U.S. DOE's Environmental Management Site-Specific Advisory Board: 20 Years of Effective Community Involvement - 15377

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ABSTRACT

This paper provides an overview of the U.S. DOE's Environmental Management Site-Specific Advisory Board from its roots in the early 1990s at the Keystone Center to its current activities. The Environmental Management Site-Specific Advisory Board has a unique mandate to provide input regarding the cleanup of nuclear legacy sites in the United States. Chartered under the Federal Advisory Committee Act, the Environmental Management Site-Specific Advisory Board comprises eight local boards. The Office of Environmental Management has made public participation a fundamental component of its cleanup mission and has found that the Environmental Management Site-Specific Advisory Board has contributed greatly to bringing community input regarding values and priorities to the cleanup decision-making processes. Public participation that involves ongoing community engagement has inherent challenges; the Environmental Management Site-Specific Advisory Board operates with additional challenges that reflect the political and technical nature of U.S. DOE's work.

INTRODUCTION

The year 2014 marked the 25th anniversary of the U.S. Department of Energy's (DOE) Office of Environmental Management (EM), an anniversary closely linked to the end of the Cold War nuclear arms race between the U.S. and the former Soviet Union. At that time, DOE began a new mission: the cleanup of the legacy waste of nuclear weapons created during the Cold War.

When EM was established in 1989, the scope and risks involved in cleanup were largely unknown. Today, a significant portion of the cleanup has been accomplished and the risks are better characterized. Originally, there were 107 contaminated sites in 35 states; now 16 sites remain in 11 states requiring some form of remediation. As of March 2014, EM has completed almost $144 billion dollars' worth of cleanup work. The EM footprint has been reduced by about 90 percent, from approximately 3,100 square miles to about 241 square miles [1]. Still, significant challenges remain in what continues to be the largest environmental cleanup program in the world.

In the early 1990s, EM recognized that progress toward cleanup would depend upon the commitment of, and collaboration with affected communities. In search of mechanisms for such collaboration, DOE joined in a 1992 federal dialogue to explore opportunities for citizen involvement in addressing cleanup levels, future use and safety at sites. 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; regionally and locally based environmental, community, environmental justice, Native American and labor organizations. The goal was to develop consensus-based policy recommendations aimed at improving the process by which federal facility environmental cleanup decisions were made.

The Environmental Management Site-Specific Advisory Board (EM SSAB or Board) was one result of this effort, as was the formation of EM's Public and Intergovernmental Accountability Program. Simultaneously, DOE developed its own public participation policy, which stated that public participation should be a fundamental component of the Department's program operations, planning activities and decision-making [2].

Although the EM SSAB is the only citizen advisory board funded directly by EM, the office supports a number of other activities focused on gathering public and community input. The Environmental Management Advisory Board (EMAB), a FACA board, is comprised of individuals from governmental and non-governmental entities, industry and scientific and academic communities, provides independent advice, information and recommendations to EM on corporate issues relating to science and technology, acquisition and project management and risk. Additionally, EM supports intergovernmental, including Tribal, consultations; public meetings; requests for public comment; and other ad hoc activities. EM also seeks stakeholder input from community reuse and economic development organizations, state-chartered oversight boards, councils of government and other organizations.

OVERVIEW OF THE EM SITE-SPECIFIC ADVISORY BOARD

The EM SSAB is a cornerstone of EM's commitment to public involvement. It is currently the only directly funded, citizen advisory board. Its scope and charter covers EM planning and decision-making processes involved with cleanup of the nuclear weapons complex. The EM SSAB provides the EM program with information, advice, and recommendations concerning issues affecting the program, both locally and nationally.

