



## SRS Citizen's Advisory Board

### September 1999 Meeting Minutes

#### **SRS Citizens Advisory Board**

September 27-28, 1999  
Savannah Rapids Pavilion  
Martinez, GA

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#### **Members Present**

|                |                   |                                   |
|----------------|-------------------|-----------------------------------|
| Bill Adams     | Lane Parker       | <u>Ex-Officio Representatives</u> |
| Arthur Belge   | Karen Patterson   | Ann Clark                         |
| Tom Costikyan  | Maria Reichmanis  | Tom Heenan                        |
| Ken Goad       | Lola Richardson   | Jim Brownlow (alternate)          |
| Bill Lawless   | P. K. Smith       |                                   |
| Ann Loadholt   | Charlene Townsend |                                   |
| Kathryn May    | Wade Waters       |                                   |
| Barbara Murphy | Wade Waters       |                                   |
| Barbara Murphy | Beaurine Wilkins  |                                   |

Members absent were Mel Galin, Brendolyn Jenkins, Georgia Leverett, Jimmy Mackey, Earnest Marshall, Murray Riley, Ed Tant, Bill Vogele and Becky Witter. Currently, there are no Board vacancies. The Department of Energy (DOE) Designated Federal Official present was Tom Heenan. There were no representatives from the Environmental Protection Agency present. Mike Schoener served as facilitator.

The meeting was open to the public and posted in the *Federal Register* in accordance with the Federal Advisory Committee Act.

#### **Key Decisions Made by the Board**

The Board requested additional characterization work of the A/M and F/H Areas Groundwater Program based on recommendations provided in an independent scientific peer review by Joel Massmann of the University of Washington and requested that the agencies establish soil and groundwater concentrations for cleanup goals.

The CAB recommended that DOE expedite the Transuranic Package Transporter Safety Analysis Report revision submittals to the Nuclear Regulatory Commission (NRC) and urge NRC to provide timely review and approval. The CAB also recommended that DOE expedite the development of an alternative treatment technology that destroys the organics in the SRS Pu-238 waste to eliminate hydrogen gas generation as a transportation issue. The Board also requested written assurance that Pu-238 wastes will eventually be safely removed from South Carolina.

The CAB provided comments on Corrective Measures Studies/Feasibility Study documents that would streamline the remedial process and integrate cleanup requirements where possible. It also requested that DOE and the agencies clarify the use of institutional controls in evaluating exposures to the public.

The Board is pleased with the present direction of the Pollution Prevention Program and requested that it be expanded; that low level waste and clean waste be separated and disposed appropriately; and that funds be invested in future pollution prevention projects.

The CAB recommended that the Secretary of Energy provide formal assurance that the SRS reprocessing capability will be retained in an operational status suitable to process aluminum-based spent fuel until the melt and dilute technology and engineering development program is successful.

The Board repeated previous recommendations that DOE provide adequate funding to SRS to support *Accelerating Paths to Closure* activities and asked that contingency plans, schedules and costs be added to address time and resource constraints.

### **Approval of the Minutes**

The July 1999 meeting minutes were approved with no changes.

### **Agency Update**

Ann Clark of the South Carolina Department of Health and Environmental Control announced that a Statement of Principles had been signed between Secretary Richardson and the Governors of DOE sites and noted that those signed with South Carolina were provided in Section III. She also announced additions to the SCDHEC website noting that permit applications are now being posted.

Tom Heenan of DOE provided the Operations Update (see attached) noting the success of all SRS programs for fiscal year 1999. He also provided an explanation of "new discoveries" added to the Environmental Remediation Program, stating these were not any new or major spills, etc., but a new administrative way of accounting for units. Mr. Heenan also provided an updated matrix of issues for CAB consideration (see attached). He noted recent visits by senior officials to SRS including General Eugene Habiger, Director of Security and Emergency Operations; Dr. Carolyn Huntoon, Assistant Secretary for Environmental Management; and Deputy Secretary of Energy T. J. Glauthier. Mr. Heenan stated that SRS accomplishments were appreciated and that visitors are always impressed with CAB recommendations and how they have been incorporated in SRS programs.

Joe Buggy, the new President of Westinghouse Savannah River Company was introduced to the SRS CAB and provided remarks regarding the FB Line incident that resulted in uptakes of plutonium to four employees. He provided a lengthy description of the incident and described measures underway to address the event. Mr. Buggy also commented on the general state of SRS and its future outlook.

