



SRS Citizens Advisory Board

Waste Management Committee

Meeting Summary

April 22, 2002
Desoto Hilton
Savannah, GA

The Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Monday, April 22, 2002 at the DeSoto Hilton in Savannah, GA. The purpose of the meeting was to hear a Department of Energy (DOE) Headquarters (HQ) update on alternatives to incineration and to review draft motions related to PUREX waste and transuranic (TRU) waste priority. Attendance was as follows:

CAB Members

Jerry Devitt*
Heather Lea Simmons*
Beckie Gaston-Dawson*
Lola Richardson*
Vera Jordan*
Perry Holcomb*
Meryl Alalof*
Mel Galin

Stakeholders

Andrew Smith
Travis Wiley
Melinda Holland
Rick McLeod, CAB Tech. Adv.

Regulators

Keith Collinsworth, SCDHEC
Chuck Gorman, SCDHEC

DOE/Contractors

Helen Belencan, DOE-HQ
Virgil Sauls, DOE-SR
Ray Hannah, DOE-SR
Gerri Flemming, DOE-SR
Sonny Goldston, WSRC
Helen Villasor, WSRC

* WMC Members present

Jerry Devitt, WMC Vice-Chair presided over the meeting for Chair Bill Willoughby, who was unable to attend. Mr. Devitt welcomed those in attendance, asked for introductions, and then requested public comments.

Public Comment

Andrew Smith commented that unlike a member of the Sierra Club, who made a public comment during the CAB Public Meeting earlier that the organization is against any waste being brought into the state of South Carolina, Envirocare of Utah (Mr. Smith's employer) is inviting waste to be brought to Utah.

After the public comment period, Mr. Devitt introduced Helen Belencan, DOE-HQ Mixed and Low-Level Waste Program Manager, Environmental Management (EM), Office of Integration and Disposition. Noting that Ms. Belencan was also a member of the Consolidated Incineration Facility (CIF) Focus Group, Mr. Devitt said that Ms. Belencan was always a welcome guest at SRS CAB meetings.

Update on Alternatives to Incineration

Ms. Belencan opened her presentation by saying that two points would be covered in the update. The first was alternatives to incineration and the second was stakeholder activities. Explaining that she has a long history pertaining to incineration issues within the DOE complex, Ms. Belencan said that a

stakeholder forum has been planned and will be held in Denver, CO, June 7-8, 2002. Ms. Belencan said that it is her intention to ask for feedback from the WMC and the SRS CAB that will assist DOE-HQ in identifying stakeholder values and concerns to consider in its technology development and evaluation process.

Next, Ms. Belencan explained that her presentation was organized to first discuss DOE-HQ's evaluation of the complex-wide need for incineration, the CIF alternatives evaluation and the creation of the Blue Ribbon Panel and the Alternative Technologies to Incineration Committee (ATIC). Ms. Belencan presented a timeline of events that began in May 1997 when DOE-HQ conducted the first evaluation of the complex-wide demand for incineration. Continuing with the timeline, Ms. Belencan said that activities at CIF had been placed in suspension; the Waste Experimental Reduction Facility (WERF) Incinerator was placed in cold standby; the Blue Ribbon Panel was formed in response to "Keep Yellowstone Nuclear Free" litigation; the ATIC was established; an alternative for CIF was identified; and the stakeholder forum was under development.

In response to the issue of whether there are viable commercial-sector alternatives for waste streams currently targeted for DOE incinerators, Ms. Belencan explained that the HQ evaluation of the complex-wide need for incineration determined a DOE inventory of 1.36 million cubic meters of low-level and mixed low-level waste that requires treatment. With CIF in suspension, Oak Ridge has the only operational incinerator at this time, and since it was the only incinerator licensed to incinerate polychlorinated biphenyls (PCBs), Ms. Belencan said that in her report to the Assistant Secretary of Energy Jesse Roberson, a recommendation was made to keep the Oak Ridge incinerator operational.

Next, Ms. Belencan discussed the peer review of the CIF alternative process and said the peer review team concurred with the selection of stabilization as an alternative treatment method for SRS's PUREX waste stream. Noting that the approach used was fundamentally thorough, the team did have comments regarding the weighting factors. For instance, some overlap was noted, especially with cost, although the team concluded the impact was inconsequential. Some of the technical issues identified by the team included the following:

- Documentation for the elimination of plutonium extraction
- Evaluate alternate disposal outlets
- Further work to establish waste loading and mixing method
- Draft Environmental Protection Agency (EPA) memo on stabilizing organic waste could have an impact

However, Ms. Belencan said that while it was important to note that it is likely there will be an opportunity for SRS to request a risk-based variance, it should also be noted that the memo remains a draft document. Further, the draft memo may not be applicable to the PUREX legacy liquids.

The last portion of Ms. Belencan's presentation was devoted to stakeholder activities, namely the ATIC and the "Alternative Technologies to Incineration Stakeholder Forum." Ms. Belencan said the objectives of both are:

- to facilitate an exchange of information on the status of alternative technologies to incineration, research and development activities, and opportunities for stakeholder involvement; and
- to identify stakeholder values and concerns for DOE to consider in its technology development and evaluation process.

Ms. Belencan identified Perry Holcomb, a CAB member and Karen Patterson (former CAB Chair) and Lee Poe as members who have been appointed to serve on the ATIC Committee. The mission of the ATIC is to "examine emerging candidate technologies identified by the Department for treatment for

disposal of mixed TRU and low-level wastes previously scheduled for incineration at the Idaho National Engineering and Environmental Laboratory (INEEL). The Department is identifying these technologies through implementation of its technology Research, Development, Demonstration, and Deployment (RDD&D) plan. The ATIC will facilitate stakeholder comment and communications on issues related to emerging alternative technologies to incineration for the treatment of mixed TRU and low-level wastes."

