Savannah River Mission Completion Laboratories

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SRMC SAVANNAH RIVER MISSION COMPLETION®

BWXT
BWX Technologies, Inc.

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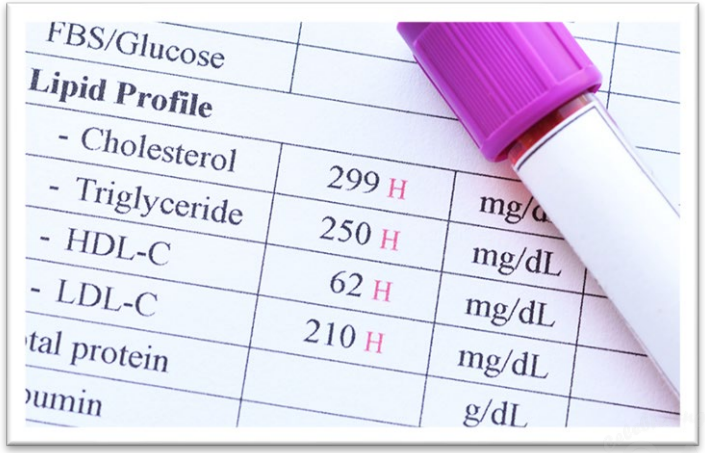
SRMC Laboratories - Power as One

- **SWPF, DWPF and ETF Laboratories merged under one umbrella unifying the overall analytical capabilities for SRMC.**
  - Expanded range of analytical capabilities
  - Standardization of laboratory practices and qualification program
  - Standardization of Advantage of specialized technical expertise across of SRMC

- **SRMC Laboratories Mission:**
  - Perform routine process sampling and analysis to obtain analytical data at several points in the process to verify the process is working as expected.
  - Sampling and analysis to support troubleshooting of the process when upset conditions or non-conformities occur.
  - Verification of in-line process monitoring instruments.
  - Special studies
  - Product Verification



Product Verification

- **SWPF Laboratory**
  - Ensure the three product streams comply with process requirements of the downstream facilities before transferring.
- **DWPF Laboratory**
  - Verify the quality of the final glass product and long-term storage requirements are met.
- **ETF Laboratory**
  - Verify removal of chemical and radioactive contaminants of processed water.
  - Analysis of low-level radioactive wastewater from F and H Tank Farms.
- **Saltstone and Tank Farm**
  - SRMC Laboratories
  - Savannah River National Laboratory

SWPF – Salt Waste Processing Facility
DWPF – Defense Waste Processing Facility
ETF – Effluent Treatment Facility

SRMC Laboratories

- **SRMC Laboratories provide 24/7 support**
  - *Four Shift rotation and Day group*
  - *Approximately 100 Laboratory personnel*

- **Laboratory Technician Training Program**
  - Safety Practices
  - Laboratory Fundamentals
  - Analytical Equipment
    - *On The Job Training*
  - Continuing Training

