

Summary Notes, June 25, 2007
SRS Citizens Advisory Board
Waste Management Committee Meeting

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Monday, June 25, 2007, 5-7 p.m., at the Aiken Municipal Conference Center, in Aiken SC.

The purpose of this meeting was to discuss the following:

- 1) E-Area Slit Trench Operations and Alternatives (Use of E-Area Trenches for disposal of CERCLA Low-Level Waste), *presentations from Howard Pope and Helen Belencan, DOE-SR and Rob Pope and Jack Cowart, Environmental Protection Agency (EPA);* and
- 2) Public comments.

ATTENDEES:

CAB Members

- Joe Ortaldo, Chair
- Alex Williams, Vice Chair
- Leon Chavous
- Franklin Boulineau
- Manuel Bettencourt
- Karen Patterson
Judy Greene-McLeod
Mary Drye
Donna Antonucci
Bob Miesenhiemer

Stakeholders

Mark Phifer
Joe Whetstone
Nancy Boltite
Bill Lawless
Don Sire

Jack Cowart, EPA
Rob Pope, EPA
Heather Cathcart, SCDHEC
Ted Millings, SCDHEC
Melanie Giorard, SCDHEC

DOE/Contractors/Others

Sheron Smith, DOE-SR
Tony Polk, DOE-SR
Michelle Wilson, WSRC
Jesse Roach, WSRC
Luke Reid, WSRC
Helen Belencan, DOE-SR
Howard Pope, DOE-SR
Sonny Goldston, WSRC
Brian Hennessey, DOE-SR
Mary Flora, WSRC
Terry Spears, DOE-SR

Rick McLeod, CAB Technical
Advisor

- *Waste Management
Committee Members*

Welcome and Introduction:

Joe Ortaldo, WMC Chair, welcomed and thanked everyone for attending the meeting. Mr. Ortaldo referenced the meeting ground rules and encouraged participation of all attendees; reviewed the agenda; and asked for introductions.

Mr. Ortaldo asked Donna Antonucci to provide a recap of her acceptance of the recognition award received by the SRS CAB from EPA on June 21, 2007. Ms. Antonucci stated that the recognition is an annual award given by EPA for significant contributions and community involvement in the cleanup efforts of superfund sites. The award will be re-presented to the CAB at the full board meeting in July.

The meeting continued with the introduction of Rob Pope, FFA Manager, EPA, who provided historical and where we are now on the EPA concerns of disposal of Low Level Waste (LLW) in the E-Area Slit Trenches at the Savannah River Site (SRS). Mr. Ortaldo reminded the attendees that DOE has the authority to disposition low-level waste in the slit trenches and that they have not done anything illegal although EPA and SCDHEC did not concur, but the disposal is certainly

Summary Notes, June 25, 2007
SRS Citizens Advisory Board
Waste Management Committee Meeting

within DOE authority. Mr. Rob Pope agreed. Open discussions of how did the CERCLA waste get into the slit trenches and why change from non-CERCLA to CERCLA; are the slit trenches lined and capped; and who has the regulatory authority and safety of the environment and the public.

E-Area Slit Trench Operations and Alternatives – *Use of E-Area Trenches for disposal of CERCLA low-level waste:*

Rob Pope, FFA Manager, EPA, began by introducing Jack Cowart who is the EPA Region 4 Off Site Rule Regional Coordinator. Rob continued by providing the following:

Background information:

1996

- SRS applied for and received Off Site Rule Acceptability from the EPA RCRA Office
- SRS proposed to use the Slit Trenches for disposal of CERCLA wastes. EPA and the South Carolina Department of Health and Environmental Control (SCDHEC) require the use of the 9 criteria for more protective disposal options used.

1996 – 1999

- The agencies discussed the options and the “Plug In” Record of Decision was a compromise.

1999

- CAB made a recommendation regarding the use of the slit trenches.

2000

- EPA Regional administrator responds that EPA must screen the disposal options using the Superfund process.
- SRS states that the use of the slit trenches is not foreseen for future actions.

2002

- EPA, DOE, and SCDHEC sign the Memorandum of Agreement on Accelerated Cleanup

2002-2007

- SRS uses slit trenches as disposal site for non-CERCLA decommissioning and deactivation

2004

- EPA and SCDHEC ask for information about E-Area

2006

- EPA reviews first E-Area documents
- Against EPA’s and SCDHEC’s requests, DOE uses slit trenches as disposal for CERCLA removal wastes

Current Status:

- EPA determined there is a release of tritium from the slit trenches and rescinded Off Site Rule Acceptability.
- DOE met with EPA and SCDHEC and presented the case for permitted release
- EPA has re-granted acceptability for most of the SRS units.
- The slit trenches are under evaluation.

EPA Perspective:

- Designed, managed, monitored by DOE
- EPA & SCDHEC not involved, E-Area not in the Federal Facility Agreement
- Slit Trench is unlined, uncapped, hole in the ground
- EPA review of E-Area documents is a courtesy
- DOE did not formally respond to EPA’s written comments

Summary Notes, June 25, 2007
SRS Citizens Advisory Board
Waste Management Committee Meeting

Closing Points:

- DOE is authorized to dispose of low-level waste by the Atomic Energy Act and Order 435.1
- The Off Site Rule has an obligation not to create a new CERCLA Site
- EPA and SCDHEC use the 9 criteria of Superfund to determine the appropriateness of clean up actions
- All three parties are working toward a compromise

The meeting discussions continued with the introduction of Howard Pope and Helen Belencan, DOE-SR who provided the following information.