The EM SSAB embodies the spirit of DOE's Public Participation and Community Relations Policy, which states that "…public participation is a fundamental component in program operations, planning activities, and decision-making within DOE…Effective public participation and good community relations both rest on a foundation of positive personal relationships; DOE managers and staff are encouraged to seek to build and nurture such relationships." Although the policy was canceled, the EM SSAB continues to adhere to the following fundamental tenets:

- DOE will actively seek to identify stakeholders, consider public input, and incorporate or otherwise respond to the views of its stakeholders in making its decisions.
- The public will be informed in a timely manner and empowered to participate in appropriate stages in DOE's decision-making processes.
- Credible, effective public participation processes, including active community outreach, will be consistently incorporated in DOE programs at Headquarters and in the field.
- DOE will conduct periodic reviews of its public participation and community relations efforts.

Today, the EM SSAB also operates under the spirit and letter of President Barack Obama's Executive Order on transparency and openness, which states that to ensure public trust, government should be transparent, participatory and collaborative [3]. The EM SSAB also adheres to the Department's Environmental Justice Strategy and the basic tenets of the Environmental Justice Executive Order 12898, which directs federal agencies to "identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The order also directs each agency to develop a strategy for implementing environmental justice [4]."

The EM SSAB operates under the Federal Advisory Committee Act (FACA), which defines how federal advisory committees operate, with emphasis on open meetings, chartering, public involvement and reporting. The charter, which also operates in compliance with various DOE-specific policies and procedures, prescribes the structure and basic operations of the EM SSAB and provides requirements relating to balance and diversity, openness, record keeping, independence and other activities of the Board [5].

The EM SSAB currently comprises eight local boards located in close proximity to major EM sites:

- Hanford Advisory Board (HAB)
- Idaho National Laboratory Site EM Citizens Advisory Board (INL CAB)
- Nevada Site Specific Advisory Board (NSSAB)
- Northern New Mexico Citizens' Advisory Board (NNMCAB)
- Oak Ridge Site Specific Advisory Board (ORSSAB)
- Paducah Gaseous Diffusion Plant Citizens Advisory Board (Paducah CAB)
- Portsmouth Gaseous Diffusion Plant Citizens Advisory Board (PORTS SSAB)
- Savannah River Site Citizens' Advisory Board (SRS CAB)

Regardless of location, the EM SSAB local boards share one mission and operate under one charter. Specifically, the EM SSAB Charter calls for the Board to provide the Assistant Secretary for Environmental Management, the appropriate field manager(s) and any other DOE officials the Assistant Secretary designates, with information, advice and recommendations concerning EM matters, notably:

- Cleanup Standards and Environmental Restoration
- Waste Management and Disposition
- Stabilization and Disposition of Non-Stockpile Nuclear Materials
- Excess Facilities
- Future Land Use and Long-Term Stewardship
- Risk Assessment and Management
- Cleanup Science and Technology Activities
- Other EM projects or issues, at the direction of the Assistant Secretary, site manager(s), and/or other designated DOE officials

With a large scope of issues under consideration, the local boards are able to focus on the unique aspects of their communities and their specific sites. The local board members are citizens who are directly affected by site cleanup activities and who bring to the group a diversity of views, cultures and demographics from affected communities and regions. Members may include stakeholders from local governments, universities, Tribal Nations, industry, environmental and civic groups, labor organizations and other interested citizens. The overall task of providing advice and recommendations to EM means that members must gather information, engage others in the community, analyze complex information, and reach a conclusion that will be sent forward as a product of the group, as opposed to a list of individual opinions. The EM SSAB, in short, is a highly collaborative effort.

The EM SSAB role in site cleanup is both substantively and politically complex. The land area of many of the sites is large, with a number of waste cleanup projects. Remediation is aimed not only at radioactive waste of various levels and hazards, but also at chemical waste and the deactivation and decommissioning of facilities. The job of the local boards is further complicated at most sites by non-cleanup, ongoing missions, including those involving radioactive materials.

The EM SSAB provides a mechanism for community education on contamination and the technical aspects of cleanup, as well as a way to learn the range of views that exist with regard to sites, their future land uses and cleanup processes. Local boards infuse DOE decision-making with community values regarding site cleanup. The range of recommendations from the local boards spans both technical and non-technical issues relevant to cleanup efforts.

