



SRS Citizens Advisory Board

Waste Management Committee

CIF Public Workshop Summary

June 5, 2000
Savannah River Site
Aiken, SC

The Waste Management Committee (WMC) met on Monday, June 5, 2000, at 1:00 p.m., at the Savannah River Site (SRS), Rainbow Rooms, Aiken, SC to host the Consolidated Incineration Facility (CIF) Public Workshop. Attendance was as follows:

CAB Members

Wade Waters*

Brendolyn Jenkins

Karen Patterson*

Bill Willoughby

William Lawrence*

Perry Holcomb*

Murray Riley

Lola Richardson*

Georgia Leverett**

Rebecca Gaston-Dawson**

Regulators

Julie Corkran, EPA

Ken Feely, EPA

Shelly Sherritt, SCDHEC

Crystal Rippy, SCDHEC

Sharon Cribb, SCDHEC

Stakeholders

Mike French

Rick McLeod

Bob Overman

Lee Poe

William Starnes

Larry Callair

Brandon Haddock

DOE/Contractors

Helen Belencan, DOE-HQ
(phone)

Larry Ling, DOE

Ray Hannah, DOE

Cassandra Knight, DOE

Gerri Flemming, DOE

Tom Tregor, DOE

Rick Ford, DOE

Peter Hudson, BNFL

Sharla Barber, BSRI

Elmer Wilhite, WSRC

Michael Kramer, WSRC

Mary Flora, WSRC

Sonny Goldston, WSRC

W.E. Stevens, WSRC

Marcia Birk, WSRC

Mary Granade, WSRC

Terry H. Rahm, WSRC

Fran Williams, WSRC

Clay Jones, WSRC

Steve Crook, WSRC

Bill Maloney, WSRC

Dwain McMullin, WSRC

Helen Villasor, WSRC

*Denotes committee member

**Denotes absent committee member

Karen Patterson, SRS Citizens Advisory Board (CAB) Chair opened the workshop by welcoming the attendees and asking for introductions. Ms. Patterson expressed her appreciation to the presenters for putting the workshop together in a short time frame and also thanked the regulators for attending. Ms. Patterson introduced Helen Belencan of DOE-HQ, one of the presenters participating in the workshop via telephone conferencing. Ms. Patterson then introduced Wade Waters, Chair of the CAB Waste Management Committee (WMC), who presided over the workshop.

Mr. Waters began the meeting by asking for public comments. There were none.

Mr. Waters explained that the reason for the workshop was to seek timely and factual information so that the WMC could develop a meaningful and timely recommendation in response to DOE's decision to suspend CIF operations. Mr. Waters said that the CAB had expected to receive this information at its full Board meeting on May 23. However, when the WMC did not receive the information, the CAB decided instead to send a letter to Mr. Greg Rudy, Department of Energy – Savannah River (DOE-SR) containing five major concerns and five questions regarding the suspension. Copies of the CAB's letter were passed out to the attendees.

Mr. Waters then introduced Dwain McMullin, the facilitator for the workshop. Mr. McMullin asked that all questions be held until after Mr. Ray Hannah's initial presentation.

Consolidated Incineration Facility (CIF) Suspension Strategy: Mr. Hannah presented DOE's suspension strategy, which included rationale on the:

- High cost to treat Plutonium-Uranium Extraction (PUREX) solvent since:
 - - other waste streams have not materialized
 - the resultant estimate for commercial mixed waste treatment is \$10,000/M³; treating PUREX solvent at SRS is approximately \$100,000/m³
- Fiscal Year 2009 (FY09) Site Treatment Plan (STP) commitment could be met with a restart of the facility in FY06.
 - - allows time for DOE to evaluate more cost-effective options
- Good cost stewardship (while evaluating more cost-effective options, site resources can be directed to higher priority programs)
- Several independent reviews are critical of CIF

Mr. Hannah briefed the attendees on the strategic options, which are to:

- Suspend operations while positioning CIF for future restart
 - - provides opportunity to maintain restart flexibility to meet the STP commitments if alternative treatments are not found
 - offers a time out to evaluate more cost-effective initiatives while funding higher priority programs
- Continue operations of CIF
 -

- considered not a cost-effective treatment of mixed waste
- Final closure
 - - considered not a practical option without a PUREX solvent disposition path other than incineration
- Continue operations of CIF while evaluating further options
 - - considered not good cost stewardship because of existing high treatment cost and completing site high priority programs