### **Public Comments**

Trish McCracken of Augusta, Ga. commented that CAB participation was lacking in a public meeting regarding Idaho Sodium-Bonded Spent Nuclear Fuel and that since two of the alternatives considered within the environmental impact statement included SRS, the Board should have been interested and provided comments. She noted that this issue must not be important to the CAB and asked the Board to please outline its priorities and mandate them in its charter. These comments were made both Monday evening and Tuesday morning. Ms. McCracken also commented that it would be beneficial if presenters could remain for the duration of the SRS CAB meetings to address concerns by the public. She also requested information regarding releases to the Savannah River by SCE&G and suggested the CAB get the Yucca Mountain monthly report.

### **Facilitator Update**

Mike Schoener asked for a show of hands to gauge interest in a January retreat focusing on the recommendation process from "cradle to grave." The Board agreed to the retreat. He also provided an update on the Stewardship Seminar to be held October 25-27 in Oak Ridge. There was discussion regarding the outcome of the seminar and the benefit gained from conducting national SSAB meetings, but it was determined this meeting would be of benefit to the Board. Mr. Schoener presented a Conflict of Interest statement developed in conjunction with DOE General Counsel to provide guidance for public participation in CAB activities (see attached). He also provided a review of recommendations noting that 25 recommendations are pending, 33 open and 37 closed. He stated that the Board is awaiting 9 responses from EPA, one from DHEC and one from DOE.

### **1998 Environmental Report**

Jim Heffner of WSRC gave an overview of the SRS Environmental Report for 1998 (see attached). He discussed the compliance record for 1998, noting several highlights such as radiological emissions and radiation dose to the public continue to be low; and that an enhanced tritium monitoring program was placed in service. He provided an update on program drivers and compliance objectives, which continue to be zero violations and full compliance. He provided compliance highlights; discussed the environmental monitoring program; and gave a summary of atmospheric tritium releases and tritium in liquid releases. Dr. Heffner discussed radiological environmental surveillance and fish monitoring and noted potential doses for 1998. He also provided a perspective slide describing various doses of radiation received from different sources. Dr. Heffner provided an overview of the Enhanced Tritium Monitoring Program, which is designed to monitor tritium discharges from SRS to the Savannah River, calculate tritium concentrations in the river and provide timely notification to downriver consumers of significant changes in tritium levels in the river. Discussion revolved around public perception and the need to put environmental releases in perspective.

### **Environmental Remediation & Waste Management Subcommittee Report**

#### **A/M and F/H Groundwater Program Independent Scientific Peer Review**

Joel Massmann of the University of Washington gave an overview of Selected Subsurface Remediation Activities at SRS (see attached). Dr. Massmann had conducted an independent scientific peer review of the A/M and F/H Area groundwater programs at SRS for the SRS CAB. He discussed the objectives and scope of the study, summarized soil contamination and remediation activities and provided his conclusions and recommendations related to site characterization and soil and groundwater cleanup. The following were conclusions of the ISPR draft report:

1. The estimate of the amount of solvent discharged to the ground (3.6 million pounds) is uncertain due to possible errors in estimating evaporation loss.
2. Measurements of solvents in the soil and groundwater are insufficient to provide an estimate of the total amount of organic contaminants in the subsurface environment.
3. Statements regarding the amount of time required to clean the soils and the groundwater are speculative.
4. The approach used to estimate the radius or zone of influence for vapor extraction wells is overly simplified. It assumes horizontal, one-dimensional flow and neglects the importance of layering and the 3-dimensional geometry of the soil.
5. The rationale for setting clean up goals has not been clearly established between the three agencies. For soils less than 80 feet deep, the goal is 700 parts per billion in water (ppbw) and for soils greater than 80 feet deep, it is 56 ppbw. Both are above the drinking water standard of 5 ppbw.
6. Estimates of soil vapor removal rates from the vapor extraction systems (350,000 lbs) have been validated.
7. Estimates of soil vapor removal rates (330 lbs over the past 3 years at a cost of about \$195,000) as a result of barometric pumping have not been validated.
8. The tests with re-circulation wells in the A/M Area have not yet provided sufficient data on the radius of the zone of influence as a function of pressure drops or flow rates, nor has the effectiveness of these wells been validated.
9. Since 1985, the pump-and-treat system has removed about 530,000 lbs of solvent from 3.5 billion gallons of water treated, but the system's future removal rate is projected to be flat.
10. The total solvent removed from the A&M area since 1985 is an estimated 880,000 lbs out of the estimated 3.6 million pounds of solvent in the soils and groundwaters (about 24 percent).
11. The F and H Area groundwater treatment system Phase I appears to be operating satisfactorily now.

Lola Richardson presented the draft motion regarding the ISPR of Selected Subsurface Remediation Activities at SRS (see attached). Keith Collinsworth of SCDHEC stated that his agency respects the work of Dr. Massmann and agreed with most of the ISPR conclusions. He stated that he hoped Dr. Massmann would assist the agencies in determining when to move from active to passive remediation. It was

determined that Dr. Massmann would remain on contract to the SRS CAB to facilitate an open process with the regulators and public in establishing soil and groundwater concentration cleanup goals. This modification was made to No. 8 of the CAB recommendation and based on the results of work requested in No. 1-7. Bill Lawless moved the Board accept the draft motion as amended and Wade Waters seconded the motion. The motion was adopted by a unanimous vote.

