



SRS Citizens Advisory Board

Consolidated Incineration Facility Focus Group

Meeting Summary

August 20, 2002
Aiken Federal Building
Aiken, SC

The Consolidated Incineration Facility (CIF) Focus Group (FG) met Tuesday, August 20, 2002 at the Aiken Federal Building in Aiken, SC. The purpose of the meeting was to hear a progress report on the Alternatives to Incineration Committee and the Denver Stakeholder Forum, an updated schedule for organic waste, and participate in a review of pending SRS Citizens Advisory Board (CAB) recommendations related to CIF and PUREX. Attendance was as follows:

CIF FG Members

Jerry Devitt*
Jean Sulc*
Wade Waters*
Bill Willoughby*
Karen Patterson
Doug Leader
Helen Belencan
Lee Poe
Bill Lawless
Sonny Goldston
Helen Villasor

Stakeholders

Bill Quinn
Rick McLeod, CAB Tech. Adv.
John Meyers

Regulators

None

DOE/Contractors

Howard Pope, DOE
George Mishra, DOE
Ed Stevens, WSRC-SRTC
Mike Chandler, WSRC
Marshall Looper, WSRC
Larry McCollum, WSRC

*CAB Members

Bill Willoughby welcomed those in attendance, asked for introductions, and then requested public comments. Hearing no public comments, Mr. Willoughby invited Bill Lawless, Technical Lead for the CIF Focus Group to review the evening agenda. Dr. Lawless welcomed Ms. Helen Belencan, DOE-HQ and extended congratulations to Ms. Belencan on her recent temporary assignment to SRS, which will begin September 17, 2002.

Update: Alternatives to Incineration

Ms. Belencan opened her presentation by reviewing the following topics for discussion:

- Alternatives to incineration – an update on activities across the DOE complex
 - Operation of the Toxic Substance Control Act (TSCA) Incinerator
 - Status of alternatives
- Stakeholder Activities in alternatives to Incineration
 - Stakeholder Forum, June 7-8, Denver, Colorado

- Environmental Management Advisory Board
- Alternatives to Incineration Committee

Ms. Belencan explained that the Oak Ridge Accelerated Cleanup Plan notes that the TSCA incinerator will operate until 2006, and continued operation will remain dependent upon the demand for incineration from Oak Ridge waste generators and others across the DOE complex. However, Ms. Belencan said that at a User's meeting in late spring of 2002, at least 12 sites, including Rocky Flats and SRS, were among those identified to send waste to the TSCA Incinerator. Ms. Belencan emphasized that the state of Tennessee is amenable to offsite waste coming in since there is an agreement that Oak Ridge will be moving its legacy waste offsite for disposal. In response to a question on the Burn Plan approved by the state of Tennessee on a waste stream by waste stream basis, Ms. Belencan said that each and every waste stream must meet all criteria before it receives state approval.

Referring to a Primer that was developed for the Alternative Technologies to Incineration (ATI) Forum held in Denver, Colorado, June 7-8, 2002, Ms. Belencan discussed the seven technologies identified as "leading incineration alternatives" recommended in the Blue Ribbon Panel Report. The Blue Ribbon Panel Report was a product of the task force of the Secretary of Energy Advisory Board, which had been created following a dispute over the proposed incineration of radioactive mixed waste at the Idaho National Engineering and Environmental Laboratory (INEEL).

The seven technologies/status include:

1. Plasma and DC Arc melters – facility has been built but not operating
2. Reverse polymerization – no activity
3. Steam Reforming – under consideration at INEEL
4. Thermal Desorption – in operation at M&EC in Oak Ridge where mixed low-level waste (MLLW) is being treated under the Broad Spectrum Contract.
5. Supercritical water oxidation – potential application at Los Alamos National Laboratory (LANL)
6. Mediated Electrochemical Oxidation – AEA Silver-II process, which is installed at the Aberdeen Proving Grounds and is a candidate for the Army Chemical Weapons Assessment (ACWA) program
7. Solvated Electron Dehalogenation – U.S. Ecology. Sandia has a few mixed waste streams that are under consideration for this technology.