IMPACT OF THE EM SSAB

The structure of the EM SSAB-- a single FACA chartered advisory board comprised of local site-specific boards serving as a conduit between a local community and a specific site-- is what makes the Board truly unique. Local site-specific boards are able to focus on the specific concerns of their local community and site. When common issues arise, the site-specific boards are able to consult one another and share lessons learned. Despite the complexity and variety of EM's work, the EM SSAB has been able to contribute significantly to the EM mission.

The effectiveness of the EM SSAB is difficult to quantify, but one way to measure the Board's success is to determine how effectively the EM SSAB's input has impacted policy decisions. The EM SSAB provides recommendations and advice, at the request of the Assistant Secretary for EM, the appropriate site managers(s), and any other DOE official the Assistant Secretary designates on issues affecting the EM Program. Since 1994, the EM SSAB has generated over 1,544 recommendations to DOE, 72% of which were accepted fully and 16% of which were accepted in part [6].

Topics of recommendations cross technical and non-technical subject matter. The recommendations also serve as a way for EM to identify and gauge what issues are important to the local communities that host DOE sites.

Perhaps one of the most valuable ways that the EM SSAB has contributed to the EM program is by helping EM prioritize cleanup work. This is especially helpful in times of budget constraints. The Board's recommendations and advice aid EM in determining how to efficiently spend money and provide the greatest value for the local communities.

The following is a brief summary of the types of advice and recommendations local boards have made that contribute to EM decision-making processes [6].

Hanford Advisory Board (Washington)

The Hanford site, located in southeastern Washington, operated from 1944 until the late 1980s when the last reactor was shut down. During its operation, the Hanford site generated large amounts of radioactive and hazardous material, which has caused considerable human health and ecological concerns due to groundwater and soil contamination.

The HAB was established in 1994 and is comprised of members who, unlike the other local EM SSAB boards, serve as representatives for various stakeholder groups. In recent years, the HAB has provided recommendations on openness and transparency; tank waste treatment; the proposed plan for the 100-N area; and budget and lifecycle scope. The HAB remains concerned about the cleanup of high-level waste in tanks, groundwater and remediation activities along the Columbia River Corridor.

Idaho National Laboratory Site EM Citizens Advisory Board (Idaho)

The initial missions of the Idaho site included the development of civilian and defense nuclear reactor technologies and the management of spent nuclear fuel. Fifty-two reactors were built, three of which remain operational. The current Idaho Cleanup Project is focused on the site's Chemical Processing Plant and the plutonium contaminated waste burial group. The site is also home to DOE's Idaho National Laboratory, where advanced nuclear technologies are studied and developed.

The INL CAB was chartered in 1994. Topics of recent recommendations have included advanced mixed waste treatment and the contracting strategy for EM activities at INL. The INL CAB is also concerned with transuranic (TRU) waste treatment and the site's post cleanup role.

Nevada Site Specific Advisory Board (Nevada)

The NSSAB was established in 1994 in conjunction with the Nevada National Nuclear Site (NNSS), formerly known as the Nevada Test Site. The NSSAB, formerly known as the Community Advisory Board for Nevada Test Site Programs, makes recommendations concerning the cleanup of NNSS, which serves as the primary location to support the nation's nuclear, energy and environmental security efforts. Currently, the NSSAB has a strong interest in waste transportation and disposal.

More recent recommendations have included ways to increase and enhance communications regarding waste transportation and disposal; improvement opportunities for the Radioactive

Waste Acceptance Program facility evaluation; a communication plan for groundwater sampling results; and budget prioritization for fiscal year (FY) 2016.

Northern New Mexico Citizens' Advisory Board (New Mexico)

The NNMCAB has operated successfully since its creation in 1998. The NNMCAB's interests include landfills, air quality, storm water and environmental justice activities. The NNMCAB provides advice and recommendations concerning cleanup activities at the Los Alamos National Laboratory (LANL), which has an ongoing mission as both a DOE national laboratory and a research facility for the National Nuclear Security Administration.

During recent years, the board has made recommendations concerning budget priorities and measures to help ensure that Waste Isolation Pilot Plant (WIPP) and LANL TRU waste disposal operations continue.

