# A Retrospective Management Perspective on Nearly 20 Years of the Savannah River Site Citizen Advisory Board – 13078

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## ABSTRACT

The Department of Energy, Office of Environmental Management (DOE EM) program has invested in site specific advisory boards since 1994. These boards have served as a portal to the communities surrounding the DOE sites, provided a key avenue for public involvement, and have actively engaged in providing input and feedback that has informed clean up and priority decisions made by EM. Although the EM program has made considerable progress in completing its mission, work will continue for decades, including work at the Savannah River Site (SRS). It is reasonable to assume the advisory boards will continue in their role providing input and feedback to EM.

The SRS Citizen Advisory Board (CAB) formed in 1994 and has issued 298 recommendations through September 2012. Although the effectiveness of the board is not measured by the number of recommendations issued, the recommendations themselves serve to illustrate the areas in which the CAB is particularly interested, and offer insight to the overall effectiveness of the CAB as a means for public participation in the EM decision making process.

## INTRODUCTION

Established in 1989, the mission of EM is to complete the safe cleanup of the environmental legacy resulting from five decades of nuclear weapons development and government-sponsored nuclear research activities. It is responsible for environmental restoration, waste management and disposition, technology development, and facility transition activities.

The SRS CAB is one of eight Environmental Management Site-Specific Advisory Boards (EMSSABs) funded by DOE, and includes approximately 25 members from the region surrounding the SRS who participate for two-year terms. The CAB provides advice and recommendations to DOE on environmental remediation, waste management and related issues. Agency Liaisons from DOE, the U.S. Environmental Protection Agency-Region 4 and the South Carolina Department of Health and Environmental Control, also participate in discussions, but are not members of the Board.

The various committees within the CAB meet to discuss environmental management issues involving the SRS and its impact on the surrounding area. Issues covered by the committees involve environmental clean-up of the site, budget management, nuclear materials handling, historic preservation, plans for the future site uses, and more. All regular meetings of the SRS CAB are open to the public and public participation is encouraged.

The CAB is headed by a Chair and Vice Chair. The remaining board members are divided into four issues-based committees, specifically the Waste Management Committee, the Facilities Disposition & Site Remediation Committee, the Nuclear Materials Committee, and the Strategic & Legacy Management Committee. These committees have changed over time to reflect the activities at the site. For example, the Facilities Disposition & Site Remediation Committee was established in 2003 to coincide with an increase in DOE-SR's excess facility decommissioning activities.

On October 25, 1994, the SRS CAB issued its first recommendation which was titled "Independent Scientific Peer Review of Technical Documents". It recommended "that significant environmental documents produced by SRS, such as the Site's annual Environmental Monitoring Report, receive an appropriate level of independent technical review before being published as final." As of September 25, 2012, the SRS CAB has made 298 recommendations.

With nearly 20 years of involvement, and a cleanup effort that is likely to require an additional 30 or more years, understanding how the CAB has engaged in the challenging efforts of environmental cleanup at the SRS is important.

## BACKGROUND – EM PUBLIC PARTICIPATION

Public participation has been a topic of discussion at the Waste Management Symposium (WMS) since its beginning in 1978. At the 1978 Waste Management Fuel Cycles Symposium, a paper titled, "The Public and the Nuclear Management Question: Assessing Information and Dissemination", [1] was presented. While this paper focused largely on the public perception associated with nuclear power, its conclusions are equally relevant to the EM program. For example, Hienaber et. al. noted that studies of public opinion revealed that people at large understand that they know little or nothing about nuclear technology, and so within this context of uncertainty, it is reasonable to expect that people will be dubious. That paper also pointed out the challenge faced when the affected industry and government are aligned on the same side of a publicly controversial issue. These same conclusions hold today – while some of our SRS CAB members are knowledgeable of the technologies and operations employed at the SRS, most are not, and they know they are not. And no one familiar with the history of the EM program could argue that the program is not controversial.

The 1993 WMS saw papers focused on the transformation of how DOE communicates with the public [2], and lessons learned from experiences at public meetings [3]. By 1994, papers at the WMS were beginning to illustrate the transformation – from talking TO the public to talking WITH the public [4, 5].

In 1989 when EM was established, the scope and risks of the work were largely unknown. Nevertheless, EM leadership recognized that progress toward cleanup would depend upon commitment, innovation, and collaboration with the affected communities. In search of mechanisms for such collaboration, the Agency joined in a 1992 federal dialogue to explore citizen involvement to address such issues as cleanup levels, future use and safety on the site [6]. The

Keystone Center, a non-profit environmental conflict-management group, convened the working dialogue among representatives of federal government agencies; state, Tribal and local governments; and regionally- and locally-based environmental, community, environmental justice, Native American and labor organizations. The goal was to develop consensus policy recommendations, aimed at improving the process by which federal facility environmental cleanup decisions were made. The EMSSAB was one result of this effort.

The charter for the EMSSAB was approved under the Federal Advisory Committee Act (FACA) in 1994. FACA was passed in 1972 and establishes the requirements and constraints for any advisory committee established to offer recommendations to the Executive Branch. This law establishes specific processes for engaging the public and considering their feedback in agency decisions. With a large scope of issues for consideration within the Department of Energy's cleanup program, the local boards such as the SRS CAB are able to focus on the unique aspects of their communities and the specific site.