Ms. Belencan said that these seven are based upon alternative means of destroying the hazardous chemical components or separating the hazardous chemicals for further treatment. However, Ms. Belencan noted that other alternatives, including stabilization, which is under development at SRS, are also viable alternatives in specific situations. When asked if there were any specific benefits of these technologies over incineration, Ms. Belencan responded that none of these technologies establishes a comprehensive solution that satisfies everyone; each has advantages and disadvantages and consideration must be given to what each site needs to treat its waste streams. Quoting Kathleen Trever of the state of Idaho's Department of Environmental Quality, Ms. Belencan said, "Is it the name or is it the flame?" to emphasize that some stakeholders react negatively to anything named "incineration" even though other technologies use about the same level of heat for treatment; i.e., DC Arc Melter. Lee Poe noted that it was cost and not incineration that was the issue at SRS.

Moving on to further discussion of the Denver Stakeholder Forum, Ms. Belencan said it became apparent to all of the attendees that what works at Site A may not be acceptable as a technology at Site B, especially to the stakeholders. At the forum, 52 persons participated where background and information briefings were provided and facilitated stakeholder discussions were held. Ms. Belencan said that the outcome of the forum included suggested actions for DOE, which include the following:

- Developing a consolidated list of criteria based upon the ACWA list, the INEEL CAB list, and the list presented by Luther Gibson of the Oak Ridge Site Specific Advisory Board

- Integrating the Alternative Technologies to Incineration (ATI) process in the expedited cleanup plans
- Perform independent scientific reviews of technologies
- Additional forums

Ms. Belencan added while at this time, there is not a lot of energy behind additional forums, DOE is working to develop a complete list of stakeholder concerns and issues from the Denver forum and the package should be out shortly to use as guidance. Ms. Belencan said she would send copies of all the attachments from the forum to Helen Villazor. (It is noted here that copies of the information provided by Ms. Belencan, including the Primer will be provided on a CD-ROM for distribution to members of the CIF Focus Group.) For example, a list of stakeholder values and concerns as expressed by individual forum participants is being provided in categories such as public involvement, disclosure of information, and identifying risks through the use of evaluation criteria/matrix. This list has been forwarded to DOE's Environmental Management (EM) Office with the recommendation that it be distributed to each of the sites for the sites' use in evaluating alternatives to incineration or other technologies. Bill Willoughby, who attended the Denver forum, noted that it was his opinion that the list would not be mutually exclusive since there were so many open-ended issues. Ms. Belencan agreed and said that a DOE challenge is not to accept a stagnant process, but to continuously assure that DOE's outreach efforts are adequate and appropriate, including identification of new stakeholders.

Addressing stakeholder activities, Ms. Belencan said that a new chair, Jim Ajello has been appointed to the Environmental Management Advisory Board (EMAB) and it is anticipated that an EMAB meeting will occur in late fall. With reference to the ATI Committee (ATIC), a subset of the EMAB, Ms. Belencan said that if EMAB schedules a meeting for late fall, it is likely an ATIC meeting will be scheduled in early fall so the EMAB may consider any recommendations. In closing her presentation, Ms. Belencan said that numerous issues for discussion have been submitted to the EMAB executive director for discussion by committee members. When asked about the future of the ATIC (the CIF Focus Group has three members on the ATIC), Ms. Belencan said that except for the upcoming early fall meeting, she was not sure what was next. Wade Waters noted that at this point in time, each site already knows the direction they are headed and the stakeholders have already provided public participation into the DOE decision-making process at the forum so perhaps the point may have been reached where it is time to consider closure. Ms. Belencan thanked Mr. Waters for his insight and said she would take his message back to Washington.