Oak Ridge Site Specific Advisory Board (Tennessee)

Formed in 1995, the ORSSAB focuses on cleanup at the Oak Ridge Reservation. Built as part of the Manhattan Project, the Oak Ridge Reservation has ongoing missions in the areas of science, environmental management, nuclear fuel supply and national security.

The ORSSAB has an interest in long-term stewardship and land transfer issues. Recently, the ORSSAB has made recommendations on DOE Geographic Information System fact sheets; additional waste disposal capacity; additional off-site groundwater migration studies; and funding priorities.

Paducah Gaseous Diffusion Plant Citizens Advisory Board (Kentucky)

The Paducah Gaseous Diffusion Plant (PGDP) site is located on 3,400 acres in rural western Kentucky, 15 miles west of the city of Paducah, near the confluence of the Ohio and Mississippi rivers. Since 1952, the PGDP has produced enriched uranium, first in support of federal efforts and then in support of commercial nuclear power missions. Today the site focuses mostly on environmental cleanup, waste disposition, depleted uranium conversion, decontamination and decommissioning (D&D) of inactive facilities and long-term contamination.

The Paducah CAB was formed in 1996 and originally focused on efforts to produce enriched uranium. The board has since expanded its interests to include the recycling of non-contaminated materials at the site. In addition, the Paducah CAB has recommended that DOE look for a long-term disposal strategy and local processing options for recyclable materials. Recent recommendations have focused on recycling; budget priorities; and maximizing safety at the site.

Portsmouth Gaseous Diffusion Plant Citizens Advisory Board (Ohio)

The Portsmouth Gaseous Diffusion Plant is located just south of Piketon, Ohio. The plant originally produced enriched uranium for nuclear weapons, but later focused on enriching

uranium to produce fuel for commercial nuclear plants. In May 2011, the gaseous diffusion production operations at the Portsmouth site ceased.

The PORTS SSAB was chartered in July 2008, after local citizens expressed interest in the cleanup of the site. The board focuses on the site's cleanup, specifically waste disposition for the D&D of the plant, the education of local citizens, land use and end use. Recently, the PORTS SSAB has made recommendations relating to the continued support of asset recovery and future site-related contracts and subcontracts.

Savannah River Citizens Advisory Board (South Carolina)

SRS, located on the Savannah River along the South Carolina and Georgia border, was constructed in the early 1950s to produce basic materials for nuclear weapons, primarily tritium and plutonium-239. Environmental cleanup at the site began in 1981, and the construction of the waste processing facility began in 1983. Waste processing continues at the site. DOE's Savannah River National Laboratory is also located on the site and conducts research in such areas as contaminated groundwater and soil, the development of hydrogen as energy, the safe management of hazardous materials and the detection of weapons of mass destruction.

The SRS CAB was formed in early 1994, following a year-long public involvement effort. Most recently, the SRS CAB has focused on recommendations relating to the chemical separation and transmutation of used nuclear fuel and defense high-level radioactive waste; public communication concerning the liquid waste program; future use planning; soil and groundwater technology cleanup; environmental monitoring programs; and the disposition of SRS canisters and L-Basin Materials.

CROSSCUTTING: THE EM SSAB CHAIRS MEETING

When common issues and concerns arise, the local boards may consult each other and share lessons learned. Through their chairpersons, who meet twice each year in-person, the local boards can confer on joint recommendations to EM. The chairpersons also communicate via regular teleconferences. The teleconferences allow the chairpersons to discuss issues of importance that arise in the interim between face-to-face meetings. The teleconferences also allow for fact-finding regarding recommendation development. As per the requirements of FACA, the Chairs are only allowed to deliberate on recommendations in a public forum. However, the teleconferences allow the Chairs to make decisions regarding a path forward for recommendations, and the teleconferences also ensure that the Chairs are prepared to deliberate the recommendations at the face-to-face meetings.

In the past, the Chairs have discussed specific issues that cut across multiple sites, such as groundwater, waste disposition and improvements to communication. More recently, the Chairs' focus has been on budget issues.

