

A STAKEHOLDER PERSPECTIVE ON THE STATUS OF THE DOE LLW MANAGEMENT SYSTEM

Earle C. Dixon
Department of Environmental Studies
University of Nevada Las Vegas

ABSTRACT

Stakeholders have increased their efforts to track the Department of Energy (DOE) low-level waste (LLW) management system, and provide input on this important national issue. A variety of integrated activities and programs within the DOE have provided stakeholders with a daunting amount of information to evaluate on the LLW issue. The DOE Final Waste Management Programmatic Environmental Impact Statement (WM PEIS) in May 1996 set forth the foundation for the Department to move forward on options to address DOE LLW disposition. Integrated efforts by the DOE to support the WM PEIS approach to LLW management have included a number of opportunities for the public to review options and provide input to the Department. The schedule to issue a LLW Record of Decision (ROD) on the WM PEIS options has heightened public interest and motivation to provide input. The DOE Site Specific Advisory Board (SSAB) program held the SSAB LLW Seminar in Las Vegas, Nevada during August 1998 to address the barriers DOE faces over LLW disposition and to provide suggestions for overcoming these barriers. This paper offers a summary of the 17 barriers to DOE LLW disposition raised by participants at the LLW Seminar, and their suggestions for overcoming the barriers. It also provides some additional stakeholder perspectives on the DOE LLW Management System gleaned from ongoing efforts by the Department to address LLW disposition.

INTRODUCTION

Over the next 20 years, the DOE expects to dispose of approximately 520,000 m³ of LLW from waste management operations across the nuclear weapons complex (1). The Department has identified six preferred disposal options that emphasize two or three regional sites selected from the six currently operating LLW management sites (2). The DOE decision-making process for selecting a LLW disposal option is based on the analysis of LLW contained in the WM PEIS. Decisions under the WM PEIS need to be made in order for the DOE to avoid construction of new storage capacity at some sites and to resolve LLW disposal at a site that can provide access to a toxic waste incinerator. Selection factors and criteria to develop the preferred alternatives for LLW disposal included: technical, environmental, safety & health (ES&H), and socioeconomic. In order to enhance the DOE decision-making process in light of the regularly revised waste volume projection information, the Department has also considered criteria such as: transportation, cost effectiveness, mission compatibility, public acceptance, and equity among stakeholders.

A Supplemental Analysis is underway and will provide quantitative assessment of potential ES&H and transportation impacts. Cost analysis information is forth coming, and mission compatibility is a technical, qualitative assessment of how well a disposal operation complements the future mission plans for a proposed disposal site. The DOE looks to public

forums and stakeholder organizations to ascertain criteria for input on public acceptance and equity. Forums such as the recently conducted Site Specific Advisory Board (SSAB) LLW Seminar at the University of Nevada Las Vegas in August 1998 offer an opportunity for the DOE to hear stakeholder perspectives on issues involving public acceptance and equity (3).

Feedback from previous discussions with stakeholders provided the DOE with some input on public acceptance and equity criteria:

- Address urgent risks.

- Pursue limited consolidation of waste to address risks and allow site closures.

- Seek to minimize transportation.

- Consider sites' suitability and their surrounding population in deciding which sites should receive waste.

- Consider cost effectiveness in deciding which sites should receive waste.

- Implementation factors:

 - Compensate sites which receive waste.

 - Continue public education about nuclear waste and materials issues, including actual transportation routes/implementation.

THE 1998 SSAB LLW SEMINAR

The Interim Report in 1993 by the Federal Facilities Environmental Restoration Dialogue Committee (Keystone Committee) recommended the creation of SSABs as a means to involve stakeholders more directly in agency cleanup decisions (4). Based on these early recommendations and guidance from the 1972 Federal Advisory Committee Act (FACA), the EM SSAB Charter was created and approved in 1994. Though only one FACA-chartered EM SSAB exists, the Department has made a substantial effort to establish SSABs at 12 major facilities across the DOE complex. The SSABs are generally comprised of volunteer citizens from the local community and ex officio representatives from various levels of government impacted by the cleanup and waste management activities at the DOE facility. The SSAB program and other advisory committees and various stakeholder organizations regularly provide input to the DOE decision-making process. The contribution of advisory boards like the SSAB is helping to provide the DOE with community principles, values, and concerns addressing environmental restoration and waste management issues.