#### Hidden Biodiversity at SRS

Whit Gibbons of the Savannah River Ecology Laboratory provided a presentation regarding hidden biodiversity at SRS focusing on the variety of salamanders at the site. There are 50 species of salamanders in Georgia and 32 in South Carolina. Sixteen species can be found on SRS. By comparison, a total of nineteen species can be found in the entire state of Texas. Dr. Gibbons brought samples of various salamanders and discussed why it is important to study them and how they are indicative of the environment. Dr. Gibbons also discussed the various educational programs offered by SREL.

#### Shipment of Pu238 Wastes

Dale Ormond of DOE provided an overview and update of the Transuranic Waste Program at SRS (see attached). Drum retrieval operations were completed in August with 8704 drums retrieved and inspected. Only 113 drums required overpacking. Vent and purge operations are expected to be completed in December, he said. SRS began characterizing waste drums in early August and an audit of this process concluded that the SRS program is fundamentally sound but a significant amount of drums need to be processed to obtain approval. Mr. Ormond described plutonium 238 as a heat source material 270 times more active than Pu239 weapons materials. Pu238 is highly toxic and generates hydrogen gas which places limitations on transportation. Mr. Ormond discussed technology development activities and the fact that DOE is working with the Nuclear Regulatory Commission to resolve transportation limits.

Karen Patterson presented the draft motion that DOE adopt a two-track approach to work through the NRC to change the transportation regulations to permit a more practical quantity of Pu-238 to be shipped to the Waste Isolation Pilot Plant; and to prepare to treat the high-activity TRU wastes to meet current shipping rules should the NRC fail to approve changes to transportation regulations (see attached). Bill Lawless moved the Board accept the motion and Wade Waters seconded. The motion was adopted by a unanimous vote.

#### Corrective Measures Studies/Feasibility Studies

Tom Rehder of WSRC provided a generic overview of documents utilized during the remediation process under the Comprehensive Environmental Response Compensation and Liability Act (see attached). He focused on corrective measures studies/feasibility studies (CMS/FS). He discussed the format of the CMS/FS, the detailed analysis conducted in the studies and the criteria utilized. A CMS/FS typically provides a detailed analysis of four to five remedial alternatives with no recommendation made for a preferred remedy, he said. Maria Reichmanis presented the draft motion recommending the three agencies streamline the CERCLA process; clarify the use of institutional control in evaluating exposures to the public; and integrate cleanup requirements where possible especially when multiple regulatory criteria deal with the same operational unit so that the picture presented to the public is coherent (see attached). Bill Lawless moved the Board accept the motion and Wade Waters seconded. The motion was adopted by a unanimous vote.

#### Pollution Prevention at SRS

Paul Hunt of WSRC provided an overview regarding pollution prevention at SRS (see attached). He discussed successful pollution prevention strategies and new technologies. He provided several examples of pollution prevention best practices and discussed waste disposal cost avoidance. Mr. Hunt also discussed challenges and future program enhancements. Wade Waters presented the draft motion noting how pleased the Board is with the present direction of the program (see attached). It also recommended that DOE expand the program to dispose of the clean waste stream separately from the solid low level radioactive waste stream and ensure that LLW is properly buried as LLW and only clean waste is sent to sanitary landfills. It also requested that DOE assure the CAB that SRS will be able to find

a source of funds to invest in future pollution prevention projects. Bill Lawless moved the Board adopt the motion and Ken Goad seconded. The motion was adopted by a unanimous vote.

Bill Lawless noted that Ethan Brown had agreed to lead the In-Tank Precipitation Focus Group as it continues to follow the DOE's progress in selecting an alternative technology for processing the salt portion of the high level waste.

#### **Nuclear Materials Management Subcommittee Report**

Tom Costikyan provided background information on a draft recommendation regarding canyon utilization and spent nuclear fuel melt and dilute technology (see attached). He presented a motion recommending that the Secretary of Energy provide formal assurance that SRS reprocessing capability be retained in operational status, suitable to process aluminum-based foreign and domestic research reactor spent fuel until the following events have occurred:

- The melt and dilute technology and engineering development program has successfully produced the planned waste form using actual irradiated SNF, and
- The Nuclear Regulatory Commission has formally stated that the melt and dilute waste form is acceptable in the national repository, and
- The melt and dilute processing facility has been constructed and is operational.

Bill Lawless moved the Board accept the motion and Ken Goad seconded. The motion was adopted by a unanimous vote.