The EM SSAB Chairs' semi-annual public meetings serve as an opportunity for exchange between members of the EM SSAB, DOE and interested organizations and citizens. These meetings rotate through the local EM SSAB sites and include a required public comment and

question/answer session. The next EM SSAB Chairs public meeting is scheduled for April 2015 and will be hosted by the SRS CAB in Augusta, Georgia.

The meetings include presentations by DOE senior leadership and product development sessions for recommendation development. Typically, the Assistant Secretary for EM attends along with Deputy Assistant Secretaries in areas such as waste disposition, budget, etc. who provide complex-wide presentations and participate in discussions with local board Chairs, Vice Chairs and board members. The meetings help to broaden local boards' perspectives because each board shares issues that may be of interest to other boards. Local board chairpersons learn about the current activities at the other local boards; this often results in each chairperson taking back lessons learned to their board. Meeting attendees also receive educational presentations from DOE high level staff.

The Chairs Meetings are invaluable to the operation of the EM SSAB. The meetings are a priority for EM's senior leadership, and act as a national forum for discussing important topics of national scope and current waste cleanup concerns. The meetings facilitate important face-to-face communication and relationship building between the Chairs and EM senior leadership. At the meetings, the Chairs are able to bring complex-wide issues to the attention of EM senior leadership, as well as DOE technical officials who make decisions regarding significant subjects such as waste disposition and budget prioritization. The Chairs and DOE senior leadership value the chance to interact in person and converse candidly.

The communities that each board represents are brought together by the EM SSAB Chairs meetings and the recommendations that often grow from the interactions of the Chairs. The Board is able to speak as one voice, representing residents of diverse communities which span the nation. Through recommendations, this united voice enables the Board to bring strong attention to issues that are of important to EM's stakeholders. The impact of the EM SSAB's full board recommendations is magnified because of the unified voice of the local boards, as well as strengthened because of the unification of the local boards.

PAST EM SSAB LOCAL BOARDS [7]

Throughout the EM SSAB's 20 year history, several local boards have been created and dissolved. Reasons for the boards' dissolution vary: the completion of the EM mission at the local board's respective site, the local board's fulfillment of its mission, or the diminished effectiveness of the local board [8].

Fernald Citizens Advisory Board (Ohio)

The Fernald Citizens Advisory Board (FCAB) was created in 1993 in response to a clear recognition that decisions concerning the Fernald Plant would have a profound long term effect on the citizens in the surrounding area, and that local citizen involvement was essential in making these decisions. Fourteen citizen members made up the board for the rural site, located in western Ohio. Several government liaisons were also involved. Built in 1951 to produce uranium for nuclear weapons, the facility operated for almost 40 years.

Among the FCAB's accomplishments was the creation of a series of "Future of Fernald" public workshops that resulted in a consensus community vision for future use of the site at Fernald. That vision led to the creation of the Fernald Preserve Visitors Center, which opened in October 2008.

After intensive study regarding cleanup options, the board pursued what it called "a balanced approach" to remediation at the site. This approach set target cleanup levels that restricted future uses of the site, but substantially reduced the amount of soil that would need to be removed. The approach also recommended that higher concentration wastes be shipped off site, while a much greater volume of low level waste would be placed in an onsite disposal facility. The balanced approach is believed to have saved taxpayers several hundred million dollars and accelerated the cleanup by more than a decade.

The FCAB received the 1999 Outstanding Organization of the Year Award from the International Association of Public Participation and has been cited as a model for other groups working on environmental cleanup. The FCAB disbanded following the completion of EM's mission at Fernald in 2006.

Rocky Flats Citizens Advisory Board (Colorado) [9]

The Rocky Flats Citizens Advisory Board (RFCAB) was founded in October 1993. The board agreed to a consensus decision-making process when approving recommendations, believing that this type of decision-making would have more of an impact on DOE and other regulatory agencies. Throughout RFCAB's tenure, the board produced 117 consensus decision-making recommendations.