Lee Poe asked the three CIF Focus Group members who attended the Denver forum if the discussion there looked at how each of the seven alternative technologies would work as a plant? Ms. Belencan, one of the forum attendees said that much like the Primer, the discussion was basically related to the process itself. Bill Willoughby, another forum attendee said it was his concern that none of the leading technologies had enough experience with radioactive waste to understand the consequences of handling radioactive waste. Mr. Willoughby said he was also concerned about issues such as the tail end of the gaseous or solid products to make them disposable. Ms. Belencan said it was important to remember that it was not the intent of the forum to select any one technology for any site within the DOE complex.

PUREX Waste Alternative Treatment Status

Marshall Looper, who presented in place of Peter Hudson, opened his presentation by reviewing the chart that provides an overview of the scheduled activities for PUREX waste stabilization and CIF closure. Mr. Looper emphasized that this was the same schedule that the CIF Focus Group reviewed at its last meeting on May 5, 2002. However, Bill Lawless questioned the validity of the dates on the schedule and asked if the September 30, 2003 date was a slippage from the earlier forecast. Mr. Looper responded that it was not a slippage and also confirmed SRS might be able to begin Resource Conservation and Recovery Act (RCRA) closure and meet final closure by April 2010. Dr. Lawless said that the group had not seen any details on CIF closure and would be interested in hearing a presentation on closure at the next meeting.

Mr. Looper then provided a status of the PUREX aqueous waste by noting that a plan for removing aqueous waste from the new Solvent Storage Tanks has been developed and a tanker to transport the waste onsite has been identified. In addition, Mr. Looper said that SRS is currently evaluating the transfer of the aqueous waste to Tank 50/Saltstone via the Effluent Treatment Facility (ETF) and noted that this action would mitigate the High Level Waste (HLW) issues related to the transfer of Low Curie Salt (LCS) to Tank 50. However, at the present time, the Authorization Basis for ETF has severe limitations and SRS would soon have to enter into discussions with the South Carolina Department of Health and Environmental Control (SCDHEC). In response to a question by Karen Patterson as to the preferred method of transfer, Mr. Looper stated that sending the waste to Tank 50 via ETF is the preferred option now because of planned LCS transfers to Tank 50.

Mr. Looper said that currently, SRS is negotiating a graduated Performance Based Incentive (PBI) with DOE to treat the PUREX aqueous waste by September 30, 2003. Intrigued by the PBI initiative, some members then asked if there was any action the Focus Group could take to assist in ensuring a successful PBI negotiation. Bill Lawless suggested that the Focus Group send a letter to DOE supporting the PBI activity and asked Rick McLeod, the CAB's technical advisor to develop a draft letter. Bill Willoughby, the CIF Focus Group Administrative Lead concurred.

Discussing the PUREX organic waste research and development program next, Mr. Looper said steps to select the stabilization media include media mixing tests and waste loading optimization. With regard to the I-129 leachability (SRS disposal option), Mr. Looper said that SRS had verified I-129 leachability from the stabilized waste forms is very low. In terms of the Environmental Protection Agency (EPA) Draft Interpretive Guidance, Mr. Looper said that SRS is planning to further analyze the organic waste for benzene and hazards metals, but for now no organic leaching tests are planned since the guidance remains a draft. However, Howard Pope, Senior Low-Level Waste Program Manager, said that continuing to investigate EPA's requirements is an inexpensive insurance policy to ensure that SRS is in compliance with the new regulation if and when it should become official.

To date, Mr. Looper said that for the Waste – Media Mixing Test, SRS is pursuing mixing tests at MSE Technology Applications in Butte, Montana. This testing includes selecting the production mixing equipment, demonstrating uniform waste-to-media ratios (e.g., two to one ratio is 67 percent organic/33 percent media by weight), and evaluating different media and range of mixing ratios (one to one) to (four to one). In addition, SRS performed further analysis of I-129 leaching (K_d) results and determined that the stabilized organic waste does meet E-Area disposal requirements for I-129. This would be a second option of disposing the waste in either 55-gallon drums or B-25 boxes in the Engineered Trench No. 1 or the E-Area slit trenches. The other option is to send the waste to the Nevada Test Site. Mr. Looper said that SRS is also pursuing RCRA certified analysis of the hazardous organics (benzene) at an offsite laboratory; however, a high concentration of alpha-emitting radionuclides is an issue at certified commercial labs.