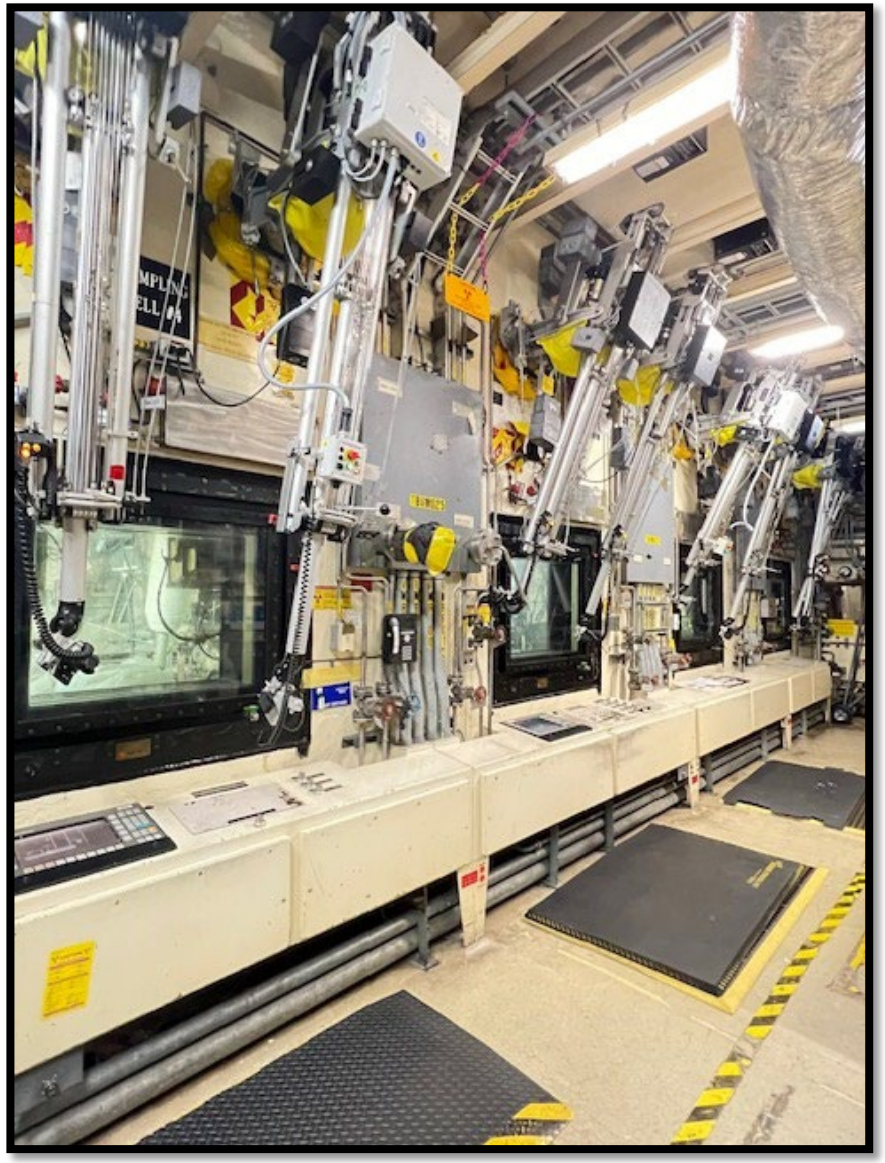
Samples analyzed from 2022 - current

Laboratory	Analytes
Defense Waste Processing Facility	11,099
Effluent Treatment Facility	9,029
Salt Waste Processing Facility	9,177