One of RFCAB's first recommendations was to incorporate a set of community values into the regulatory framework for cleanup at Rocky Flats. It was important to the RFCAB that the cleanup framework had a universal scope and that it addressed all the activities necessary to cleanup and close the site. DOE created a community oversight panel to assess the soil levels. The RFCAB continued to make an impact on soil levels and ended up serving as the contract manager for the community oversight panel on the 18-month assessment project; the RFCAB also managed all financial matters on the project. When DOE established a community focus group to revise the information the community oversight panel found, several members of the RFCAB participated. The RFCAB was active in its pursuit to have DOE institute acceptable soil cleanup levels at Rocky Flats.

The RFCAB spent a great deal of time working on recommendations concerning the long-term stewardship of the site. The board championed for the incorporation of long-term stewardship planning into the cleanup decision-making. The RFCAB also wanted the borders of the Rocky Flats wildlife refuge and the land held by DOE to be distinguished by fences and signs.

EM's work at Rocky Flats was completed in 2006 and the RFCAB was disbanded. Following the dissolution of the RFCAB, the Rocky Flats Stewardship Council was formed to provide ongoing support to DOE, the U.S. Environmental Protection Agency (EPA), the State of

Colorado and the U.S. Fish and Wildlife Service, which manages the Rocky Flats National Wildlife Refuge.

Monticello Site-Specific Advisory Board (Utah)

The Monticello Site-Specific Advisory Board (Monticello SSAB) was established in 1993 to develop recommendations relating to cleanup issues at the Monticello Site in southeastern Utah. DOE, EPA and the State of Utah worked together to recruit and select members.

The Monticello SSAB was disbanded in October 1999, following the remediation of the former mill site and surrounding areas. During its short life, the Monticello SSAB submitted recommendations concerning: the transfer of the mill site from the government to the City of Monticello; the location of the site repository; water use; and local employment and contracting at the site.

The board actively worked with DOE, EPA, and the State of Utah on the design process for the composite cover system at the Monticello Millsite Repository [10]. The Monticello SSAB was vocal on its desire that the cover of the repository blend in with its surrounding environment [10]. The cover was lined with vegetation and similar in color to the surrounding rock, and was engineered to blend in with its environment.

Sandia Site-Specific Advisory Board (New Mexico)

The Sandia Site-Specific Advisory Board (Sandia SSAB) met for the first time in June 1995 under the EM SSAB Charter. The Sandia SSAB was established to assist DOE in the Sandia Environmental Restoration Operations at the Sandia National Laboratories, which consists of a campus on the Kirtland Air Force Base in Albuquerque, New Mexico and one in Livermore, California.

The Sandia SSAB collaborated on recommendations concerning: on-site storage, the treatment and permanent containment of environmental restoration generated wastes and Air Force base land use.

DOE ceased funding for the Sandia SSAB at the end of FY 2000 due to a decreasing workload following the completion of the Sandia Environmental Restoration Project. Public participation transitioned from cleanup efforts to a long-term stewardship plan and several members of the Sandia SSAB began working on the Long-Term Stewardship Community Working Group [11].

Pantex Citizens Advisory Board (Texas)

The Pantex Plant Citizens' Advisory Board (Pantex CAB) was established under the EM SSAB Charter in May 1994 to provide recommendations and advice to the Pantex Plant located near Amarillo, Texas. Members represented specific categories, rather than organizations, with careful consideration given for gender balance and racial diversity.

Several characteristics of the Pantex Plant posed challenges to the development of a successful advisory board. Many of the activities at the Pantex Plant remained classified and the site itself is not as accessible to the public as the other EM sites. Following its inception, board members began advocating developing recommendations outside of environmental cleanup, on defense related issues. These challenges and issues could not be overcome, and the Pantex CAB was disbanded in 2001, following disagreements over the board's scope.

