



## **SRS Citizens Advisory Board**

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

#### **Meeting Summary**

January 10, 2001  
Aiken Federal Building  
Aiken, SC

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The Consolidated Incineration Facility (CIF) Focus Group met on Wednesday, January 10, 2001, at 5:00 p.m., at the Aiken Federal Building, Aiken, SC. Attendance was as follows:

#### **FG Members**

Wade Waters, CAB  
Jean Sulc, CAB  
Perry Holcomb, CAB  
Ken Goad, CAB  
Brendolyn Jenkins, CAB  
Mike French  
Lee Poe  
Doug Leader  
Bill Lawless  
Todd Crawford

#### **Stakeholders**

Rick McLeod, CAB Tech.  
Advisor  
Zaddie Wilkins  
Francis Bolton  
John Meyers

#### **Regulators**

None, SCDHEC  
None, EPA

#### **DOE/Contractors**

George Mishra, DOE  
Jim Buice, DOE  
Marshall Looper, WSRC  
Linda Perry, WSRC  
Ray Hannah, DOE  
Peter Hudson, WSRC  
Sonny Goldston, WSRC  
Mary Flora, WSRC  
Helen Villasor, WSRC

Wade Waters opened the meeting promptly at 5:00 p.m. by inviting introductions and thanking everyone for coming.

Next, Mr. Waters announced that Helen Belencan, DOE-HQ, a member of the CIF Focus Group, had been appointed as the DOE-HQ representative responsible for developing the action plan for responding to the Blue Ribbon Panel's (BRP) recommendations on emerging technological alternatives to incineration. Secretary Richardson had appointed the BRP in response to concerns raised by citizens about incineration in Idaho. Mr. Waters said that Ms. Belencan reported that there will be ongoing stakeholder involvement in the development of the action plan; however, at this time the format has not been formalized. Mr. Waters explained that this stakeholder involvement could consist of a conference, teleconference, public meetings, or perhaps the formation of a panel. Mr. Waters noted that this would be an excellent opportunity for the CIF FG to provide engaging dialog on incineration, SRS's PUREX legacy waste, and also input to DOE-HQ's format selection.

**Public Comment:** There were no public comments.

**Discussion of DOE-HQ Response to CAB Recommendation 129:** Wade Waters opened the discussion by asking if there were any comments relative to the DOE-HQ response to CAB Recommendation 129 sent by David Huizenga. In its recommendation, the CAB asked that the BRP use an internal report that was prepared to study treatment systems for mixed low level waste (LLW); expand

the mission of the BRP to identifying the best available technology for treatment of other wastes; follow the same objective of identifying the best technology available for the treatment of PUREX (SRS's incinerable waste stream); and DOE-HQ to justify the duplications of time and resources by funding three separate studies on the same issue.

The Focus Group agreed that incineration had been precluded in Mr. Huizenga's response and believed the response needed further clarification. It was pointed out that the letter contained a mechanism for seeking clarification; however, it was decided that no action be taken until the new administration has had an opportunity to become established and a response is received to a current draft motion that was prepared to be presented to the full Board at its January meeting. The draft motion, "Technology Investigation for PUREX Treatment and Incineration", includes a recommendation that the BRP address only specific waste streams at the Idaho National Engineering and Environmental Laboratory (INEEL) and not expand its evaluations to other waste streams at other DOE facilities. It also recommends that DOE include incineration or more specifically, the enhancement of the Consolidated Incineration Facility (CIF) in its investigation for the best available technology to treat PUREX waste.

CIF Funding Strategies for Two Cases Discussion: Mr. Waters said this discussion was important to the Focus Group because the members need assurance that funding for CIF will remain under constant consideration by DOE. Noting that a decision could be made that there is no viable alternative for incineration of SRS's PUREX waste stream, another case could develop if the South Carolina Department of Health and Environmental Control (SCDHEC) holds strong feelings about restarting CIF. If that scenario were to happen, the Focus Group wants to be sure that funding would be available for whatever actions had to be taken.

Mr. Waters said the second case involves finding a viable alternative technology to incineration that is cost effective and protective of human health and the environment. However, Mr. Waters noted that the timeframe would stretch out further since this scenario would require additional detailed studies, development, construction, a pilot program, etc. Mr. Waters said the Focus Group needs to know that there still would be sufficient funding for this case.

In the third case, if the point in time is reached when SCDHEC says that if the site does not have a proven alternative technology available, then the regulators would expect SRS to implement procedures for re-permitting CIF. Therefore, Mr. Waters said with both the re-certification of CIF and the necessary continuing studies, the possibility of pursuing a dual track exists. Mr. Waters explained further that this scenario would present even a greater funding hardship for DOE since money would have to be made available to accomplish both cases.

