INTRODUCTION/BACKGROUND

Federal missions on the Oak Ridge Reservation began with the Manhattan Project, and continues today with major facilities supporting the Nation’s Science and National Security missions. While most of the land area on the Oak Ridge Reservation is free of environmental impacts from these activities, significant legacy contamination is associated with specific facilities and past waste management areas. In 1989, the Oak Ridge Reservation (ORR) was placed on National Priorities List, and DOE established its Office of Environmental Management that same year. Three years later, in 1992, the Federal Facility Agreement for the reservation was signed. Three years afterward, the Oak Ridge Site Specific Advisory Board was established to augment ongoing public involvement activities related to Oak Ridge Reservation cleanup activities.

One of the early and most impactful decisions the board made was to organize the End Use Working Group. This broad-based group of board members, DOE representatives, and members of the public was formed in 1997 to study future uses for contaminated areas of the reservation. The group was instrumental in building consensus in the Oak Ridge community regarding the long-term end state of reservation lands. The group’s recommendations were a fundamental input into Record’s of Decision subsequently developed to establish cleanup requirements across the ORR, and they continue to influence decisions being made today.

In developing its recommendations on end states, the End Use Working Group came to the realization that long-term stewardship of contaminated areas of the reservation would be necessary, in some cases in perpetuity. It was from this concept that the Oak Ridge SSAB’s 15-year involvement in stewardship would begin. A stewardship committee formed by the End Use Working Group wrote Volume 1 of the Stakeholder Report on Stewardship. This document—and its companion Volume 2, which was written a year later—form a crucial foundation for stewardship planning in Oak Ridge and have been referenced around the DOE complex as other sites consider stewardship planning.

From these two broad-based initiatives, the board’s focus has evolved to increasingly hone in on more specific, project-based recommendations and initiatives.

Key Recommendations and Their Impact

Since its formation in 1995, the Oak Ridge Site Specific Advisory Board (ORSSAB) has submitted 186 recommendations to the Department of Energy’s (DOE’s) Oak Ridge Environmental Management (EM) program. These recommendations have focused on a wide range of topics, from those involving specific, highly technical issues to broader areas related to strategic planning and policy.
Every major record of decision (ROD) developed by Oak Ridge EM has had heavy SSAB involvement, and none of the RODs have been at odds with majority SSAB opinions. DOE, EPA, and the state are very interested in the SSAB’s opinions and factor them into their decision-making as a matter of course. Plus, the ORSSAB provides DOE and the regulators with a forum for understanding stakeholder perspectives.

The vast majority of the board’s recommendations have been accepted and acted upon by the Oak Ridge EM organization. This high level of agreement with the board’s recommendations is in large part a result of the collaborative working relationship between the board and EM. This relationship has resulted in a board that is highly knowledgeable about of the cleanup work to be performed at the Oak Ridge Reservation (ORR), as well as one that is educated about and understanding of the constraints the EM program must work under in regard to regulatory environment, funding, project prioritization, and other issues.

In the previous five years, for example, the board has issued 43 recommendations to DOE. Of these, 38 have been accepted, 4 have been partially accepted, and only 1 has been rejected.

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The following examples exemplify the importance of the board’s recommendations to DOE Oak Ridge. The first two are examples of individual recommendations, followed by four that reflect the aggregate impact of multiple recommendations on a single topic.

**Removing Uncontaminated Areas of the ORR from the National Priorities List**

The ORR encompasses roughly 34,000 acres, but only about 10 percent of the reservation is actually contaminated from research and production activities by DOE. The entire reservation, however, was placed on EPA’s National Priorities List for cleanup under the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Even though all of the reservation is on the National Priorities List, EPA policy states that only areas with contamination are considered subject to the requirements of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

In 2009 a white paper was written describing the process to clearly document areas impacted by contamination, as well as those areas that are not part of the list. The board reviewed the paper.
and subsequently issued a recommendation to DOE, stating that the board believes that defining only contaminated areas of the reservation in the list would be beneficial in presenting a more positive image of the reservation and the Oak Ridge community to the public.

DOE responded to the recommendation, saying that it had initiated activities to delineate areas of the reservation that have no history of industrial activity or evidence of contamination.

The proposed changes would benefit the EM site and the community by helping the public understand that the reservation (and the Oak Ridge area in general) is not as extensively contaminated as is often perceived. At the promotion of the SSAB, this effort is expected to help recruit new business, industry, and families to the area, which in turn will boost the economic health of the community.

**Oral History**

By 2007, DOE had conducted about 275 oral history interviews with Oak Ridge scientists, engineers, community leaders, and residents, but there was no central location housing all of the existing tapes, and no mechanism to manage an active oral history program in terms of cataloguing and transcribing tapes, identifying and interviewing people, and providing access to material to researchers and other interested parties.

ORSSAB established an Oral History Ad Hoc Subcommittee that year to determine if there would be community support for the preservation of Oak Ridge oral history. In October 2007 ORSSAB sponsored a community workshop to consider ways to consolidate existing Oak Ridge oral histories in one manageable location and how to continue gathering oral histories for future use. Thirty people representing a variety of agencies and interests participated in the workshop.

In 2008 the board made a recommendation to DOE to support a comprehensive oral history program, and DOE quickly agreed. The seeds sown through the recommendation grew into a comprehensive oral history program called the “Center for Oak Ridge Oral History” headquartered at the Oak Ridge Public Library.