The SSAB program for the DOE EM program conducted a three-day seminar in Las Vegas, Nevada, to discuss defense LLW disposition options. The SSAB LLW Seminar was designed and executed to focus on a single nuclear waste issue utilizing participants with an advanced knowledge of the DOE LLW issue. This seminar was an opportunity for each site board to shape their knowledge of LLW toward a process that helped produce individual letters of recommendation to the DOE on LLW disposition options. The DOE SSAB site boards are located in the states of Idaho, Washington, Nevada, New Mexico, Colorado, Ohio, Kentucky, Tennessee, and South Carolina.

The SSAB LLW Seminar agenda was designed to meet the following objectives:

1. **To establish communication among the various SSABs that will allow continued dialogue.**
2. **To learn about the complex-wide low-level waste program and the present configuration of low-level waste at each of the DOE sites.**
3. **To learn about the status of DOE's efforts to determine the disposition for low-level waste.**
4. **To discuss barriers/challenges to DOE's decision-making process.**
5. **To formulate suggestions for overcoming barriers/resolving challenges to DOE's decision-making process.**
6. **To discuss themes among the suggestions that offer opportunities for collective action among the participating SSABs.**

Prior to the SSAB LLW Seminar, members had limited opportunities to meet as a single organization to discuss EM issues except for the Semi-annual SSAB Chairs Meeting hosted by the DOE. Activities like site board meetings, the National Dialogue Pilot Field Workshops, and the Intersite Discussion Workshops have provided recent opportunities for members of the SSAB to discuss their issues of concern in an intersite manner. Information presented in support of these activities continued to reflect the intention of the DOE to move forward with programmatic decisions for the management of numerous nuclear materials and wastes.

STAKEHOLDER SUGGESTIONS TO THE DOE LLW ISSUE

The design of the LLW Seminar was accomplished by building the agenda and objectives for the meeting through weekly conference calls, e-mails, and faxes. The LLW Seminar facilitation team designed an agenda that provided a limited amount of overview and summary information on DOE LLW disposition options before breaking into five small session groups. The five small groups each focused on one of five categories of the LLW issue, constituting: 1) transportation considerations; 2) equity, inter state, tribal, and environmental justice (herein referred to simply as equity; 3) system-wide considerations; 4) economic considerations; and 5) environmental/safety considerations. Each small group developed statements of the three most important barriers/challenges the DOE faces in attempting to complete the decision process for LLW disposition.

ECONOMIC CONSIDERATIONS

The results of the Economic Considerations Small Group's efforts are summarized in the following;

Economic barrier/challenge #1: A small number of sites will assume the increased burden of LLW disposal.

Suggestion to resolve economic barrier/challenge #1: DOE needs to provide compensation to those communities that will assume the increased burden of LLW disposal to offset the impacts of their extra burden.

Economic barrier/challenge #2: DOE often focuses on short-term site-specific solutions rather than final complex-wide solutions.

Suggestion to resolve economic barrier/challenge #2: DOE should use life-cycle cost/benefit analysis that provides a complex-wide perspective to make a comprehensive, final decision after considering all factors (including equity).

Economic barrier/challenge #3: In an era of declining budgets, LLW is not being disposed in the most economic manner possible.

Suggestion to resolve economic barrier/challenge #3: The cost of disposal of LLW should be one of the main criteria in determining where waste should be sent.

An alternative suggestion was offered, also in response to barrier/challenge #3. It was labeled suggestion #4.

Economic Suggestion #4: The full cost of disposal should be disclosed and considered in waste disposal decisions to encourage waste minimization and avoid loss of cleanup funds at receiving sites. Sites that have already received legacy wastes should be considered as receiving sites.

ENVIRONMENTAL/SAFETY CONSIDERATIONS

Another small group examined environmental and safety considerations that should be incorporated into the decision-making process for LLW disposition. Issues that were considered included the quality of environmental documentation, how cumulative impacts are addressed, and worker and public health and safety. The results of the Environmental/Safety Considerations Small Group's efforts are summarized in the following:

Environmental/safety barrier/challenge #1: DOE should more accurately and adequately characterize the LLW it will treat and dispose. The lack of uniform and clear language to describe and discriminate among the types of wastes that are labeled LLW, in terms of form and activity level, causes confusion and hampers the public's understanding of decisions.

