some items were too degraded to be verified.

News from Savannah River Nuclear Solutions

SAVANNAH RIVER SITE • AIKEN • SC 29808

The completed inventory will be used to develop a prioritization and disposition plan for individual core samples. Long term plans include finding a more suitable facility for the core and making the resources more readily available to stakeholders and the scientific community.

Savannah River Nuclear Solutions, a Fluor and HII partnership company, is responsible for the management and operations of the Department of Energy's Savannah River Site, located near Aiken, South Carolina.

SRNS-2024-1476