ORSSAB’s work on the oral histories program provided an important step in bringing cohesion to the various interests in the community on an issue of importance not only to the public but to the DOE EM program as well. Material contained in oral histories will offer invaluable information to EM when determining the scope and the data necessary to approach areas of the reservation requiring remediation or in determining if an area does not require remediation.

**Stewardship**

Since its inception, ORSSAB has provided 41 recommendations to DOE Oak Ridge related to long-term stewardship of the ORR. In the past five years alone, the board has issued seven recommendations on important aspects of stewardship, and as in the past, many of them have relevance to many of the other DOE sites in the complex, giving them impact far beyond Oak Ridge.
One of the first key recommendations concerned the board’s two-volume *Stakeholder Report on Stewardship*, which provided a broad outline of stewardship roles and responsibilities, as well as the implementation steps necessary for assuring protection of human health and the environment from residual contamination left in place on the reservation. Some of the more recent stewardship recommendations include:

- Recommendation to Automate the Stewardship Verification System Process for the Remediation Effectiveness Report
- Recommendation to Establish a Site Transition Process Upon Completion of Remediation at Ongoing Mission Sites
- Recommendations and Comments on the Long-Term Stewardship Implementation Plan
- Recommendation on Developing a Stewardship Map Showing Remediated Areas with Radioactive/Hazardous Waste or Residual Contamination Left in Place

DOE has embraced the board’s proactive stance on stewardship and continues to work collaboratively with the board on implementation of the board’s recommendations.

**Historic Preservation**

The question of how to best preserve the historical significance of the K-25 Building at East Tennessee Technology Park (ETTP) resulted in six recommendations to DOE on various aspects of the preservation question.

The K-25 Building was constructed as part of the Manhattan Project during 1944–45 to supply enriched uranium for the first atomic bombs and later for Cold War defense purposes and nuclear power reactors. When it was built, in just 18 months, it was the largest building in the world under one roof. Operations at the K-25 Building were permanently shut down in 1964.

To comply with the National Historic Preservation Act, a memorandum of agreement was signed in 2005 regarding preservation measures. But because the building was rapidly deteriorating, no part of the building could be preserved, and an extensive effort was undertaken by DOE, the SSAB, and the community at large to develop alternative commemorative strategies.

Resolution was achieved in fall 2012 when DOE announced the formal completion of an agreement that will preserve the historic contributions of Oak Ridge’s K-25 site. ORSSAB’s involvement in historic preservation offered a vital mechanism for DOE EM to provide the community with information and gather public input on an issue that will have long-term implications for the public and EM.

**Budget**

Each year the EM program develops its budget request for the fiscal year two years beyond the current fiscal year. In FY 2011 ORSSAB formed a new standing committee to work closely with DOE Oak Ridge in assessing cleanup priorities for the Oak Ridge Reservation.
The committee reviews multiple sequencing scenarios for funding and prioritizes completing the various cleanup projects on the reservation. The committee then develops the board’s recommendations to DOE Oak Ridge on its EM budget request. As part of its work, the committee has assisted DOE by helping coordinate public workshops on the budget priorities.

The input the SSAB submits DOE each year provides EM with a valuable perspective on the public’s priorities for sequencing of Oak Ridge Reservation cleanup activities. DOE has found the SSAB’s input is particularly useful in obtaining the community’s perspective on the relative importance of property redevelopment opportunities, and controlling lifecycle costs associated with reservation cleanup. At this time, the Department’s planned sequencing of cleanup work is largely consistent with budget prioritization decisions provided by the ORSSAB.

**EM Waste Management Facility**

The cornerstone of the Oak Ridge EM program is the EM Waste Management Facility (EMWMF), a 2.2 million yd$^3$ onsite CERCLA waste disposal facility. Even before construction began in 2002, the SSAB was involved in making recommendations on siting and other issues.

During the past 10 years, the facility has played a key role in accelerated closure of ETTP and Melton Valley at the ORR. Accelerated closure of these two areas will provide almost $1 billion in life cycle savings and reduce risk to human health and the environment. EMWMF alone is estimated to save the Oak Ridge EM program in excess of $100 million through cost savings associated with not shipping wastes disposed of in EMWMF to offsite facilities.

From the inception of the EMWMF concept, the SSAB has worked with DOE, the regulators, and the public to achieve consensus on almost every aspect of the project—from agreement to construct the facility to site location, construction, and waste acceptance criteria. The SSAB has made 12 recommendations to DOE on EMWMF-related issues and has provided numerous opportunities in SSAB board and committee meetings for public involvement in project decision-making. All these efforts have led to significant risk reduction and savings for DOE and the community.

Given the public acceptance challenges inherent to locating and constructing a radioactive waste disposal facility, the ORSSAB has served as a critical forum for discussing and selecting an Oak Ridge Reservation cleanup waste management strategy.

**Conclusions**

The Oak Ridge Reservation Site Specific Advisory Board has been a highly effective forum for soliciting community input on Oak Ridge Reservation cleanup. Experience in Oak Ridge indicates that the utility of Board recommendations is far higher when the Board is asked to focus on broad programmatic issues, and less useful when the Board attempts to provide advice and recommendations on matters related to technical or project management issues. In Oak Ridge the Board has helped shape the program on many levels including definition of end-state cleanup objectives, budget development, program sequencing, waste management, and decisions.
concerning preservation of history related to missions implemented on the Oak Ridge Reservation.