Ms. Belencan addressed the stakeholder forum in more detail by providing the preliminary agenda and explained how stakeholders can participate without traveling to Denver. Noting the web addresses, Ms. Belencan encouraged the meeting's attendees to participate so that their thoughts on the criteria DOE ought to consider in technology evaluations can be heard. The web addresses are as follows:

- For information on the background of the Forum – <http://tmfa.inel.gov/ati/>
- For registration materials and a draft meeting agenda – <http://www.getf.org/ati>

Ms. Belencan also provided additional resources and references to assist interested stakeholders by citing the Idaho Citizens Advisory Board's list of criteria and the criteria used for technology demonstration and implementation that was developed through the Army's Assembled Chemical Weapons Assessment (ACWA) Program. Copies were provided to the meeting attendees.

In response to a question raised on why DOE is anti-incineration, Ms. Belencan said that with the suspension of operations at CIF, and the shutdown of WERF, it only appears that the Department is leaning away from incineration. However, Ms. Belencan emphasized that at one time, DOE had three incinerators that were operational. However, the Department has had to consider the matter of the cost to operate the incinerators versus the amount of material requiring treatment. Based on DOE's analysis on complex-wide demand for incineration, Ms. Belencan noted it became more cost effective to find alternative treatment methods to incineration, such as in the case of CIF.

PUREX Waste Alternative Treatment Evaluation Draft Motion Review

Perry Holcomb, Motion Manager provided background on the draft motion by noting that CIF operations were suspended early in fiscal year 2001 since there was a lack of projected waste streams and a high operating cost of \$18M per year. Addressing the PUREX legacy waste, Dr. Holcomb said SRS had approximately 38,000 gallons in its inventory, with 25,000 gallons consisting of the organic phase and the remainder consisting of the aqueous phase. Dr. Holcomb said that according to the Site Treatment Plan (STP) commitments, one-half of the waste has to be treated by fiscal year 2009 and the rest by fiscal year 2019. On July 25, 2002, the CIF Focus Group was formed and held its initial meeting two days later, July 27, 2000.

Dr. Holcomb then discussed the systems engineering approach that SRS used to evaluate both CIF and proposed alternatives. As a result of the study, SRS informed the South Carolina Department of Health and Environmental Control (SCDHEC) that it had made a decision to pursue an alternative treatment technology and not restart CIF. Dr. Holcomb noted that the alternative treatment consisted of treating the organic phase by direct stabilization and sending the aqueous to Saltstone via Tank 50. In citing an approval from SCDHEC, Dr. Holcomb said that CIF would not undergo closure until 10 percent of the organic waste has been successfully treated.

In its draft motion, the CAB recommended that SRS verify in writing to the SRS CAB its plan to blend the PUREX aqueous waste into the Saltstone feed as soon as practical after the Saltstone Processing Facility is restarted and that the process be targeted for completion by the end of fiscal year 2003. In addition, the CAB recommended that SRS select a material used in treating the PUREX organic waste by direct stabilization as soon as possible. After a brief discussion, recommendations were made to edit

the draft motion before it was to be presented to the CAB at its meeting the next day.

Transuranic (TRU) Waste Priority and Off-site Shipments

Jerry Devitt, Motion Manager provided a brief review of the background contained in the draft motion and said that the CAB had been concerned about the treatment and disposition of TRU wastes for a long time. Noting that SRS has the largest inventory of Pu-238 waste in DOE, and because there is not disposition path clearly identified for Pu-238 wastes intermixed with organics, they remain a great risk to the environment and the public near SRS. With the new push toward Cleanup Reform Appropriations, Mr. Devitt said it was incumbent upon the CAB to provide this recommendation to DOE-SR as well as send copies to DOE-HQ and the DOE Carlsbad Field Office.

The draft motion recommended the following:

1. DOE-HQ allocates the necessary number of TRUPACT II containers for SRS to meet its fiscal year 2002 commitment of a minimum of 12 shipments.
2. DOE-HQ accelerates shipments of TRU waste from SRS by expanding capabilities such as HANDSS-55, and authorizations at SRS to package higher loading of Pu-238 or Pu-239 consistent with DOE, DOT, and NRC rules and regulations and meeting WIPP WAC in TRUPACT II containers in order to maximize SRS risk reduction.
3. DOE-HQ expedites the removal of the highest hazard TRU waste from SRS and uses the Cleanup Reform Appropriations as a method to acquire funding to eliminate the risk.
4. DOE-HQ develops and effective and efficient operational plan to utilize the TRUPACT II containers for TRU waste shipments from all DOE weapons complex sites.
5. SRS expedites the design and construction of the facilities to repack, characterize, and certify its TRU waste shipments to WIPP.
6. DOE-HQ accelerates its work with the Nuclear Regulatory Commission to receive approval to transport higher gram loading of SRS Pu-238 TRU waste mixed with organics by incorporation technology such as the hydrogen "getters".

After a brief discussion, a few minor edits were proposed to be made before the draft motion was to be presented to the CAB at its meeting the next day.

Public Comment

With there being no public comment, Mr. Devitt adjourned the meeting at 8:25 p.m.

Meeting handouts may be obtained by calling 1-800-249-8155.