



## **SRS Citizens Advisory Board**

### **Consolidated Incineration Facility Focus Group**

#### **Meeting Summary**

April 11, 2001  
North Augusta Community Center  
North Augusta, SC

---

The Consolidated Incineration Facility (CIF) Focus Group met on Wednesday, April 11, 2001, 5:00 p.m., at the North Augusta Community Center, North Augusta, SC. Attendance was as follows:

#### **FG Members**

Wade Waters, CAB  
Murray Riley, CAB  
Perry Holcomb, CAB  
William Lawrence, CAB  
Karen Patterson, CAB  
Bill McDonell  
Lee Poe  
Bill Lawless  
Doug Leader  
Ray Hannah  
Sonny Goldston  
Peter Hudson  
Helen Villasor

#### **Stakeholders**

Rick McLeod, CAB Tech.  
Advisor  
Bill Groce

#### **Regulators**

None

#### **DOE/Contractors**

George Mishra, DOE  
Mike Simmons, DOE  
Ed Stevens, SRTC  
Elmer Wilhite, SRTC  
Bernie Mayanscik, WSRC  
Cliff Thomas, WSRC  
Marshall Looper, WSRC

Wade Waters opened the meeting at 5:00 p.m., by inviting introductions and thanking everyone for coming. Mr. Waters then offered his congratulations to three members of the Focus Group, Karen Patterson, Perry Holcomb and Lee Poe for having been selected to participate as members of the Environmental Management Advisory Board's (EMAB) Alternative Technologies to Incineration Committee (ATIC). The ATIC was formed in response to a recommendation made by the Blue Ribbon Panel appointed by the former Secretary of Energy for interested stakeholders to provide expertise and public involvement in examining emerging candidate technologies for treatment and disposal of mixed TRU and low-level wastes previously scheduled for incineration at the Idaho National Engineering and Environmental Laboratory (INEEL). Bill Lawless asked Rick McLeod, the CAB's technical advisor to draft a letter of appreciation to send to the EMAB for selecting the three members from the Consolidated Incineration Facility (CIF) Focus Group to serve on the ATIC. Dr. Lawless also commended Wade Waters on the interview Mr. Waters provided for an article recently published in a local newspaper on the CIF.

#### **Public Comments:**

Lee Poe asked that in view of the new position that he, Karen Patterson and Perry Holcomb have assumed on the EMAB, it would be helpful to be provided with additional technical details on SRS's CIF activities and requested a meeting at SRS with Peter Hudson and Ray Hannah. In addition, Mr. Poe requested that the meeting be kept open so that other interested stakeholders could attend. Helen Villasor is to schedule a meeting date suitable to all parties.

Wade Waters asked the attendees to refer to the DOE-HQ e-mail and conference announcement regarding the upcoming Federal Agency Environmental Cleanup Conference being held in Salt Lake City, Utah, April 23-26, 2001. Mr. Waters noted that both documents created even more concern to the Focus Group by precluding SRS participation at this event. However, the Interstate Technology Regulatory Cooperation (ITRC), of which Mr. Waters is an active member, is a co-sponsor of the conference. Therefore, Mr. Waters said that he would be attending the conference. At a special conference workshop, Mr. Waters said he would be provided with an opportunity to present the concerns of the CIF Focus Group regarding incineration. Bill Lawless asked if any state regulatory agencies would be attending and noted that if there were none, the conference had a wrong mix of attendees. Wade Waters said that he knew of two South Carolina Department of Health and Environmental Control (SCDHEC) representatives who were planning to attend. Several of the attendees reiterated their disappointment that SRS was not being represented at this conference.