At SRS, federal and contractor managers play an integral part in assuring attentiveness to CAB involvement. On the federal side, there is a dedicated staff member who is charged with day-to-day interaction with CAB members and preparations for CAB meetings. In addition, the site assigns two members of the federal Senior Executive Service to serve as co-deputy Designated Federal Officials (a term from the FACA law). These executives work closely and cooperatively with the CAB to assure effectiveness and ensure CAB issues receive appropriate management attention. The SRS Site Manager also attends each meeting, provides opening remarks, and responds directly to questions asked of him by CAB members during the meeting.

Similarly, presidents of the primary site contractor organizations attend meetings, providing overviews of accomplishments and responding to questions when requested by DOE. Senior federal staff members are assigned to work with CAB committee chairs to develop an annual work plan, listing topics to be presented to the CAB during the year. These individuals usually attend the meetings and offer responses to questions or help clarify points of CAB discussion, as appropriate. They also communicate, sometimes real time, with other staff at the site to get clarification or to take appropriate actions to follow up on a topic of CAB interest. This dedication of personnel to the CAB discussions indicates the importance to SRS of CAB advice.

## REVIEW OF CAB RECOMMENDATIONS

### Categorization of Recommendations

Table 1 and Figure 1 illustrate the broad categories of recommendations issued by the CAB since 1994. It is not surprising to see the top five categories being solid waste, liquid waste, planning (which includes budget related recommendations), nuclear materials, and soil and groundwater remediation/facilities decommissioning. These five categories account for 80 percent of all recommendations issued. The sub-categories of recommendations total to greater than 100%, illustrating well the complexity and inter-relatedness of topics. For example, a single recommendation focused on budget issues also could easily encompass a waste or remediation

technical issue.

**Table 1: SRS CAB Recommendation Topical Areas**

| Category | Percentage | Sub-Category | Percentage |
|---|---|---|---|
| **Solid waste** | 19 | Transuranic Waste | 38 |
| **Liquid Waste** | 17 | Salt Waste | 25 |
| **Planning** | 16 | Budget | 44 |
| **Nuclear Materials** | 14 | Plutonium | 35 |
| **Remediation/Decommissioning** | 14 | Remediation | 75 |

Table 1 illustrates that the CAB does focus on the key EM programs, and puts its attention in those areas that are most critical to achieving the programs goals. The remaining 20 percent of recommendations include such topics as historic preservation, technology development, job training, public participation, Yucca Mountain (since SRS stores used fuel and solidified high-level waste awaiting deep geologic disposal), and regulatory issues, including recommendations on various programmatic environmental impact statements and the SRS Federal Facility Agreement (FFA). These topics also demonstrate that the CAB recognizes external actions that can impact the SRS (like programmatic environmental impact statements) and areas of interest to the community, such as historic preservation.