Tom Costikyan also presented a draft statement to be read at the October 21 meeting in Atlanta on the Yucca Mountain draft Environmental Impact Statement. The statement urges DOE to proceed with plans to license the federal repository by 2002 so that SRS and other sites may proceed with activities to properly prepare nuclear materials for disposition. Wade Waters moved the Board adopt the statement and Ken Goad seconded. All members were in favor. P.K. Smith noted that the American Nuclear Society had offered several seats on a bus traveling to the meeting.

#### **Risk Management & Future Use Subcommittee Report**

P.K. Smith presented a draft motion regarding the Accelerated Cleanup: Paths to Closure documents (see attached). This motion repeated several recommendations made by the Board in the past that have not been addressed to the Board's satisfaction. The recommendation requests that DOE provide adequate funding to SRS to support the ACPC activities and that contingency plans and associated costs be developed for major "show stoppers." Bill Lawless moved the Board accept the motion and Beaurine Wilkins seconded. The motion was adopted by a unanimous vote.

Wade Waters announced a meeting of the Risk Management & Future Use Subcommittee in Hilton Head, S.C. that had been rescheduled from Sept. 18 to Oct. 16 due to Hurricane Floyd. The meeting will focus on Low Country communications and a fish advisory issued by SCDHEC. Ann Clark remarked that SCDHEC is looking for advice on how to communicate the advisory.

#### **Administrative Subcommittee Report**

Beaurine Wilkins announced that there would be no discussion regarding the Bylaws Amendment Proposal since there were not enough Board members present for voting. Lola Richardson provided an update of the membership solicitation campaign. Over 70 requests had been made for applications and a few had started coming back in. WSRC had donated television advertising space and the Board received 26 commercials during fall premiere week on WJBF.

#### **Outreach Subcommittee Report**

Lane Parker announced the completion of the Board video and copies were distributed to all Board members. He also referred to the next edition of the "Board Beat" which was provided as well (see attached). Mr. Parker also noted that speaker training had been provided and two members had

completed speaker certification. He also requested that a full Board photograph be taken at the November Board meeting.

### **Other Administrative Items**

Ann Loadholt discussed travel and stated that she noticed travel costs were up and asked the board to be conscientious about traveling and to travel only when needed. She also discussed attendance and stated that subcommittee attendance as well as full Board meetings will be tracked and reported to the Board. She reminded Board members how important it is to participate in subcommittee activities and suggested that some meetings be held in Hampton, S.C. midway between Aiken and the Low Country. Ms. Loadholt introduced new Board member Charlene Townsend and welcomed Judy Burch to the Board staff. She also thanked Todd Crawford for his services and announced that his contract was expiring shortly although it had been extended through November.

Ms. Loadholt and Karen Patterson provided a trip report on the Site Specific Advisory Board Chairs meeting hosted by Hanford the week prior. They noted that Secretary Richardson had addressed the Chairs and when asked what the SSABs could do to help, he suggested talking with their congressman, continue ISPRs, and help DOE get the message out by continuing outreach efforts. It was noted that Idaho and Sandia do talk with their legislators.

### **Handouts**

September 28, 1999 Meeting Agenda  
Operations Update, September 1999  
Issues for CAB Consideration, dated 9/16/99  
SR CAB Recommendation Summary Report, dated 9/22/99  
Conflict of Interest Guidance for the SRS CAB, dated 9/27/99  
WSRC Environmental Monitoring Program Overview, Jim Heffner  
Selected Subsurface Remediation Activities Savannah River Site, Joel Massmann  
Motion, Independent Scientific Peer Review Selected Subsurface Remediation Activities, Lola Richardson, CAB  
Biodiversity, Whit Gibbons, SREL  
Transuranic Waste Overview/Update, Dale Ormond, DOE  
Motion, The Shipment of Pu-238 Wastes to the Waste Isolation Pilot Plant, Karen Patterson, CAB  
The Feasibility Study, Tom Rehder, WSRC  
Motion, Corrective Measures Study/Feasibility Study Generic Comments, Maria Reichmanis, CAB  
Pollution Prevention at SRS, Paul Hunt, WSRC  
Motion, Pollution Prevention at SRS, Wade Waters, CAB  
CAB Nuclear Materials Management Subcommittee Draft Recommendation  
Motion, Accelerating Cleanup: Paths to Closure, P.K. Smith, CAB  
Summary of Proposed Bylaws Amendments, Beaurine Wilkins, CAB  
"Board Beat" Fall, 1999, Lane Parker, CAB  
Letter to Ann Loadholt from SCDHEC, dated 9/14/99  
SRS CAB Fiscal Year 1999 Budget Summary  
Monthly NEPA Report  
1999 SRS CAB Activity Calendar  
SRS CAB Recommendation Summary

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