Mike Simmons said that an evaluation of the conference format and agenda had been made by DOE-SR and it was determined that with tight travel budgets this conference was considered to be more of a vendor forum than in-depth discussion on incineration. In addition, Mr. Simmons stated that Helen Belencan, DOE-HQ, who is also a member of the CIF Focus Group, would be participating and DOE-SR is very comfortable with the results of the work from Ms. Belencan and her team. The DOE-HQ study team is currently evaluating viable commercial-sector alternatives for waste streams currently targeted for DOE incinerators and whether DOE should continue with the current planning baseline of closing the incinerator at Oak Ridge in 2003. Therefore, Mr. Simmons said that the decision was made that SRS would not participate in the conference. Perry Holcomb asked how the information from the conference would be disseminated. Several suggestions were then made to check on the availability of conference proceedings, Internet interactive sessions, compact discs, presentations, etc. Helen Villasor was asked to follow up on this request.

A question on the status of the 2002 budget was raised. Karen Patterson, a member of the Focus Group, who is also the Chair of the SRS CAB, said that she was trying to get some information so that it could be presented to the CAB at its April 24, 2001 meeting. Ms. Patterson said that a major CAB concern is the effect that mandates would have on the budget.

#### **Performance Assessment (PA) for DOE Low-Level Waste (LLW) Disposal Facilities: What it is and why we do it:**

Sonny Goldston opened his presentation by noting that the CAB has been briefed on this topic before; however, Mr. Goldston said that if the Waste Management Committee (WMC) was interested in presenting it to the CAB again since there are several new members, he would be happy to do so.

Mr. Goldston proceeded with his presentation by explaining that in order to understand how the PA can be applied to a new wasteform (i.e., stabilization technology), it was important to understand the principles behind the PA. Mr. Goldston then introduced the technical basis for DOE authorization of LLW disposal and how the PA assures that the disposal of LLW meets DOE's performance objectives and requirements as set forth in DOE Order 435.1, "Radioactive Waste Management". The objective of this Order is to ensure that all DOE radioactive waste is managed in a manner that is protective of worker and public health and safety, and the environment. While the intent of Mr. Goldston's presentation was to address the PA, Mr. Goldston said that a Composite Analysis (CA) is also needed since the CA takes in all other sources of contamination. In assessing the impact to a hypothetical future member of the public from all radioactive sources that may interact with LLW disposal facilities, it also looks at a compliance period of 1000 years. DOE then has to issue a Disposal Authorization Statement, which is analogous to a

Nuclear Regulatory Commission license. However, Mr. Goldston said it was important to remember that groundwater monitoring must be in place and that the site is also required to have a maintenance program in order to provide annual reviews of disposal activities. In closing his portion of the presentation, Mr. Goldston said that a special analysis would have to be performed.

Elmer Wilhite provided the next portion of the presentation by discussing the performance objectives and requirements of the PA/CA, a conceptual model, an agricultural intruder analysis of exposure pathways and a more in-depth analysis of the PA/CA Process. In reviewing the PA-derived disposal limits, Mr. Wilhite said that the PA conclusion predicts that most SRS LLW can be safely disposed within allowable limits.

To better understand how the PA addresses other wasteforms, Mr. Wilhite presented a chart that described the development of the Waste Acceptance Criteria (WAC) and said that the options for waste exceeding the WAC would be to dispose of the waste in a more protective unit, i.e., the Low Activity Waste (LAW) vault instead of a trench or an Intermediate Level vault (ILV) instead of the LAW vault. Another option would be to treat the waste to enhance stability, such as stabilizing the waste with concrete or altering the chemistry of the waste form. Other options include transporting the waste to another DOE LLW disposal facility such as the Nevada Test Site; conducting special analysis to "take credit" for waste form and/or package properties (e.g., distribution coefficient ( $K_d$ )). In closing, Mr. Wilhite provided an example of another SRS wasteform, the activated carbon vessels from the Effluent Treatment Facility that contained more Iodine-129 than the ILV WAC permitted. A special analysis was performed and showed that the vessels could be disposed in the ILV. Mr. Wilhite said a similar process could be pursued for PUREX/NOCHAR.

#### **PUREX Alternative Treatment: Update on Selection Process:**

Peter Hudson reviewed the Systems Approach, which is being used by the SRS study team to determine which options should be considered as alternative technologies to treat the PUREX waste stream. The Systems Approach includes:

- Defining requirements
- Identifying potential solutions
- Screening out non-viable options
- Grading viable options
- Establishing a short list of a small number of options
- Investigating the short list in detail
- Ranking the short list and selecting a preferred option
- Providing a peer review of the process and results.