Suggestion to resolve environmental/safety barrier/challenge #1: DOE should improve its definition and characterization of LLW by accurately characterizing wastes and relating the definitions to the risks posed by the waste, its waste form, and its activity level. DOE should use a graded approach to disposal and monitoring.

Environmental/safety barrier/challenge #2: Communication challenges include a failure to use clear definitions and risk-based information in discussing wastes; a failure to provide adequate information to local emergency response personnel; a failure to provide adequate worker safety training; and a failure to provide adequate, readily available emergency responder training.

Suggestion to resolve environmental/safety barrier/challenge #2: DOE should improve communication with affected communities and the general public; improve worker safety and emergency response training; and encourage improved communication among DOE sites and between agencies/regulators.

Environmental/safety barrier/challenge #3: The lack of external regulation deprives DOE of both public credibility and a clear and uniform set of standards to work toward. There is also a need for clear and consistent understanding and application of regulatory standards within and

among regulatory agencies. The historic lack of worker medical monitoring has created concerns and uncertainties in making waste treatment and disposal decisions.

Suggestion to resolve environmental/safety barrier/challenge #3 : *DOE should improve the regulatory status of LLW by continuing to move toward external regulation, improving the sites' permitting status, and verifying comprehensive worker medical monitoring.*

Environmental/safety barrier/challenge #4: Historically, the DOE complex has not provided strict process review or economic incentives to minimize waste production. This has both increased the size of the waste disposal problem and made some people less sympathetic to the disposal problem.

Suggestion to resolve environmental/safety barrier/challenge #4 : *DOE should do what can be done to minimize and/or treat LLW from ongoing/new operations and should implement financial incentives to reduce waste generation.*

EQUITY, INTER STATE, TRIBAL, AND ENVIRONMENTAL JUSTICE CONSIDERATIONS

Another small group examined issues related to equity, interstate trade-offs, tribal concerns, and environmental justice that DOE should incorporate into its decision-making process for LLW disposition. The results of the Equity (etc.) Considerations Small Group's efforts are summarized in the following;

Equity barrier/challenge #1: Not everyone is at the table, that should be in the position that they should be for the entire duration of the management of LLW generation through the time when it no longer poses any threats. The author notes that this barrier/challenge is somewhat confusing as originally worded, but it basically implies that not all stakeholders impacted by the LLW issue are included in decisions on the issue for the entire duration of the issue.

Suggestion for overcoming/resolving equity barrier/challenge #1: *DOE should follow its own policies and executive orders for implementing its responsibilities with regard to how it interacts with states, tribes, and local governments. SSABs should continually strive to be representative of all of the public.*

Equity barrier/challenge #2 : The definition of equity, process for achieving it, and medium for exchange for negotiating it have not been developed and universally accepted.

Suggestion to resolve equity barrier/challenge #2 : *DOE should establish a universally acceptable definition for equity. It should include a process for determining how to achieve it and a medium for exchange through a public involvement process that begins with SSAB input. The SSABs should begin by discussing and presenting a definition from each site's perspective. DOE should collect the input and propose an integration of those definitions and take public comment on the product. DOE should then reconvene the SSABs to help determine how to define equity on the national level.*

Equity barrier/challenge #3: DOE is asking (fill in the blank, could be communities or any other specific groups that will bear more than their fair share of the burden) to accept the burdens of LLW disposal when the agency hasn't demonstrated the ability to meet its commitments, and it doesn't have the trust of those they are imposing upon.

Suggestion for overcoming/resolving equity barrier/challenge #3: DOE should develop a legally binding mechanism for funding its commitments to ensure future funding will be adequate to meet its commitments.

SYSTEM-WIDE CONSIDERATIONS

Another small group discussion focused on the big picture of what makes sense, taking into consideration issues like regulatory constraints, system-wide trade-offs, the environmental restoration program, etc., that DOE should incorporate into its decision-making process for LLW disposition. The results of the System-Wide Considerations Small Group's efforts are summarized in the following;

System-wide barrier/challenge #1: The lack of effective leadership and commitment from the U.S. Congress for cleanup contributes to a broad-based public apathy and ambiguous direction for the DOE. DOE's decision-making process is not accountable to the public. Results of public participation and/or comment are rarely considered in the final decision.