Addressing the CIF Focus Group's on-going concern with the F-Canyon PUREX solvent waste stream, Mr. Looper said that the F-Canyon deactivation will generate 60,000 gallons of low-level waste solvent and so far, the lab-scale solvent tests have been encouraging since radionuclide removal may be adequate for offsite vendor treatment, primarily because the Canyon PUREX is much less contaminated than the legacy PUREX waste. However, Mr. Looper noted that field washing in the canyon would be required to verify results. Currently, there are two treatment options for the Canyon PUREX, which includes transfer to an offsite vendor for treatment, or treat onsite by stabilization along with the legacy waste. Bill Willoughby asked Mike Chandler, who was in attendance at this meeting, if he could come to the next CIF Focus Group meeting (being planned for early January 2003) and provide an update on PUREX activities at both canyons (F and H). Mr. Chandler said it is likely more information would be available by then and agreed that someone would come and talk to the group. Mr. Willoughby asked Mr. Chandler to be prepared at the next CIF Focus Group meeting to also discuss available or allocated funding to either store the waste if the Canyon goes into suspension or to treat it if the Canyon is deactivated.

In closing, Mr. Looper summarized his presentation by saying that for PUREX aqueous waste, the PBI is planned to incentivize treatment by September 30, 2003, and that plans are underway to treat the waste at Saltstone. For PUREX organic waste, the PBI is planned to incentivize treatment by September 30, 2006, waste disposal at SRS is an option (in addition to the Nevada Test Site), and mixing tests (waste to media) are planned for fiscal year 2003. In response to a question by Rick McLeod, the CAB's technical advisor concerning the cost breakdown for PUREX treatment, Mr. Looper said a conceptual estimate was included in the *PUREX Alternative Treatment Evaluation Final Report* that was issued early in the spring. In response to a question by Jean Sulc if the recommendations identified in the Final Peer Report (*PUREX Alternative Treatment Evaluation Final Re*, Appendix N) had been addressed, Ms. Belencan, who was a member of the Peer Review Team, said that the team fully supported the work cited in the report. The Peer Review Team did highlight some areas for additional investigation that are being addressed by SRS.

CIF Focus Group Discussion on Open/Pending Recommendations Related to PUREX/CIF

Members of the Focus Group reviewed five open or pending CAB recommendations related to PUREX/CIF and determined that the Waste Management Committee close Recommendations 126, 133, and 136. The group suggested that Recommendation 146 should remain pending until the presentation on F Canyon Suspension is heard by the Waste Management Committee at the CAB Combined Committees meeting in Beaufort, SC on August 27, 2002. A suggestion was also made to close Recommendation 152, with a caveat to close it only after the PBI has been received. Bill Lawless also asked that Rick McLeod develop a letter to send to SCDHEC asking if they are amenable to the September 30, 2003 date for treating the PUREX aqueous waste.

Other

In discussing a new meeting date, it was suggested that the CIF Focus Group not meet until January 2003. Some agenda items include an update on F Canyon PUREX solvent, including funding; a progress report on the work of the stabilization study team; additional PBI discussion. Bill Willoughby and Bill Lawless expressed their appreciation to Helen Belencan for attending this meeting and making a presentation

Public Comment

During the public comment period, Bill Lawless introduced Bill Quinn, a member of the Sierra Club. Bill Willoughby announced that Tom Heenan and Virgil Sauls would be retiring from DOE in January. Mr. Willoughby then adjourned the meeting at 7:15 p.m.

Action Items

- Helen Belencan to provide copies of attachments to Helen Villasor. (Complete)
- Rick McLeod, CAB Technical Advisor to prepare a letter to DOE regarding the PBI. (In progress.)
- Helen Villasor to provide CD-ROMs containing all attachments from the Denver ATI Stakeholder Forum. (In progress.)

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