STATE OF THE EM SSAB

After 20 years of operation, the EM SSAB is a successful entity that continually strives to reflect community values and diversity of viewpoints. But the EM SSAB is by no means a static organization. The EM SSAB local boards are constantly evaluating how they are functioning. All local boards hold an annual retreat to discuss the previous year and create a work plan for the following year. Evaluations look at results vis-à-vis the board work plans, as well as member assessments of satisfaction with process and membership on the board. The board is also responsive to diversity issues continually evaluating issues of gender/ethnicity, gender, age, and education levels and organizational affiliations, among others. The goal is to continue to ensure that each board is reflective of and serves the interests of the community it serves.

From various assessments performed over the life of the EM SSAB, there have been several ongoing challenges for the local boards noted by EM. Most boards, for instance, report difficulty in engaging a diverse membership. Some of the obstacles are related to the level of involvement required of members; most boards report that members devote at least 10 hours per month to board activities, must attend up to six meetings per year, and commit to ongoing education due to the complexity and highly technical nature of the site cleanup information. In addition, some sites are quite remote, with limited population in the affected area. Maintaining membership diversity can be a problem in these areas, despite vigorous recruitment efforts that include direct mailings as well as print and electronic media advertisements.

Another challenge for the EM SSAB are resource uncertainties and budget limitations, over which local stakeholders have little control—and which, of course, are set by Congress. EM's cleanup operation currently is a $5+billion/year effort. While that is a large sum of money, the cleanup process is ongoing, and funding is not available to remediate all sites immediately.

A further challenge is the volume and complexity of information that a board member must understand in order to engage in deliberations and make informed recommendations to EM. In addition to highly technical information, each board member also must understand applicable law, regulations, orders and policy involved in the cleanup process, as well as those that apply to the operations of citizen advisory boards.

In response to these challenges the EM SSAB local boards continue to adapt new and creative strategies for public engagement and outreach. For example, several of the local boards are currently using social media to connect with larger, more geographically dispersed audiences. The SRS CAB has recently begun to use Google Hangouts, which is a cost-saving virtual application that allows participants to connect across computers to send and receive messages, video chat and share documents. The SRS CAB staff has found that this tool allows the board to

reach a more diverse selection of people. During public meetings, the SRS CAB also takes questions from members of the public via Facebook. Other boards have set up e-newsletters. The NSSAB has begun to use billboards placed along busy highways to recruit members.

Other methods to involve the community include: public meetings, speakers at community events, presentations/exhibitions, educational sessions and custom-tailored news media advertisements in areas of special demographic interest, and letters targeted to specific organizations/interest groups to recruit new members.

The local boards have also recognized the importance of involving younger generations in cleanup issues, and therefore several of the boards have created student liaison positions. The NNMCAB and the INL CAB each have a high school student as their student liaison. The students attend board meetings to learn about issues related to the sites, and are mentored by other members. The student liaison for the INL CAB will complete a project at the end of his/her term, comparing the understanding of his/her peers before and after information about the INL site and INL CAB was presented to them.

CONCLUSION

Public participation is an iterative process— communities inform technical decisions, and technical decisions and new findings affect public deliberations. In the 20 years since its creation, the EM SSAB has brought community values to the EM decision-making processes at various sites, with different cleanup challenges and community dynamics.

Ultimately, perceived outcomes weigh heavily in judgments regarding how successful the EM SSAB has been. For the community, primary determinants of success might be cleanup levels achieved and future land-use, while the government and taxpayers weigh whether the projects were completed on time and at the best possible cost. Since 1994, the local site boards have met numerous times, providing DOE with hundreds of recommendations. Many of these recommendations have proven highly effective in redirecting EM efforts in ways that better reflect the values of local stakeholders. Communities are pleased that the sites near them are being cleaned up, although many continue to call for more funding and better communication. DOE and the EM SSAB plan continual improvement through sharing lessons learned, ongoing self-assessment, external evaluation, and the application of social science research on best practices for citizen advisory boards.

Overall, EM greatly values its public outreach and stakeholder programs and believes public involvement has been critical to its success. When conducted in an open, responsive, and accountable manner, public participation results in substantive input to EM decision-making processes, which in turn leads to improved trust and confidence in the EM program among stakeholders.

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