

Envisioning Communications with Future Stakeholders - A Case Study Using the In-Situ Decommissioning of P-Reactor - 9285

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ABSTRACT

This paper will explore opportunities to expand the CAB's public outreach by the incorporation of technologies typically used in social networks and distance learning. Envisioning opportunities to engage next generation CAB members in public involvement will be delineated by retracing the decision process used with the in-situ decommissioning of P-Reactor at the Savannah River Site (SRS). This paper will discuss existing opportunities to enable another group of stakeholders to take part in the environmental policy decision making process regarding the inclusion of some very long lived radioactive constituents. The aim of the paper will be to locate places in the current process where alternate or parallel informational dissemination pathways could exist. These alternatives will incorporate the next generation's expectation for instantaneous information and universal ownership of hand-held communication devices. The goal of this paper is to use the present framework of CAB communications and add the components of virtual networking and distance learning in hopes of bridging the generational technology gap and extending the dialog to future stakeholders.

INTRODUCTION

The Department of Energy (DOE) Office of Environmental Management (EM) joined the national policy dialogue on Federal facility environmental cleanup in 1993 and received a Federal Advisory Committee Act (FACA) charter to set up local site-specific advisory boards (SSABs) in 1994. The aim was to improve cleanup decisions by reflecting priorities and concerns of stakeholders. These Citizens Advisory Boards (CABs) depend upon the existence of strong relationships between federal and state regulators, stakeholders, and private contractors.

SRS History

In the aftermath of WWII, The Savannah River Plant began its mission as a production facility for plutonium and tritium in the nuclear industrial complex. Its history was rooted in the secretive Manhattan Project, the now infamous DuPont contract for a one-dollar profit, and the civilian controlled Atomic Energy Commission (AEC). The construction of the plant began in 1949 with plans for 5 heavy water reactors named C, K, L, P, and R. The first reactor, R, was operational in December 1953 and P reactor went critical in February 1954. All five reactors at the Savannah River Plant were operational by March 1955.

The site is 310 square miles located on the Atlantic Coastal plain within the Aiken Plateau and the alluvial terraces alongside the Savannah River. In 1950 when it was sited, there were no power reactors and only a few production reactors in existence. The AEC Reactor Safeguard Committee established a "rule of thumb" that governed reactor placement. Sites were mapped out to include large buffer regions because it was assumed that periodic releases would occur and this isolated placement of the reactors would provide protection.

As commercial reactors came on line and the environmental movement raised safety concerns about nuclear reactors, the concept of “confinement” and “defense in depth” led to improvements of the Savannah River Plant’s older reactors. The P Reactor was fitted with seismic bracing, which gave the high hat its distinctive buttresses. These changes were accompanied by the political restructuring in the Energy Reorganization Act of 1974, which ultimately resulted in the formation of the Nuclear Regulatory Commission (NRC) and the Department of Energy (DOE). Further international developments in the Soviet Union led to the end of the Cold War and the ultimate shutdown of the reactors in 1989. Then the focus of the site changed to its latest mission, that of environmental remediation.

Throughout this storied history of weapons production, the site has remained a secure facility with a guarded nature and natural reluctance towards transparency. The immediate local population accepts this large neighbor as its proud partner in the nuclear industry. The downstream population, having little economic benefit from the plant, has always looked skeptically at the secluded “Bomb Factory” with rumored unnatural organisms. A tritium release in the 1990’s accentuated this need to communicate accurate information to all stakeholders about the Savannah River Site.

SRS-CAB Structure

The SRS-Citizen’s Advisory Board was established as a FACA chartered EM-SSAB and operates as a trusted conduit between the DOE and its affected communities. The foundation of this relationship between the DOE, state and federal regulators, and stakeholders is an open dialogue. This dialogue is dependent upon an informed public and open access meeting space. This exchange of information is often highly technical, laced with acronyms, and layered with discussions of uncertainty and risk. The structure of the Board and its mobile meeting schedule forms the platform for this dialogue.

The SRS-CAB convenes as a full board six times a year and sub-committees meet in intervening months. The full board meetings are two days long and conducted in various facilities in upstream and downstream locations. The issue based sub-committees meet close to the site in the evening. They are organized as follows: Strategic and Legacy Management, Waste Management, Nuclear Materials, and Facility Disposition and Site Remediation. At these sub-committee meetings, presentations and discussions develop into recommendations. These recommendations are the method designated to carry the advice to the DOE. The SRS-CAB has generated 260 recommendations on a broad range of topics guided by the yearly workplan.