Mr. Hannah noted that since there is no alternative treatment method available yet, CIF must remain a viable option. However, DOE believes that assumptions must continue to be made; therefore, an alternative options committee has been formed to determine if:

- There is a more cost-effective option for PUREX solvent treatment
- Non-PUREX solvent can be treated through the Broad Spectrum Contract (using licensed commercial vendors) or other commercial options
- STP commitments can be satisfied
- Safe facility lay up can be completed and maintained
- Re-permitting and restart can be achieved

Mr. Hannah addressed the facility status during suspension and noted that the facility would be cleaned to levels protective of human health and the environment in line with a pending South Carolina Department of Health and Environmental Control (SCDHEC)-approved Suspension Plan and other applicable permit requirements; the PUREX solvent would remain in Resource Conservation and Recovery Act (RCRA) compliant storage; and surveillance and maintenance would be maintained at the facility. Mr. Hannah noted that workforce impacts would include a surveillance and maintenance staff to remain at CIF depending upon discussions with SCDHEC and the number of people (approximately 12 people) that would be required according to the regulatory-approved Suspension Plan. The final number would depend on the pending permit requirements. Mr. Hannah said the rest of the staff would be assigned to other higher priority programs. In response to a question raised on the number of people included in the CIF workforce, Mr. Hannah responded that approximately 85 people are assigned to the facility plus support organization personnel who routinely assist in CIF operations.

Current and Potential CIF Waste Streams: Of the current and potential CIF waste streams, Mr. Hannah said that the legacy PUREX solvent was originally inventoried at 42,000 gallons. To date, 5,330 gallons have been treated; over 100,000 gallons of PUREX solvent are expected from canyon operations; and expectations are that the canyons will disposition the PUREX solvent between 2010 and 2014. Indications are that future PUREX solvent will be cleaner and easier to treat than backlogged PUREX solvent. Additionally, under a suspension strategy, Mr. Hannah said that CIF could easily transition to treat this future volume of PUREX solvent by coordinating delivery schedules with canyon operations. For the non-PUREX solvent waste streams, the current inventory is approximately 385 m³ and consists of solvents, oils, paints and thinners, and lab samples. The cost to treat this waste is estimated at \$6M based on Broad Spectrum Contract (commercial vendors) rates, and this schedule would meet the FY05 STP commitment. (Note: this paragraph contains mixed metric values.)

At this point in the workshop, Karen Patterson raised a question concerning the Waste Management Programmatic Environmental Impact Statement (WMPEIS) and the fact that there has been no indication of any offsite waste treatment or storage permitted at SRS. Mr. Hannah responded that there are no large volumes of waste in the DOE complex to be treated or stored and none has been targeted for CIF. Ms. Patterson noted her surprise that Environmental Management Integration (EMI) had not been mentioned in the CIF suspension rationale. Mr. Hannah said that EMI could be considered if it supports DOE's

decision to suspend CIF operations. Lee Poe then said that he thought this was a "trust in me" presentation and that "he can't walk away with a good feeling about it, since there is no alternative at this point in time." Wade Waters asked about the dilution factor of 50 to 1, and if a lower diluted PUREX solvent could be burned in a more cost-effective manner. Mr. Hannah explained that while DOE is looking at bringing dilution factors down, it is only one of the alternative treatments under consideration. Another alternative would be to stabilize the PUREX solvent in a polymer or other media for disposal. Mr. Hannah added that the team would continue investigating several different technologies.

Peter Hudson presented the forecast volumes for incinerable low-level waste (LLW) and mixed low-level waste (MLLW) that include 35 m³ of MLLW liquid, 350 m³ of MLLW solid, 1,228 m³ of benzene (subject to the In-Tank Precipitation decision), 1,100 m³ of LLW liquid, and 1,550 m³ of non-radiological liquid waste (oil, water, etc.). In discussing the volume forecast for non-SRS incinerable LLW and MLLW, Mr. Hudson noted that the Waste Experimental Reduction Facility (WERF) Incinerator in Idaho is projected to shut down in 2001 and the Tennessee's Toxic Substances Control Act (TSCA) Incinerator at Oak Ridge will shut down in 2003.

CIF Alternatives Study Approach: Peter Hudson continued his presentation by adding that SRS will be using a systems engineering approach to address the alternatives to incineration of waste PUREX solvent. The approach consists of defining the requirements, identifying potential solutions, screening out non-viable options, grading viable options, preparing a short list of options, investigating the short list in detail, ranking the short list and selecting preferred options and providing a peer review of the process and results.