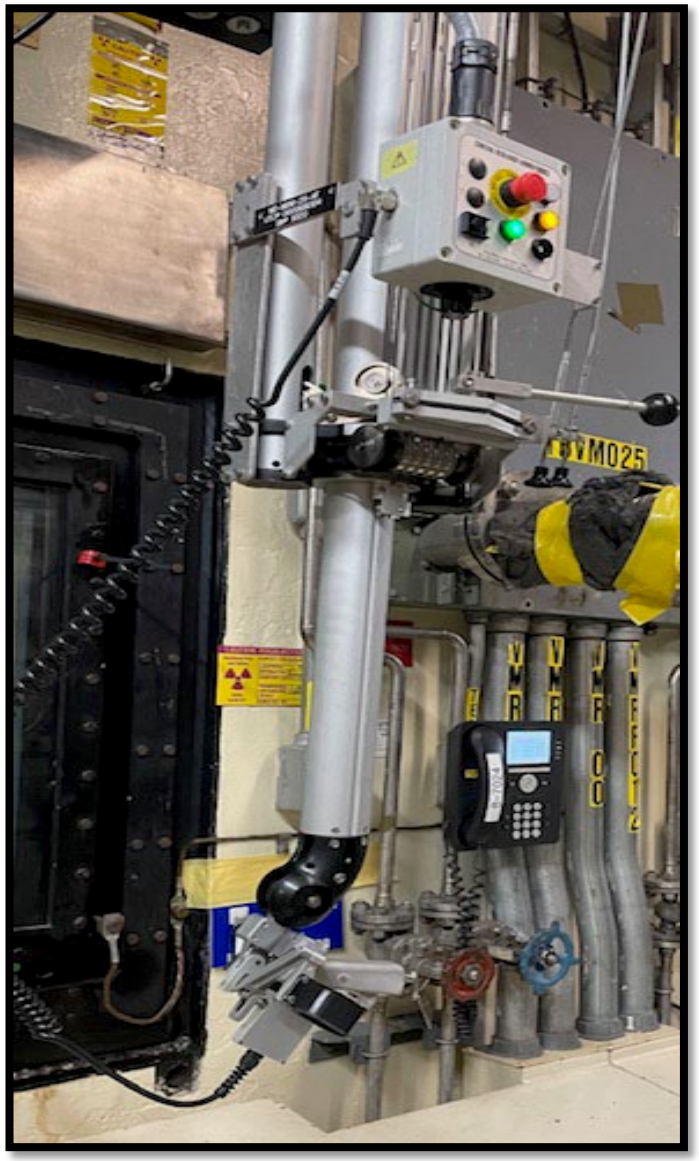
Safety

- **Various controls built into the Laboratories minimize personnel exposure to chemicals, radiological material and for contamination control.**
  - Cells with Manipulators
  - Gloveboxes
  - Samplers
  - Radiohoods
  - Fumehoods
  - Radiobenches

Cells and Manipulators



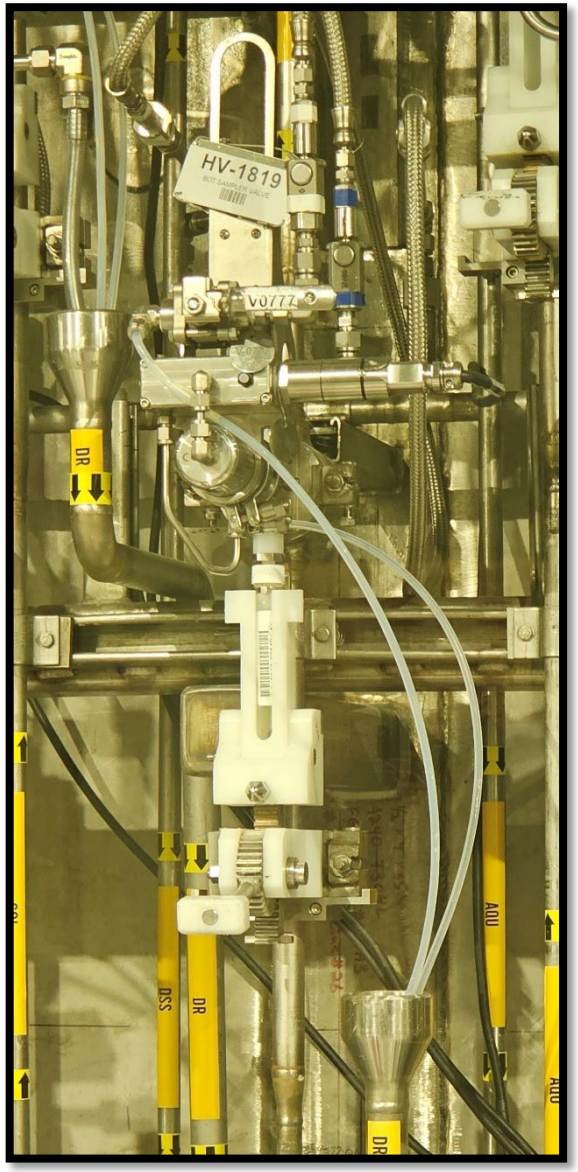
Manipulators



Glovebox

Sampling Capabilities

- **SWPF and DWPF Laboratory samplers piped directly from the process tanks to the Laboratory.**
  - Cells and Gloveboxes
- **Samplers are in Cells or Gloveboxes to minimize exposure to radiation.**