The current SRS-CAB communication format is centered upon face-to-face meetings lasting two hours to two days. Depending upon the member’s proximity to the site, an additional one to five hours may be added to the commitment in traveling time. In between meetings, the committee’s work is accomplished by using mailings distributed by the administrator, electronic mail, the CAB and DOE websites, telephone calls, and electronic conferences.

SRS-CAB Membership

The Standard Operating Procedures (SOPs) and Internal CAB Guidance sets guidelines to ensure membership representative of the community. The SRS-CAB works hard to include members from a geographically widespread and diverse population as evidenced by the structure of the traveling board. This mobility in meeting space along the Savannah River has produced active members from the site boundary to the sea and from both Georgia and South Carolina state capital cities. CAB members are reimbursed for their travel, which enables the incorporation of many socioeconomic viewpoints. The CAB membership tenure is limited to a total of six years of service. These term limits are fairly new and

the expected turnover of members combined with a broad base of stakeholders willing to serve, should result in larger numbers of the general public who are involved in clean-up decisions at SRS.

The current CAB member is generally a middle aged professional from the academic and scientific community. The members, current and past, have dedicated large amounts of time, in travel and study to provide this stakeholder perspective into the clean up of the contamination at the Savannah River Site. The current SRS-CAB meeting schedule is dependent upon face-to-face meetings lasting two hours to two days. Depending upon the member's proximity to the site, an additional one to five hours may be added to the commitment in traveling time. This adds up to an average monthly time commitment for the members of twenty hours. This type of commitment may hinder younger stakeholders from active involvement, as their career and family issues generally require substantial attention, however this can be accommodated by the incorporation of the many forms of instantaneous communication and distance learning.

Since the contamination at the Savannah River Site involves long-lived radioactive constituents with potential health risks, these important cleanup decisions that the CAB weighs in on, may reach generations chronologically farther away than humans can imagine. The net effect of this dialogue between stakeholders, regulators, and the DOE will be inherited by future generations as the best cleanup practicable. In order to ensure the incorporation of values from as broad a constituency as possible, these DOE decisions where perpetually contaminated land is established, should be inclusive of a chronologically diverse group of stakeholders.

The incorporation of next generation members presents the CAB with the fundamental challenge of growth, to be capable of morphological change while maintaining functional competence. These future CAB members represent a new type of information gatherer as evidenced in their daily lives. They generally live in households that lack a landline telephone and newspaper subscription, but have always known wireless Internet connections, TiVo, cellular telephones, and cable television. This current generation of post college graduates has little need for postal service, but is wholly dependant upon satellite transmissions, as most personal and business relationships are conducted online via email, social networks, and secure websites as well as by cellular phone text messages. Their habit of multi-tasking combined with their expectation for instant access to information and entertainment, produces a group of individuals in a niche that the CABs should incorporate. This niche represents a generation of stakeholders with a combination of attributes and capabilities that currently pose a challenge to the current CAB communication platform.

Concurrently, these stakeholders have lived in an educational climate mostly mute on the topic of nuclear physics due to the state of the nuclear industry in the United States. This lack of familiarity with the nuclear industry is due to the combination of a lack of new, nuclear reactors and nuclear weapons, and has produced a generation of citizens educated in an environment of nuclear dormancy. This may very well provide an opportunity for the DOE to begin an outreach program focused on this segment of the population and connect the energy of this generation to the development of solutions to nuclear waste disposition.

P Reactor

P Reactor operated from 1954 until 1988 to produce tritium and plutonium using heavy water to moderate and cool the reactor. P Reactor released liquid effluent to Steel Creek, Par Pond, and the Reactor Seepage Basins. Liquid effluents included primarily disassembly basin purges and cooling water from the reactor heat exchangers. Tritium, cesium-137, and organic solvents are identified as the constituents of concern. The reactor was placed in shutdown status in 1993 and all irradiated fuel assemblies, target material, and moderator were removed. Radioactive and contaminated process equipment is contained within the

reactor building. The deactivation and decommissioning of P Reactor has left it in the “cold and dark” state.

In May of 2003, the DOE and its federal and state regulators, agreed to support accelerated cleanup with the area closure program. The completion of an area is documented in an Area Record of Decision (ROD). Cleanup of P Reactor is being addressed as an operable unit (PAOU) and is the first SRS Area Completion that involves a hardened facility.