With this introduction, Mr. Waters said the Focus Group believed that it would be more beneficial to have a group discussion with Jim Buice and Ray Hannah rather than hear a presentation. Mr. Waters then opened to the floor to Mr. Buice and Mr. Hannah to answer funding questions from the group.

Questions were raised regarding the possibility of tearing down the facility, restoring the site to a Greenfield and the expected costs to perform this action, or even reusing the facility for another purpose. Ray Hannah referred to the regulatory date of April 2002, and said a decision will have to be made by this date to either pursue an alternative or restart the facility. If the decision were made to pursue the alternative, then SCDHEC would issue instructions to immediately begin facility closure. Mr. Hannah said that an estimated \$80M would be required to be spent sooner or later since this is the site's cost for CIF. Mr. Hannah also said that a dual track would have to be pursued if an alternative technology has not been identified by April 2002. However, Mr. Hannah emphasized that the site is continuing to keep all of its options open at this time.

Noting that if the decision were made to restart CIF then it would most likely occur in the 2007-08 timeframe. SRS would then treat the legacy PUREX waste, transition it to the existing inventories in the canyons, and then shut down CIF. Mr. Hannah said that this action is a good business practice since it is

preferable to a restart, shutting back down and restarting again. When Mr. Hannah was asked how this would affect the calculations that have been made, he said DOE would be forced to look at a dual track since there would be many avenues to pursue including additional costs for permit modifications, pursuing the Maximum Achievable Control Technology (MACT) Standard, performing a risk assessment, preparing a reasonable funding profile, etc. Therefore, Mr. Hannah said the question would be better answered in the 2005 timeframe, and after further negotiations with SCDHEC. Mr. Hannah did clarify that the \$80M would not be spent in one year, but instead include a spread over several years. A question was raised if there would be funding for each of the three different scenarios. Mr. Buice responded that in determining outyear spending, DOE would be required to put extra weight into the Integrated Priority List because the CIF actions are regulatory driven. Currently, Mr. Hannah said that DOE is trying to determine the smart solution, i.e., either use CIF or shut it down. Nevertheless, Mr. Hannah closed the discussion by emphasizing that DOE's plan is still to have its decision ready in 2001.

**Update on Alternative Treatment Technology Work:** Peter Hudson provided a presentation on the work underway in the search for an alternative treatment technology. The team has been using the systems engineering approach, which is a systematic decision-making process for selecting the best option from among several alternatives. The steps in the approach, which have been completed to date, include the following:

- Requirements have been defined
- Potential options identified
- Non-viable options screened out
- Viable options graded
- Small number of options were placed on a short list

As the team continues with its effort, members will need to:

- Investigate the short list in detail
- Rank the short list and select the preferred options
- Provide a peer review of process and results by independent team

In reviewing the process requirements, Mr. Hudson said that treatment processes are needed for both the organic and aqueous phases of the legacy PUREX waste. The secondary waste generated from PUREX treatment must comply with Resource Conservation and Recovery Act (RCRA) disposal requirements, and the radioactive constituents must meet the appropriate Waste Disposal Criteria (WAC) for disposal. The lifecycle treatment cost must be less than the combined re-start and operational cost to treat the waste in CIF. The alternative option must provide for treatment of at least 16,000 gallons of legacy waste by the end of Fiscal Year 2009. The alternative process must be a mature technology that can be successfully demonstrated as a potential solution for PUREX waste treatment. When asked when the technology demonstrations will be completed, Mr. Hudson said that the plan is to be finished by December 2001, about four months before the final decision date of April 2002.

Discussing the potential solutions that have been identified to date, Mr. Hudson said the SRS Creativity Committee, which is comprised of SRS senior technical professionals including Don Orth and Todd Crawford, made 35 recommendations. The PUREX treatment request for proposal was published in the *Commerce Business Daily* (CBD) and 15 vendor proposals were received including technology options from companies in the United Kingdom and France. In addition, 12 vendor proposals were received for the treatment of thermal technologies onsite; two biotechnology treatment options; and one of SRS's new missions, the Canyon Stabilization process, where the aqueous phase could be mixed with waste from processing of Highly Enriched Uranium (HEU) reactor fuel.