Radiohood and Radiobench

Radiohood

Radiobench

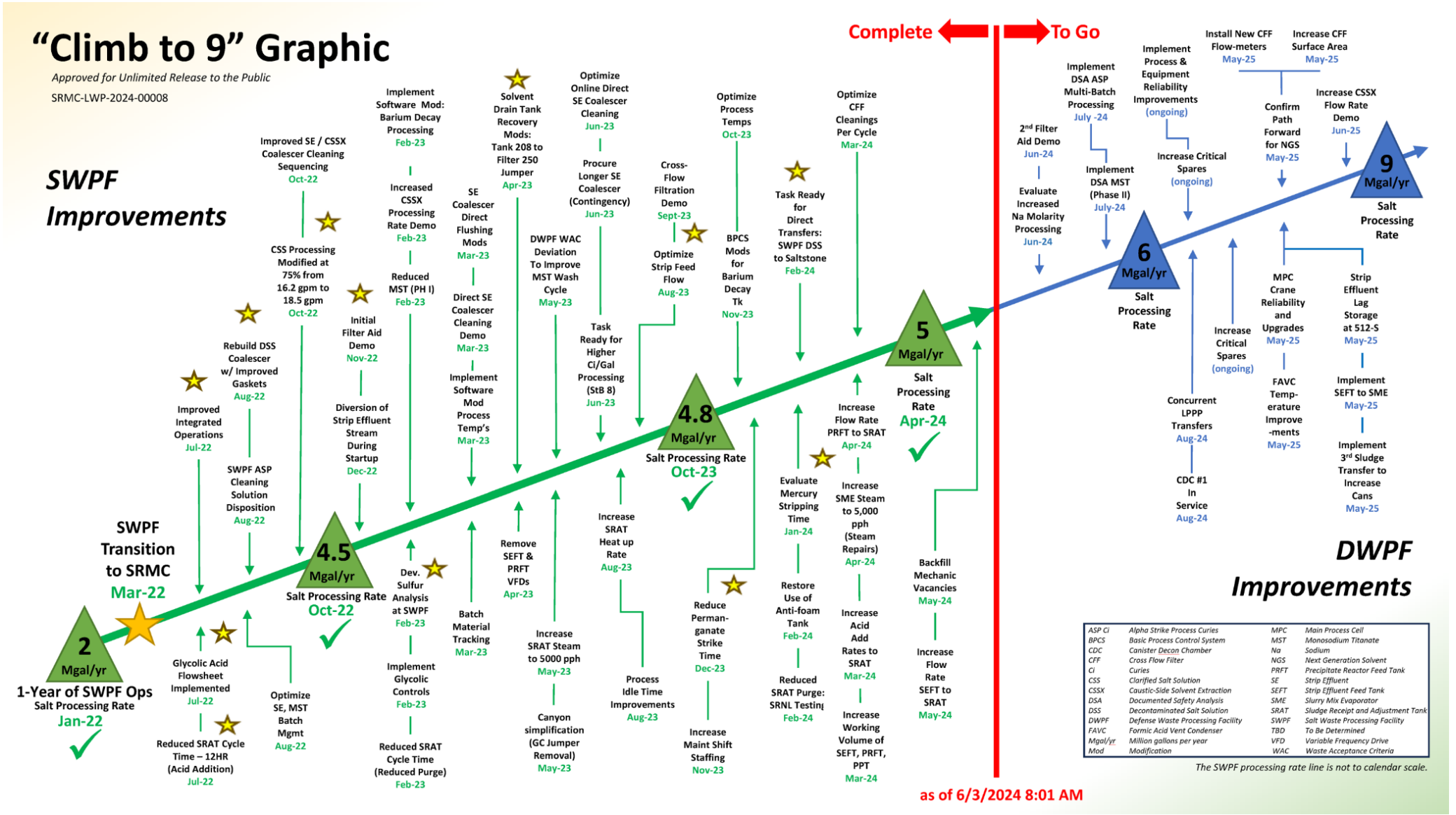
Continuous Improvements

- **Expanded Analytical Capabilities**
  - New Analytical Instruments
  - Internalize analysis scope

- **Manipulators**
  - SRMC Maintenance team dedicated to repair and preventive maintenance.
  - Centralized repair shop at DWPF.
  - Identified and tested parts to extend life of manipulators

- **Reliability**
  - Equipment Redundancy
  - Upgrade of instruments
  - Spare parts inventory

Continuous Improvements



Summary

- **SRMC Laboratories mission is to safely provide analytical support to the facilities.**

- **The Laboratories support both the day-to-day analyses, in addition to future planning to support the "Climb to 9" improvement initiatives.**

- **Continuous improvements of processes allows the Laboratories to consistently provide analytical results, meeting turnaround times to support SRMC throughput goal of 9 million gallons of salt waste processed per year.**