Suggestion to resolve system-wide barrier/challenge #1: DOE should create a Super CAB, composed of all of the board chairs and two or three delegates each. The Super CAB should be controlled by the boards, but supported by DOE. Meetings of the Super CAB should be focused on issues. Participating SSABs will be responsible for gathering data at the local level as appropriate. The Super CAB could play a major role in improving process and in creating feedback loops.

Note from the facilitator for this group: This suggestion was widely misunderstood. The intent was not to create a completely new organization, but rather to create an opportunity to continue events like the LLW Seminar. This suggestion has essentially been adopted by various Boards that are offering to sponsor issue-driven workshops.

System-wide barrier/challenge #2: DOE decision-making is hindered by a lack of programmatic integration. The compartmentalization of DOE programs and field offices results in decisions based on partial information, a lack of consistency and coordination between sites, unproductive relationships between the field and DOE-HQ, and destructive competition between DOE sites. Variability in relationships with regulators and the uneven application of environmental laws contribute to this lack of consistency.

Suggestion for overcoming/resolving system-wide barrier/challenge #2: DOE should improve communication between DOE-HQ and field offices by supporting greater exchange of information between staff. DOE should complete the transition from defense to environmental restoration by dismantling the existing structure and making a single Assistant Secretary on par with Defense programs. This should result in an integrated environmental program bringing waste management and environmental restoration into one program with integrated management strategies for the two previously-separated waste programs. This new program needs to demonstrate purpose and leadership. DOE should also convene a reinventing government, task force to look at regulations, orders, process, relationships, and budgets to make specific suggestions for enhancing effectiveness. Finally, DOE should maximize the effectiveness of closure funds.

System-wide barrier/challenge #3: The lack of effective procedures for implementation of funding environmental stewardship programs prevent stakeholders, and should prevent everyone, from accepting Environmental Management decisions.

Suggestion to resolve system-wide barrier/challenge #3: *DOE should establish a focus for stewardship within DOE, support a national stakeholder meeting on stewardship, and incorporate stewardship considerations into its decision-making processes.*

TRANSPORTATION CONSIDERATIONS

A final small group discussion focused on issues related to transportation of LLW among DOE sites and commercial facilities that DOE should incorporate into its decision-making process for LLW disposition. The results of the Transportation Considerations Small Group's efforts are summarized in the following;

Transportation barrier/challenge #1: There is a lack of stakeholder participation at the national level.

Suggestion to resolve transportation barrier/challenge #1: *DOE must establish a process to include broad stakeholder participation for complex-wide transportation issues which accomplishes early and meaningful public involvement in the decision-making process.*

Transportation barrier/challenge #2: DOE's transportation system is poorly designed with regard to operations and methodology. In addition, DOE lacks consistent emergency response programs and is not dealing well with social equity and sovereignty issues.

Suggestion to resolve transportation barrier/challenge #2: *DOE should establish clearly defined and consistent policies for national transportation operations and methodologies. These policies must include, at a minimum, emergency response, modes and routes, standards and protocol, and social equity and sovereignty considerations.*

Transportation barrier/challenge #3: There is a lack of trust in DOE regarding transportation of radioactive materials.

Suggestion for overcoming/resolving transportation barrier/challenge #3: *In order to strengthen the public's trust and confidence regarding transportation issues, DOE must provide education and timely and complete information regarding the benefits, safety, and risk of LLW transport.*

RESULTS AND NEXT STEPS

After the small group sessions a representative from each of the five groups reported the results in a plenary session. Questions from participants were encouraged to ensure that everyone understood the suggestions and the barriers or challenges they were crafted to address. Each site board was tasked to evaluate each of the five categories according to importance and ability of the full board to support the points in a consensus recommendation letter. Since the SSAB LLW Seminar itself was not designed to result in a set of recommendations representing the SSAB program, the results of a simple ranking by SSAB members in attendance might be helpful to the full site boards.

Each SSAB site was asked to provide two scores for each of the 17 suggestions. The first ranking score reflected how important the group thought the suggestion was in order for the DOE

to move forward with implementable decisions for LLW disposition. Ranking the suggestion for importance ranged from 1 (for “not important at all”), to 5 (for essential). The second ranking score for each suggestion indicated how supportable each group thought the suggestion would be if their respective SSAB site board were to consider developing a recommendation to transmit the suggestion to the DOE. Ranking the supportability for each suggestion ranged from 1 (for “snowball’s chance in xxxx”), to 5 (for “a piece of cake”). The ranking forms were tabulated by the facilitators for an average score for each suggestion by SSAB site, and the results were presented to the full group of participants.