Karen Patterson asked that if offsite waste cannot be sent to the CIF, and it doesn't have a home, would DOE plan to incinerate the waste somewhere else or provide another treatment option rather than incineration? Helen Belencan of DOE HQ responded (via telephone) that DOE's plan for after 2003 is to shut down its incinerators. Ms. Belencan added that DOE is investigating other viable treatment options, including commercial treatment vendors such as Allied Technology Group (ATG) in the state of Washington who is coming on line soon and will have a broad range of materials that it can receive for treatment. Lee Poe raised the question of what is DOE's rationale for the cessation of incineration across the complex. Ms. Belencan responded that WERF had looked at the cost of implementing the Environmental Protection Agency's (EPA) Maximum Achievable Control Technology (MACT) Rule and decided continued operations of the facility would not be cost effective. WERF is considered the least capable incinerator in the complex because of the narrow range of materials it can accept for treatment. At the Oak Ridge TSCA incinerator, Ms. Belencan said that DOE looked at determining factors such as how long it would take to work off the backlog of waste and if any additional waste would be coming in. In its studies, DOE discovered that there would not be enough waste streams to justify continued operations of the facility. Mr. Poe then asked if there is a political drive in DOE-HQ to "get out" of incineration. In response, Ms. Belencan said that to her knowledge there was no political drive underway, but noted DOE is interested in finding a reasonable alternative that is economically viable. Ms. Belencan also said that by using ATG, which is a hybrid type of facility, DOE would be proving that this new technology could become a valuable treatment process for the complex.

Rick McLeod asked for a clarification that if it was known early on that CIF operating costs were \$20 million, why didn't DOE begin the suspension process one year ago? Mr. Hannah responded that DOE has not been sitting idle. In fact, Mr. Hannah said DOE was investigating different options such as lowering the dilution factor or reclassifying the facility from radiological to a Hazard Category 3. Mr. McLeod also asked how much longer it will take DOE to go through the decision process since it will take time to pilot test, design and build another alternative. Mike French added that he was against having another In-Tank Precipitation plant on our hands. Brandon Haddock asked why CIF could not remain running for three more years to meet the STP commitment and then shut down. Clay Jones responded that there is a fixed amount of money and with the current strategy, DOE can make better use of the money for higher priority items. During this point in the meeting Lee Poe asked about opportunities for public involvement. Mr. Hannah told the attendees that DOE is willing to listen to public requests and that any future public involvement would largely be up to the CAB and members of the public.

Regulatory Strategy: In addressing the regulatory strategy, Mr. Hannah said that maintaining the permit is not feasible since the current permit does not allow it. However, Mr. Hannah noted that ongoing discussions between DOE and the regulators are underway. SCDHEC is agreeable to a phased approach that includes Phase 1 where CIF will be cleaned to levels safe to human health and environment with minimal disassembly of systems, and Phase 2 which will take the facility to final closure as described in the permit. Shelly Sherritt of SCDHEC confirmed that the agency is expecting to receive a Suspension Plan that describes the clean out, demonstration, schedule, a decision point for CIF's future and disabling the incinerator to ensure the facility is not being operated. Speaking in terms of Clean Air Act issues, Mr. Hannah said that DOE is expecting to position CIF to comply with existing facility requirements of the MACT Rule and will go forward with issuing a draft Notice of Intent to Comply, which will be available to the public before June 30, 2000. A public meeting will be held prior to July 31, 2000. Ms. Sherritt clarified SCDHEC's position on the MACT Rule by noting that CIF would be identified as a source but not be allowed to operate until all MACT standards have been fulfilled. DOE has approximately 18 months to come to a decision point on closure or restart for FY06. During this time, DOE plans to evaluate CIF's optimization strategy and study alternative treatment options. In the event re-permitting is required, DOE anticipates a three-year effort to re-permit at a cost of approximately \$2 million.

Preliminary Cost Assumptions: Mr. Hannah began this part of his presentation by explaining that the numbers in the presentation were not of budget quality; however, the comparison was being presented at the request of the CAB. In the first scenario, total suspension/restart costs would equal \$56 million. Operations would be suspended from FY01 to FY05. Suspension clean out costs above the remaining FY00 budget would be \$3 million. Surveillance and maintenance costs at \$2 million a year would equal \$10 million. Restart costs in FY06 would be \$35 million, re-permitting costs would be \$2 million, and PUREX solvent option study/optimization costs would be \$4 million. This action would result in a cost of \$120 million. Total suspension/restart costs would equal \$54 million. Operating costs from FY07 to FY 09 at an optimized rate would equal \$66 million (\$22 million a year). The total cost to suspend, restart and operate at an optimized rate would equal \$120 million (\$54 million plus \$66 million). The total cost to continue operations and disposition 35 thousand gallons of PUREX solvent at the current rate (5,000 gallons per year) would equal \$154 million. Mr. Hannah concluded his presentation by saying that it would be a more efficient use of site resources to suspend operations, optimize CIF and then restart rather than operate the facility at status quo.

