

Savannah River National Laboratory

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BERAC Meeting

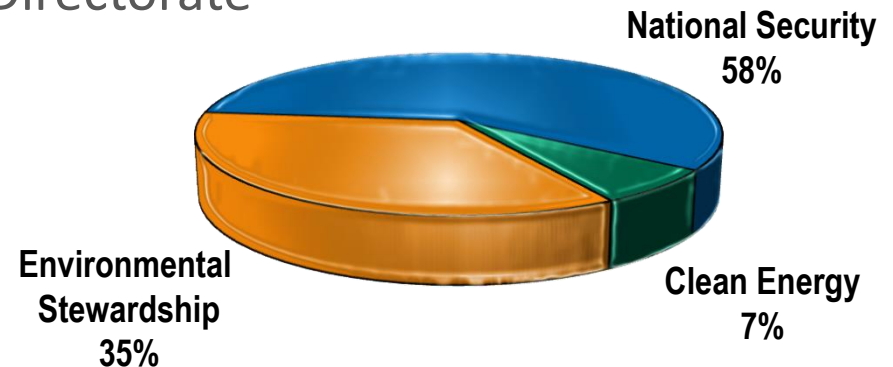
March 22 – 23, 2016

Laboratory mission and overview

- SRNL provides technical innovation for the DOE Office of Environmental Management missions as well as for other DOE offices and for other federal agencies.
- SRNL is a multiprogram laboratory
 - 3 Business Unit Directorates
 - Environmental Stewardship, National Security, Clean Energy
 - Cross-Cutting Science and Technology Directorate
 - Nuclear Materials Programs Directorate

Key Business Areas

- Environmental Remediation and Risk Reduction
- Nuclear Materials Processing and Disposition
- Nuclear Detection, Characterization and Assessments
- Gas Processing, Storage and Transfer Systems



SRNL FY15 Execution

Core capabilities: research & facilities

- Current BER-related core *research capabilities*
 - Characterization of contaminant transport
 - Environmental monitoring and modeling
 - Mitigation of contaminant movement
 - Soil remediation
 - Risk and decision analysis
 - Radioecological research
 - Atmospheric modeling
 - Characterization of complex systems
- Current BER-related core *facilities*
 - SRNL Radionuclide Test Bed Complex
 - Conduct investigations at the appropriate temporal and spatial scales to advance system understanding along a continuum from proof of concept, pilot-scale testing, field testing, and modeling.
 - Especially successful at providing technical direction for long-term modeling and regulatory decision making.
 - Highly-instrumented atmospheric radiation measurement site

Future strategic science priorities

- The principal future science priority for SRNL is to enable DOE EM to meet its mission goals through the advancement and application of innovative science discoveries. Of specific interest to BER are:
 - Understanding systems far from equilibrium
 - Understanding complex, inaccessible systems
 - Coupling multiscale experiments with modeling
 - Atmospheric sciences
- Key science areas to advance in this endeavor include materials science, environmental science, and characterization methods.

Future strategic partnerships

- SRNL intends to engage with other national laboratories and academic institutions in partnerships that will enable DOE EM to meet its mission goals, such as,
 - ORNL for advancing strategies for tank waste separations
 - PNNL to advance solutions for the Fukushima recovery
 - LBNL in investigation of fate and transport of radionuclides in SRS environments
- SRNL is engaged in the recent Funding Opportunity Announcement from the DOE SC BES for EFRCs in scientific research relevant to the DOE EM mission. SRNL looks forward to supporting BER as BER pursues the BER-specific basic research needs coming out of the recent Basic Needs Report.
- SRNL now manages the DOE EM Minority Serving Institution Program
 - An important mechanism for developing a diverse set of students into the next generation of scientists who will be part of the continuum of researchers who provide the science for DOE EM to be successful in completing its challenging mission.