Objective: Respond to questions from the May CAB Board Meeting

- What are the environmental and technical consequences of continuing to use the Slit Trenches?
- If we cannot use the Slit Trenches for CERCLA waste, what are the alternatives and what would they cost (both offsite and onsite of SRS)?

Consequence of Continued Slit Trench Use

- Waste Acceptance criteria, including PA-derived radionuclide disposal limits, will continue to be used.
- This ensures that performance measures at the point of compliance will continue to be met.

PA Performance Measures

- Dose to a member of the public ≤ 25 mrem/yr from all pathways
- Dose to a member of the public ≤ 10 mrem/yr from air pathway
- Radon emanation ≤ 20 pCi/m²/second
- Water Resource Protection: Radionuclide concentrations in groundwater and/or surface water \leq Drinking Water Standards
- Dose to a Hypothetical Inadvertent Intruder ≤ 100 mrem/yr for chronic exposures and ≤ 500 mrem for an acute exposure
- Resident, drilling, and post-drilling scenarios

Slit Trench Closure:

- Operational Period
 - During operations, a cover of four feet of clay/sand backfill is emplaced as the trench is filled
 - The operational cover is sloped to enhance runoff
- Interim Cover
 - Following the end of operations, additional backfill, as needed, and a surface hydraulic barrier (e.g., HDPE membrane) is added to enhance runoff

Final Slit Trench Closure Cap:

- Final closure of the Slit Trenches will occur at the end of the 100-year institutional control period.
- Static surcharging and/or dynamic compaction of the Slit Trenches will be conducted at the end of the 100-year institutional control period to essentially eliminate future subsidence potential.
- Final closure will consist of the installation of an integrated closure system designed to minimize moisture contact with the waste and to provide an intruder deterrent.
- The integrated closure system will consist of one or more closure caps installed over all E-Area disposal units and a drainage system.
- The following figure provides the anticipated Slit Trench closure cap configuration.

Summary Notes, June 25, 2007
SRS Citizens Advisory Board
Waste Management Committee Meeting

Disposal alternatives and costs:

Assumes 150,000 cubic meters of CERCLA decommissioning waste.

Facility	Life-cycle cost/cubic meter	Incremental cost/cubic meter	Comment
SRS Slit Trench	\$360	\$60	Operation, construction, closure, monitoring
SRS Vaults	\$1900	\$1300	Operation, capital cost, closure, monitoring
Nevada Test Site	\$870		Disposal, transportation, container, storage, and handling (cost to SRS)
Energy Solutions (Utah)	\$1690		Disposal, transportation, container, storage, and handling, closure (cost to SRS)
Potential On-Site Lined CERCLA Cell	\$400 – 500 (capital \$30 – 40 Million)		Based on costs at Idaho and Oak Ridge

Open discussions and questions from CAB members for clarification of what CERCLA waste is; the disposal methods in slit trenches used at other DOE sites; and performance assessment point of compliance. If DOE lists the disposal criteria in the Federal Facility Agreement, the slit trenches would continue to operate by the DOE O 435.1. SCDHEC and EPA roles would be the same until closure. When closed, the Record of Decision process would include the regulatory reviews. Mr. Miesenhiemer recommended that there be clear documentation in the files to ensure document what is being done and the decision basis for good efforts and rational. Several statements and questions relevant to the Barnwell facility waste acceptance criteria and to the E-Area Slit Trench disposals which is difficult to compare due to the different facility designs and unique purposes. Manuel Bettencourt asked why a lining is irrelevant. Ms. Belencan replied that the liner is expected to be shorter life line than radionuclide and that tritium is more conservative, therefore the lining is not necessary. She continued by stating that the SRS E-Area slit trenches are not and do not today pose any threat to health or the public. Ms. Drye asked if there was any contingency in the budget for the slit trenches and Ms. Belencan replied no.

In conclusion, EPA, SCDHEC, and DOE are working together to resolve all issues.

Public Comment:

- Mr. Joe Whetstone, citizen, asks the CAB to request a briefing from DOE on the GAO Report, dated June 7, 2007, TRU Waste Cost Increased.
- Mr. Whetstone also provided a public comment from Mr. Lou Zeller, BREDL, who would like DOE to address the hazardous, radioactive, and mixed radioactive and hazardous wastes disposal methods to include seepage basins for liquids and burial pits for solid radioactive wastes.
- Mr. Joe Whetstone, citizen, would like DOE to address the essential function and design, groundwater plumes fact sheet.
- Mr. Joe Whetstone, citizen, stated that he would like for DOE to do whatever they can to stop trench leaking. He believes that current standards do not protect the public.

Summary Notes, June 25, 2007
SRS Citizens Advisory Board
Waste Management Committee Meeting

- Bill Lawless stated that he believes the CAB is providing a good motion and recommends moving forward with the recommendation.

Adjourn:

Mr. Ortaldo adjourned the meeting at 7:15 p.m.

Follow-Up Actions:

Rick McLeod to revise/update the Disposal of CERCLA Wastes in the SRS Slit Trenches draft motion for consideration by the CAB at the full board meeting in July.