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For Immediate Release

SRS contractors collaborate for time/cost saving improvement with implementation of new sample laboratory

AIKEN, S.C. (February 14, 2024) – The Department of Energy’s prime contractor at the Savannah River Site (SRS) recently worked closely with EM’s national laboratory to create a new sample analysis laboratory in one of the Site’s production areas that will decrease processing downtime and save taxpayer dollars.

The technical safety requirements for operating a piece of equipment known as the General Purpose Evaporator (GPE) require that all solution fed to the GPE be basic rather than acidic. The GPE, located in the Site’s H Area Outside Facilities, concentrates low-level radioactive solutions from various sources, including sump material, leaks, lab waste and rainwater.

“The GPE helps concentrate the waste to ensure the Canyon produces as little as possible,” said H Area Laboratory Project Lead Engineer Regina Marquez of Savannah River Nuclear Solutions, the Site’s managing and operating contractor. “To ensure the facility is in compliance with the technical safety requirements, we sample the solution in the tanks that feed the GPE prior to processing. If the sample results come back acidic, we add caustic, a strong base that is soluble in water, to bring the pH up to basic levels.”

Until the recent addition of the H Area laboratory, samples from the GPE feed tanks were sent across the Savannah River Site to the Savannah River National Laboratory (SRNL) for analysis.

“The process of pulling samples, packaging them, sending them approximately 10 miles across SRS and then giving SRNL time to sample could take as little as one to two days, and at times, take as long as six days, depending on what day of the week the sample was pulled and the workload of the laboratory,” Marquez explained. “It was determined that this downtime could be eliminated with the creation of a laboratory in H Area that could do the sample analysis as needed.”

Establishing a new laboratory involved procurement of a new piece of analytical equipment and ensuring all safety and laboratory standards were met.

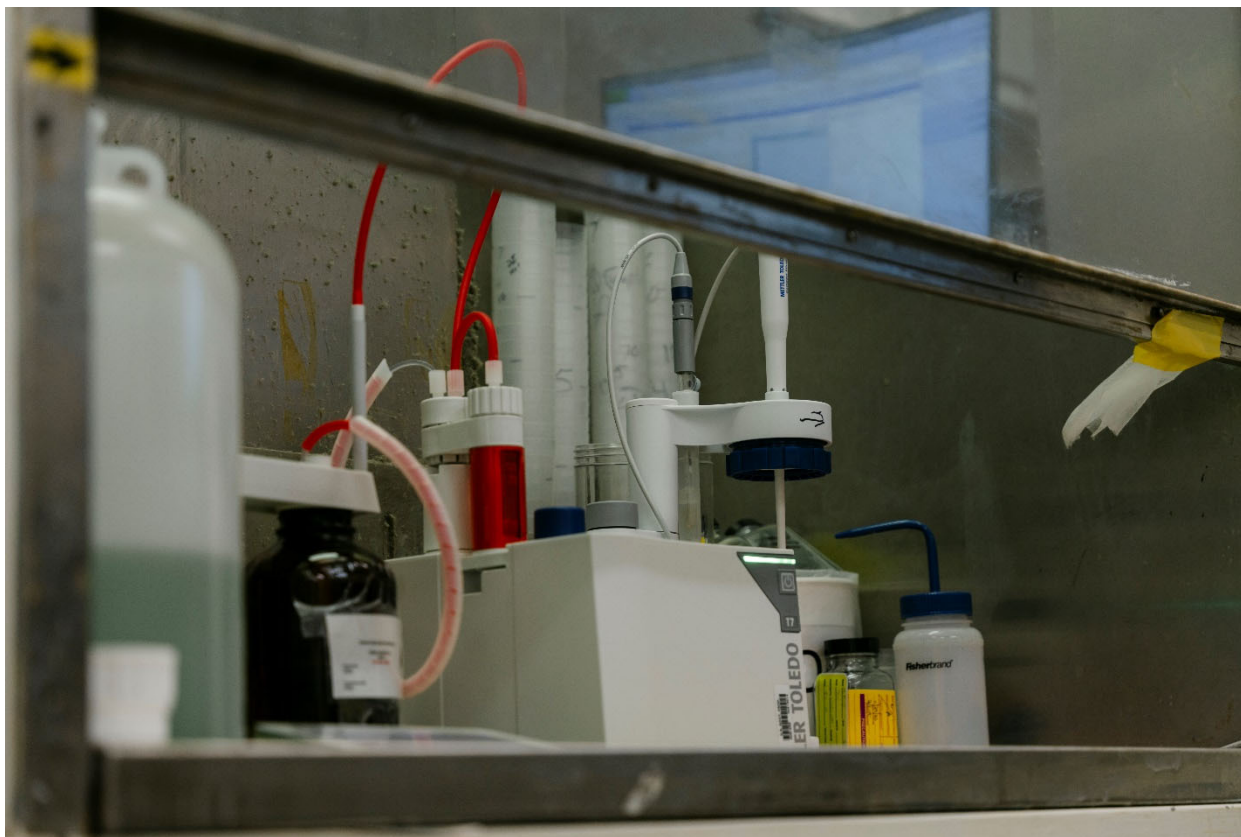
“SRNL was very supportive of our efforts to implement the lab by ensuring we met all technical requirements so that our sample analysis would be in compliance with laboratory standards. Even the simplest lab analysis is complicated when it involves maintaining the high standards of safety associated with our type of work,” Marquez said.

SRNL also helped write the procedure needed to run the analytical equipment and to train H Canyon operators on its use.

“This was a major factor in getting the lab up and running, as H Canyon Operators had never performed this type of work before,” continued Marquez. “This project required all hands-on deck and SRNL stepped up.”

Since implementation of the lab, the downtime due to sample analysis has reduced from 2-6 days to four hours at most. “This will lead to significantly reduced costs as well,” she said.

“DOE appreciates the effort and collaboration between SRNL and SRNS to implement this time and cost saving laboratory,” said DOE-Savannah River Senior Program Manager Jeff Bentley. “SRS prides itself on continuously improving and looking for better and more cost-effective ways to safely perform some of the Department’s most important nuclear related missions.”



The new H Canyon laboratory utilizes an existing and unused fume hood in H Canyon. This small set up will lead to time and cost savings when sampling solution from the General Purpose Evaporator.

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