In response to a question as to who is performing the peer review, Mr. Hudson said it was the members of the Transuranic (TRU) Mixed Waste Focus Area (MWFA). Lee Poe asked that the Focus Group be provided a list of the names of the members of the MWFA. Mr. Hudson said he would provide the information to Helen Villazor for distribution to the CIF Focus Group.

Mr. Hudson continued his presentation by presenting the flowchart for the CIF Alternatives Study and noted that the study team is in the process now of estimating lifecycle costs; however, Mr. Hudson emphasized that any of the preferred alternatives have not been totally demonstrated. Additionally, Mr. Hudson said that both paths on the flowchart are being conducted in parallel, meaning that CIF is still being considered as baseline since it is the only known technology that works. In addition, CIF remains on the short list because of unidentified closure costs. Bill Lawless pointed out the critical need for a cash flow analysis at this time.

However, if CIF were to become the preferred option, Mr. Hudson said that the facility would need increased containment to ensure worker protection. Mr. Hudson also said that the study team has started

working on a schedule to answer the question raised by the Focus Group at an earlier meeting about CIF optimization. Mr. Hudson said he would be prepared to discuss CIF optimization at the June CIF Focus Group meeting. Mr. Hudson was also asked if it would be possible to discuss the budget impact on CIF at the next CIF Focus Group meeting.

In closing, Mr. Hudson said that the current path forward is to continue evaluating the alternatives and determining radionuclide pretreatment requirements. Lee Poe commented that this is not a short-term process and there is also an issue of regulatory constraints. Mr. Hudson agreed and said the study team is working hard to investigate the many viable options. One of which is the use of Tank 47 for the PUREX aqueous phase waste stream; however, Mr. Hudson said at this time it has been difficult to get on the High Level Waste (HLW) Division's screen since the program is entrenched in other HLW issues such as Salt Process, Tank Closure, etc.

#### **Status of Site Treatment Plan (STP) CIF Non-PUREX Waste Streams:**

In response to a CIF Focus Group request, Bernie Mayanscik presented a status report on the STP non-PUREX waste streams originally identified for treatment in CIF.

Ms. Mayanscik said that non-PUREX mixed waste remains in storage awaiting treatment and that alternative options to treat the mixed waste streams have been identified. The options were evaluated using the options analysis method identified in the Solid Waste Division's (SWD) System Plan.

In discussing the non-PUREX waste streams and current volumes, Ms. Mayanscik said SRS has 478 cubic meters of incinerable solid waste, 3 cubic meters of aqueous liquid waste, 35 cubic meters of organic liquid waste for a total volume of 516 cubic meters. The incinerable solid waste includes solvent contaminated rags and wipes; solids and debris such as rags, wipes and mop heads; job control waste such as protective clothing, paper, plastic, etc.; paints, paint chips and thinners; laboratory sample waste; and filters. Aqueous liquid waste includes spent photographic fixatives; acidic mixtures; and laboratory wastes. Organic liquid waste includes solvents and solvent mixtures and mixed waste oils.

Ms. Mayanscik then identified the treatment options and vendors for the non-PUREX waste streams. Some of the treatment options include macroencapsulation or stabilization, deactivation followed by stabilization, and incineration or other thermal processes. In response to a question asked by Lee Poe if macroencapsulation was being performed at SRS, Ms. Mayanscik said that it was being done at Oak Ridge. Some discussion then arose regarding the large amount of waste that had been destined for treatment at CIF. However, it was noted that CIF was the largest generator of this waste, citing the filters that were a byproduct of the CIF process. Lee Poe commented that this large amount of waste needs to be clearly understood since it presents a picture much larger than just PUREX. In closing, Ms. Mayanscik said that the new STP commitment is to treat the non-PUREX incinerable waste by the end of third quarter Fiscal Year 2007.

#### **Public Comment:**

None.

Wade Waters adjourned the meeting at 7:55 p.m.

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