

Recommendation #262
Future Missions

Background

The Department of Energy's (DOE) Savannah River Site (SRS) is a world-class facility with many unique achievements to its credit [1, p. 8]. For example, SRS has the best safety record in the DOE Complex. Its Defense Waste Processing Facility (DWPF) is the only operational high-level waste vitrification facility in the nation. Its interim Actinide Removal Process (ARP) and MCU Modular Caustic Side Solvent Extraction (CSSX) Unit (MCU) are the only operational radionuclide decontamination facilities in the nation for liquid wastes. These interim facilities will be replaced by 2015 by the Salt Waste Processing Facility (SWPF) with greater decontamination rates. SRS is the site where the first two high-level waste tanks in the nation were closed with state and national regulatory approval. SRS produces all of the nation's tritium, not only making it a leader in the storage of hydrogen but also in the development of hydrogen-based fuel-cells for vehicles. Recently, SRS opened its first hydrogen refueling station. It is a leader in the shipment of Transuranic (TRU) wastes to the WIPP repository in New Mexico (NM). SRS is consolidating Aluminum-based Spent Nuclear Fuel (SNF) and Surplus Plutonium (Pu) as it has with other materials in the past (e.g., TRU wastes removed from Mound and Battelle Columbus). Cleanup strategies have saved hundreds of millions of dollars and regulatory milestones are on, or ahead of, schedule. The SRS Citizens Advisory Board (CAB) received the prestigious EPA award for Citizens Excellence in Community Involvement. And, based in part on a recommendation by the SRS CAB, public tours of SRS have begun.

SRS also has a vision for its future built around its current strengths in the five strategic theme areas defined by DOE: Energy Security; Nuclear Security; Scientific Discovery and Innovation; Environmental Responsibility; and Management Excellence [1]. For Energy Security, SRS is planning an Energy Park, expanding biomass crops, and, among other plans, converting excess nuclear materials to "beneficial reuses" [1, p. 23]. Nuclear Security is the primary driver at SRS. The emphasis on Scientific Discovery and Innovation leverages the national potential of the Savannah River National Laboratory (SRNL) to increase future missions and engage the region in education [1, p. 21]. Environmental Responsibility is the "keystone" in DOE's successful resolution of its 50-year legacy of nuclear weapons production. As one of the largest natural sites in the Eastern US, SRS is recognizable from space orbit by its dark-green color. Management Excellence provides the discipline to move SRS forward, addressing "the formidable challenges of the future" [1, p. 11].

Comments

SRS CAB lauds the SRS achievements and strongly supports the SRS Vision, which articulates an expanded scope of work beyond EM's current mission of cleanup and remediation to "Make more of the site available for new missions and insure

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infrastructure needs are met” [1, p. 9]. In addition, we heartily endorse the reaffirmation of SRS's designation as a National Environmental Research Park (NERP) and the commitment to not only advance NERP status [1, p. 24], but also to establish an energy research park at SRS [1, p. 13]. The CAB desires that DOE-SRS remain a responsible landlord through environmental stewardship and use of the abundant scientific talent at SRNL, the Savannah River Ecology Laboratory (SREL), the USDA Forest Service (USFS), and other site contractors, to address current and emerging environmental issues of national importance.

These issues have been clearly identified by the US National Academy of Engineering in their 14 "Grand Challenges" and include the need to develop the technologies to provide access to clean water; to sequester carbon and develop alternative energy sources; and to prevent nuclear terror [2]. As indicated in its Strategic Plan, SRS and SRNL have the tools to address these grand challenges.

DOE has announced that the Stimulus Budget (American Recovery and Reinvestment Act, or ARRA) plans to invest \$1.6 billion by hiring 3,000 temporary workers at SRS [3]. To the extent possible and without interfering with ARRA projects, the CAB wants to see that these investments support future missions and retention of a Best in Class workforce.

The Stimulus Budget is also spending \$1.2 billion for science among the 10 National Laboratories around the US, including \$277 million to establish about 12 Energy Frontier Research Centers. These efforts are sponsored by the DOE Office of Science; however, SRNL is presently not on the list of funding recipients [4].

SRNL provides scientific support to EM to accomplish its mission. However, EM is presently funding the infrastructure costs for all SRS site contractors. But at a time of limited resources, if other funding sources become available to pay for infrastructure costs, it will be easier for SRS to continue to provide scientific support for the EM missions at SRS.

Recommendation

The SRS CAB recommends that DOE:

1. Assure that the projects funded by the ARRA stimulus package be executed such that any required infrastructure modifications have the potential to support future missions.
2. Include reports on infrastructure modifications and the status of jobs (including the number of jobs created, the job skill types required, and the job training to be provided) in all future ARRA-related project briefings to the CAB.
3. Provide an annual briefing to the CAB on SRS's progress in executing the SRS Strategic Plan [1]. Pay particular attention to those areas not routinely covered in

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- DOE Environmental Management (EM) program briefings (Nuclear Materials, Waste Disposition, and Area Completion), that is, SRNL technology achievements, SRS Corporate Board successes in helping to improve SRS missions [1, p. 26], and advances in Management Excellence. Schedule the first of these briefings for the September 2009 full CAB meeting.
4. Formulate an aggressive SRNL business plan that addresses how its search for increased funding from sources other than DOE-EM will be achieved, including the DOE Office of Science [1, p. 21]. Provide a summary of this planning effort in future CAB briefings on the DOE SRS Strategic Plan.

References

1. US Department of Energy – Savannah River Operations Office (2009, 4/15) CAB comments on the *U.S. Department of Energy Savannah River Site Strategic Plan, March 2009 (SRS-SP-09)*.
2. www.engineeringchallenges.org
3. www.recovery.gov; and <http://www.energy.gov/southcarolina.htm>
4. www.energy.gov/news2009/7083.htm.

Agency Responses

[Department of Energy-SR](#)