



SRS Radiological Evidence Examination Facility (REEF)

The project involved the significant modification and transformation of an existing 33,000 square foot laboratory at the Savannah River Site, previously the laboratory was used for environmental sample analysis, to a specialized facility for the receiving, handling, and forensic examination of materials treated as evidence. The facility included unique features required to handle radiological/biological hazards. Forensic equipment related to special analyses and investigations was accommodated in the design process. Pro2Serve completed the detailed design and will provide construction support for procurement, construction, start-up, and preparation as-built documentation.

The scope of work included replacing all laboratory hoods and laboratory fixtures/casework, ceilings, flooring, floor finishes, wall finishes, and lights as well as new gloveboxes, and the addition of a two vehicle truck bay. The existing building structure did not meet several code requirements and had to be modified to meet current standards and requirements.

Extensive analyses for seismic and wind loads were performed and significant internal and external bracing additions and modifications were designed. The HVAC system was replaced due to the extensive changes required for the control of radiological hazards.

HVAC pressurization boundaries were used for partitioning and containment. The general HVAC approach was to set up three pressure boundaries (zones) to contain the most hazardous areas in the centrally located laboratories/lab hoods and to employ HEPA filtration to control contamination during normal operations as well as during potential upset scenarios. Some rooms had stainless steel liners added to the walls to aid in decontamination. Emergency power and UPS systems were added for backup of important functions/systems, such as the containment ventilation. The facility included access control and secure communication features.

Horizontal design features included a parking lot, access roadway modifications, site grading, and the addition of new underground utility services. The design required an accelerated schedule and was performed on schedule in seven months. This required close coordination with all team members from Savannah River Site, the user, and Pro2Serve.