Results of the ranking of the suggestions were interesting. Total scores for importance ranged from 27 to 45 (out of a possible total of 50) and 3.7 was the mean score for importance. Total scores for supportability ranged from 30 to 46 (also out of a possible total of 50) and the mean for supportability was 3.7. It was generally agreed that the suggestions related to transportation considerations were ranked higher in both importance and supportability than the suggestions in the other four categories. Members generally agreed that the suggestions related to economic considerations were ranked lower in both importance and supportability. The participants from each SSAB had an opportunity to report how they had scored the various suggestions and why.

The LLW Seminar provided the list of 17 suggestions to overcome barriers and challenges to the DOE decision-making process for LLW disposition. This list is significant because it was developed by five groups constituting approximately 60+ members of the SSAB program from 10 sites across the DOE complex. The list of 17 suggestions was produced at the Seminar to provide individual boards with a document they could utilize to craft individual letters of recommendation. Some SSABs have followed up with their own recommendations using the results of the LLW Seminar, whereas, others have not. Facilitators of the LLW Seminar knew that it would be extremely difficult to produce a single letter from the SSAB program in the two and a half days of the meeting, so they settled to produce the list of 17 suggestions.

During the September 1998 SSAB Chairs meeting a suggestion was agreed to by the various chairs that it would be worth while to explore the possibility of transmitting a single recommendation letter to DOE with numerous board signatures. The suggestion was based on the premise that a single recommendation with multiple SSAB signatures would have a more powerful impact than separate transmittals with single signatures. An effort by the NTS CAB to lead the development of a single recommendation letter based on the 17 suggestions transmitted over the signatures of multiple SSABs has not been successful to date. Coordination of this effort has proven to be extremely difficult because of various reasons involving: more important and abundance of issues at the site level; lack of facilitation capacity; scheduling conflicts; and lack of supportability for the original wording of the suggestion(s). Future seminars of this type undertaken by the SSAB program should be mindful of how challenging and difficult it can be to produce a single recommendation letter at or following the meeting.

The process and results of the LLW Seminar have demonstrated the potential for convening large numbers of stakeholders to address a specific topic and develop draft recommendations acceptable to a wide variety of perspectives. Planning is already underway for the SSAB program to conduct a LLW Transportation Workshop in May 1999 in Cincinnati, Ohio following

the format of the LLW Seminar. There is also discussion for possibly an SSAB meeting in Oak Ridge, Tennessee during the fall of 1999 to discuss stewardship.

Incorporation of public participation in the decision-making process for LLW disposition is an important, difficult, and iterative, long term process. Stakeholders see the status of the LLW management system as slowly moving forward, but repeated delays of the LLW ROD are generating more skepticism that the decision may not stand. Stakeholders believe the DOE is going to have to overcome many barriers before LLW disposition options can finally be decided, supported, implemented, and sustained. The DOE has made progress in seeking stakeholder input for many of the non-technical aspects of the LLW disposition decision-making process summarized in this paper, but it appears that the public still wants more involvement. The DOE must continue to move forward with as much public acceptability for LLW disposition decisions as possible in a open, defensible, and accountable manner. Stakeholder groups like the SSAB program believe they can contribute sensible, informed recommendations to the DOE to help the nation manage its LLW problem, and get on with the business of environmental restoration at former nuclear weapons facilities.

REFERENCES

1. U.S. Department of Energy, Office of Environmental Management (May 1996). *Final Waste Management Programmatic Environmental Impact Statement*, DOE/EIS 0200-F.
2. U.S. Department of Energy, Office of Environmental Management (September 1998). *Information Package on Pending Low-Level Waste and Mixed Low-Level Waste Disposal Decisions*.
3. Nevada Test Site Community Advisory Board (1998). *Site Specific Advisory Board (SSAB) Low-Level Waste Seminar, Post Meeting Materials Packet*.
4. U.S. Department of Energy, Office of Environmental Management. *Site Specific Advisory Board Guidance Final - December 1995*. Retrieved November 29, 1998 from the World Wide Web:<http://www.em.doe.gov/em22/ssabguid.html>.