**Recommendations over time**

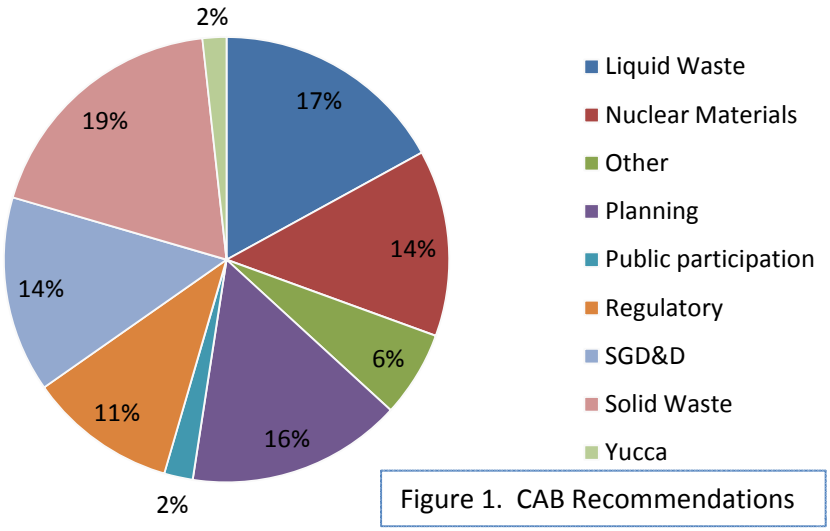


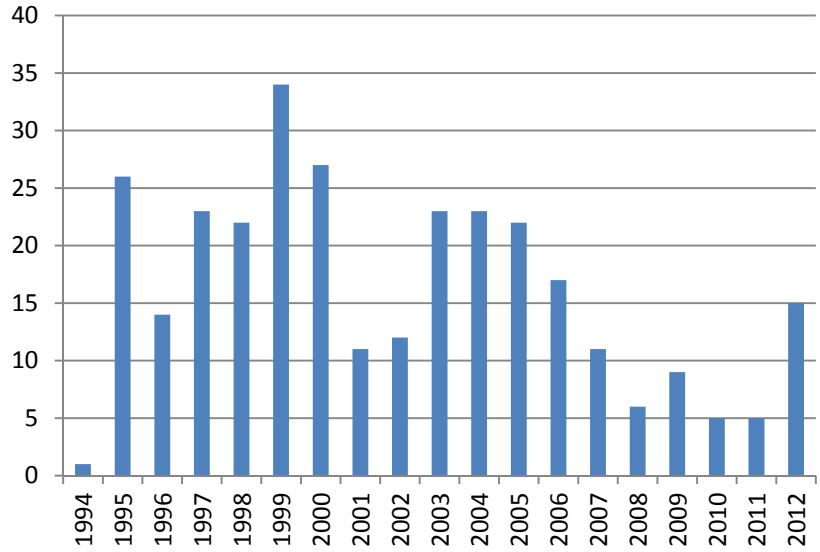

Figure 1. CAB Recommendations

In 1994, during its first year of operation, the CAB issued one recommendation. This first recommendation was titled "Independent Scientific Peer Review of Technical Documents" and recommended "that significant environmental documents produced by SRS, such as the Site's annual Environmental Monitoring Report, receive an appropriate level of independent technical review before being published as final." DOE-SR accepted the recommendation, and while the organization conducting the review has changed, the SRS annual Environmental Monitoring Report continues to receive an independent technical review before being published as final. The lasting nature of the impacts of the recommendations can be seen in other areas as well, and will be further discussed.

Figure 2 illustrates how the numbers of recommendations have varied over time. On average, the

CAB has issued approximately 16 recommendations each year. Important to note is that the recommendations issued are not used as a performance metric, and there is no annual target, nor, from a management perspective, should there be. The years with fewer recommendations still provided ample opportunity for SRS to exchange information and discuss EM project performance with the CAB full board and its committees. The dialogue that occurs at the meetings is an important form of communication among SRS federal and contractor managers, the CAB members, and members of the public who attend the committee or board meetings.

Figure 2. CAB Recommendations Over Time




**A closer look at some key CAB involvement outcomes**

The earlier years, from 1995 – 2000, were the formative years of the CAB and of EM work at SRS. Assuring that the direction of DOE's site cleanup was informed by the perspective of the public and the CAB was important. During this time the CAB focused on ways in which the SRS could proceed expeditiously and cost effectively in its cleanup activities. Their Recommendation Number 46, "Plug-In Record of Decision Approach", described their support for the DOE, EPA, and SCDHEC to use streamlined methods for arriving at remedial decisions while still ensuring that conditions and decision criteria are shared with the CAB, and thus with the public. [8].

Between the years 1995 and 2001, the CAB had a concerted focus on the actions taken to close the Old Radioactive Waste Burial Grounds (ORWBG), issuing seven recommendations. The ORWBG is a 76-acre facility in the SRS Burial Ground Complex that was used from 1952 to 1974 and was identified in the FFA as a waste unit requiring remediation under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). During operation, solid radioactive waste from SRS and other Department of Energy and Department of Defense sites was placed in open trenches and then covered with at least four feet of soil. The final remedial action

for the ORWBG consisted of the installation of a geosynthetic cover system that was completed in 2005. Throughout the CERCLA remedial action process, the CAB offered recommendations concerning the process and in support of the final remedy. The successful remediation of this waste unit would not have been possible without the support of the CAB.

The SRS operates a waste disposal complex for the disposal of Low Level Waste (LLW) generated on site and by the Naval Reactors Program. Three different disposal systems are employed – trenches, engineered cells, and above ground vaults. Each system is operated according to the requirements of DOE Order 435.1, Radioactive Waste Management, and conditions are established by the waste authorization statement and waste acceptance criteria (WAC).

In 1994, LLW disposal at the SRS expanded to include the use of large, robust, above ground concrete vaults in addition to slit trenches [9]. Due to the cost benefit of slit trench disposal, waste that had been emplaced in the vaults was reevaluated for slit trench disposal. The results revealed that some waste (specifically lightly contaminated soil) did meet the trench disposal criteria, and that it would be cost effective to remove that waste from the vaults and dispose of it in the trenches, thus restoring space in the vaults. An information and education effort with the CAB began in 1997, including presentations on radiologic performance assessment, composite analysis, waste generation forecasts, and the systems engineering analysis for all SRS waste streams. In 1999, the CAB issued a recommendation stating that "disposal of low activity LLW in the vault is needlessly using expensive vault space when instead it could meet the WAC for the trenches." This change in disposal practice resulted in a cost avoidance of approximately $63 million. The SRS continues to use the full suite of disposal options.

## CONCLUSIONS

These are just a few examples of how the CAB has been involved in meaningful ways with cleanup decisions at the SRS. The CAB remains focused on key EM cleanup areas, for example having consistently focused on the liquid waste program with recommendations provided in that area every year since being established. Stakeholder involvement is recognized as a critical element of the EM cleanup program. Early and informed input from concerned citizens helps assure cleanup dollars are wisely spent. While the CAB is an investment in and of itself, the highlighted results show the significant benefit that has accrued to the DOE from this investment.

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