In screening out the non-viable options, the potential treatment options were evaluated versus the functional requirements. Mr. Hudson noted that several options were eliminated because the technologies were either immature or had a high projected lifecycle cost. However, during the screening evaluation a

"long list" of viable technologies was generated. Two of the technologies on the long list presented to the CIF Focus Group at its October 30, 2000 meeting included Waste Stabilization of both the organic and aqueous components by using a polymer (NOCHAR) and Pretreatment, a method designed to remove the radionuclides to lower activity.

While reviewing the long list treatment options, Mr. Hudson told the group that several SRS facilities were also identified as options. For example, the aqueous waste could be transferred to Tank 47 where the radioactivity would end up contained in the Defense Waste Processing Facility glass (vitrification process,) or sent to Tank 50 and stabilized using Saltstone. However, Mr. Hudson emphasized that WACs must be carefully examined to ensure all requirements are met. Lee Poe then encouraged the participation of the High Level Waste Division in the decision-making process since the use of tank space is being evaluated.

Mr. Hudson also discussed the option evaluation criteria, which uses the SWD *System Plan* technology evaluation criteria as the basis. The main evaluation criteria were the lifecycle cost, technical maturity, process availability, operational flexibility and stakeholder acceptance. When asked about the lifecycle cost criteria and if it included long-term stewardship, Mr. Hudson said that this is a rough-cut for now and uses broad ranges only. It also does not include decontamination and decommissioning of CIF down to a Greenfield status since this lifecycle cost will be incurred whether CIF is closed now or restarted and closed later.

In reviewing the PUREX organic waste short list, Mr. Hudson said there were two options above the line. These include offsite commercial treatment that will require pretreatment, and stabilization. Those options below the line include onsite commercial treatment and CIF optimized treatment. Mr. Hudson emphasized that while there was a big gap in the scoring between the options above and below the line, it was important to keep CIF in the final short list evaluation because it is the baseline (only existing treatment) and must be used for all cost comparisons.

The PUREX aqueous waste short list results include Tank 47/Evaporator, Tank 50/Saltstone, Effluent Treatment Facility (ETF) (with no radiological pretreatment), stabilization, new canyon stabilization process, and ETF (with radiological pretreatment). Below the line on the short list were onsite commercial treatment and CIF treatment.

In closing, Mr. Hudson said the next step in the search for an alternative treatment, is to investigate the short list in detail. Several members of the Focus Group indicated they would like to hear a presentation at a future Focus Group meeting on how the ranking is being accomplished. Other members asked to hear presentations on some of the technologies that were discussed. For example, there was an expressed interest in more information on the stabilization process (NOCHAR) since it is above the line on the short list.

**Update on SCDHEC Permitting Efforts Status and Discussion:** Ray Hannah provided a brief update on the regulatory status of CIF. Mr. Hannah said that SCDHEC issued a letter on January 2, 2001 stating its decision to issue a permit modification, which will become effective on February 2, 2001. Regulators have established an appeal period of 15 days, which will end January 17, 2001. Therefore, the CAB's Technical Advisor, Rick McLeod was asked to review the document as well as the *Responsiveness Summary* to determine if the CIF Focus Group has a basis to appeal the decision. Some members believed an appeal could be appropriate since the date of April 2002 is an arbitrary date set by SCDHEC and not one that is regulatory driven. Others indicated that the only action the Citizens Advisory Board has is to determine the future status of the recommendation it made to the regulators. Mr. Hannah indicated that it is his opinion that SRS will not file an appeal.

It was suggested that SCDHEC representatives be invited back to make a presentation to the Focus Group on the *Responsiveness Summary* as well as the future regulatory expectations for CIF, including information on the required permission to place CIF in a standby mode.

**Group Discussion:** Lee Poe provided the status of his assigned task to evaluate the CIF Safety Analysis Report (SAR). Mr. Poe said it was his opinion that the document meets the intent of DOE Order 5480.23 and puts credence back to the Auditable Safety Analysis (ASA) since all functional intent of the safety requirements are being met. However, Mr. Poe noted that it is his belief that management must pay attention to specific details and would encourage periodic spot checks.

Copies of three newspaper articles relating to Secretary Richardson's comments on incineration at INEEL were distributed, and during the group discussion, a few members of the focus group were disappointed with comments quoted by Secretary Richardson that "he was making INEEL the lead field site for guiding DOE's long-term stewardship program."

Mr. Waters noted that the next CIF Focus Group meeting date would be February 21, 2001 at the Hampton Inn, Aiken. Mr. Waters also confirmed that Helen Belencan would be invited to make a presentation to the Focus Group in March.

**Public Comment:** There were no public comments.

Wade Waters adjourned the meeting at 7:45 p.m.

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