In this area closure, a two-phased approach to obtain public input was used, where the first phase received feedback about acceptable quantities of materials left after cleanup and the second phase consisted of public workshops to determine the final Reactor End State. The Early Action Proposed Plan (EAPP) for PAOU was issued and included a public comment period. The issuance of the final ROD for PAOU is expected early in 2009.

During the first phase, the SRS-CAB Facility Disposition & Site Remediation (FD &SR) committee had presentations in May 2006, passed recommendation #233 on PAOU at the full board meeting, and toured P Reactor with a working lunch to provide for feedback. The second phase involved CAB members attending three P reactor public workshops (October 2007, March 2008 and May 2008), giving feedback, receiving the EAPP (June 2008), hearing a presentation on a Environmental Assessment/Cost Analysis (EA/CA) of P area disassembly basin and submitting public comments throughout. This level of public involvement required membership to have schedules amendable to travel and extended periods of time to study.

Integration of Modern Communication Technologies

The P Reactor In Situ Decommissioning (ISD) as an acceptable alternative end state resulted from a process that incorporated public values into the EAPP by conducting tours, presentations, and meetings between the CAB, the general public, and the regulators. The DOE CAB communication platform must take steps to expand horizontally in order to collaborate with future stakeholders about the environmental management of nuclear waste that will remain in perpetuity. In each step, opportunities to expand the dialogue to young stakeholders exist and should be employed in order to evolve the CAB structure to accommodate the new niche of satellite instantaneous information gatherers.

The first presentation by Chris Bergren on the PAOU should have been videotaped and separated into chapters. This initial information could have been posted on a variety of free open access interactive websites, such as “Justin TV” or “uTube” for viewing on demand. Also, the chapters could be uploaded to “iTunes University” where they remain accessible and can be downloaded as podcasts to hand held communication devices or laptops. This on demand episode format is favored by the next generation of stakeholders who are more likely to watch these videos on their iPods or laptops while in transit. Instead of having three public workshops on the P Reactor End State, the first one could be catalogued, and updated versions incorporating the public feedback and questions could be posted. The presentations should all be distilled into executive summaries that can be watched on the small screen in manageable time fragments with clear instructions for phoning, text messaging, or emailing feedback to the DOE. Thereby, the first and second phase of dissemination of information about PAOU including the tour of P Reactor, could all have been captured on video, integrated with Microsoft PowerPoint presentations, vetted by DOE security experts, and then released to the general public and CAB membership for public comment.

In order for the CAB process to be FACA compliant, the public’s input as advise is required. If the DOE had produced presentations to the CAB as P Reactor episodes, released them to the SRS-CAB website and public access channels with the link to an email address or chat room the DOE could create a virtual place for ongoing feedback with the public. Another communication method to engage young

stakeholders in dialogue is at online networking sites like “Yahoo! Groups”, “Ning”, “Gather” or “Twitter”. These oddly named networks are powerful tools to link together communities with similar social interests and should be utilized as locations where a community of interest can be established. There are many reservations about engaging in serious discussions in a virtual place, but if the DOE expands its definition of “meeting space” virtually, it could have tremendous benefits towards increasing the percentage of citizens involved in productive discussion of nuclear waste disposition and increase the community investment in the eventual policy decisions. The trends in social habits and information gathering strongly favor the immediate integration of these powerful tools into the DOE communication platform with the newest stakeholders.

CONCLUSION

The CAB recommendation has been the valuable and reliable vehicle of communication for advice to the DOE by the SRS-CAB. The current CAB structure of Board and committee meetings has admirably built a community of informed stakeholders and an important body of advice. The famed anthropologist Margaret Mead noted, “Never doubt that a small group of thoughtful, committed citizens can change the world: indeed, it is the only thing that ever has”. Today, the CAB must engage this niche of stakeholders to generate the longest lived solutions society has engineered. As noted by Tom Friedman, “it is time to accept the horizontal flattening of the workspace and reap the benefits of its immediacy and productivity”. The work of the DOE and site contractors is just beginning to deal with the most difficult cleanup projects that include massive, hardened facilities like reactors, canyons, and tank farms. This most certainly is the time to improve the platform used to generate substantive public input with the broadest group of stakeholders with a modernization program designed to upgrade the suite of communication technologies. Just as the 1946 series of correspondences between, Thelma Present, wife of an atomic physicist at Oak Ridge, and Margaret Mead, famed anthropologist, detailed in “Dear Margaret, Letters from Oak Ridge,” exemplify the beginnings of public outreach and the power of dialogue, the CABs should utilize new methods of communication for optimal dialog with the public.

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