Status of Complex-Wide Studies: Helen Belencan began her discussion by addressing the Waste Management Programmatic Environmental Impact Statement (WMPEIS) Record of Decision (ROD) that was issued in February 2000. Ms. Belencan said that the ROD was implemented at an operations level and presented a disposal perspective where waste generators would work in concert with the receiving sites. In terms of mixed waste treatment, WERF is continuing to treat off-site waste, and in response to its re-submitted burn plan, Oak Ridge is expecting approval for offsite waste in late June 2000. At this time, Ms. Belencan noted that no sites have identified CIF for treatment of their waste (volume of waste targeted to incineration is low). For low-level waste disposal, SRS is evaluating sending tritium contaminated and Iodine-129 (orphan wastes) to the Nevada Test Site. In complex-wide studies of current incinerator plans, DOE will shut WERF down in 2001-2002; TSCA will shutdown in 2003; and CIF operations will be suspended in 2000, with restart scheduled for 2006. As a countermeasure, Ms. Belencan addressed the commercial sector alternatives that include ATG (hybrid vitrification process), Materials and Energy Corporation in Oak Ridge (chemical oxidation process) and Waste Control Specialists, Andrews, Texas, which is still in the design phase pending information on waste volumes impacted by the PCB Mega Rule (direct dispose vs. treat). Ms. Belencan concluded her presentation by saying that the high cost of incineration makes maintaining DOE incinerator capability difficult to support past 2003 based solely on unit costs. However, Ms. Belencan noted that DOE is conducting analyses at a waste stream level to evaluate treatment alternatives and is supporting WERF's closure as planned. DOE will continue to follow progress in the commercial sector in its development of treatment alternatives and also reassess the need for the TSCA-licensed DOE incinerator.

Open Discussion of Other Issues: In the final portion of the workshop, attendees were invited to provide additional comments to augment the disappointment the CAB has expressed concerning DOE's decision to suspend CIF operations without informing the CAB of its intent.

Issues:(To be addressed by SRS in ongoing communications with CAB)

- Disappointment by CAB that they were not kept informed on the decision for CIF
- Schedule from DOE informing stakeholders on what is going to be done between now and 06
- Opportunities for future active public input
- Why are we suspending CIF operations when it is a proven method of reducing/eliminating waste even though it is not cost effective?
- Ability to meet STP compliance schedules
- Approach SRS plans to use in going to Phase I suspension
- Alternate Technologies
 - - Availability schedule?
 - Can they be developed?
 - Viability of alternatives?
- Cost Effectiveness of alternative technologies
- Cost of restarting CIF
- Opportunities for making CIF more cost effective
- CIF closure costs
- Provide estimate of original startup costs for CIF
- Assure all waste streams have cost effective (in terms of burning in CIF) treatment options
- Safety study that categorized CIF as a radiological facility and what would it take (benefit and cost) to change it to another category
- Trade off analysis with the supercompactor
- Considerations of other materials in storage and risks of continued storage versus getting rid of it quicker
- Downstream monitoring of incinerators

Actions:

- DOE to provide Lee Poe with figures delta, i.e., comparison of suspension costs to original CIF startup costs; safety documentation for the CIF as a radiological facility; and documentation on what would be required to change the CIF facility status to a Category 3.
- DOE to provide Perry Holcomb with schedules regarding what is going to be done between now and 2006.
- CAB to discuss the possibility of forming a Focus Group to address CIF issues.

Public Comments: Julie Corkran, EPA, Region IV noted that EPA has virtually no role in DOE's decision to suspend CIF operations since SCDHEC is the delegated agency in this matter. Dr. Corkran did state however, that EPA is only concerned if there are discussions regarding any Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) offsite waste that may be directed to CIF. Mary Flora provided clarification to the announcement of the formation of a Focus Group by saying that the public, as well as CAB members, will have an opportunity to participate if they so desire.

With no other public comments, Karen Patterson thanked everyone for attending and then adjourned the meeting at 4:20 p.m.

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