



## SRS Citizen's Advisory Board

### SRS Citizens Advisory Board

#### Meeting Minutes

July 24-25, 2006

North Augusta, S.C.

#### Monday, July 24, 2006, Attendance

##### SRS CAB Members

Meryl Alalof  
Donna Antonucci  
Manuel Bettencourt  
Tracy Carroll  
Leon Chavous  
David Dawson  
Gerald Devitt  
Art Domy  
Mary Drye  
Mercredi Giles  
Cynthia Gilliard

##### Stakeholders

Perry Holcomb  
Jack Roberts  
Bill Willoughby  
Sam Booher  
Ron Schroder

Judy Greene-McLeod  
Kuppuswamy Jayaraman  
Bill Lawless  
Wendell Lyon  
Jimmy Mackey  
Robert Meisenheimer  
Joe Ortaldo  
Karen Patterson  
Wade Waters  
Alex Williams  
Gloria Williams-Way

##### Regulators

Kim Newell, SCDHEC  
Chuck Gorman, SCDHEC  
Turpin Ballard, EPA  
Thomas Rolka, SCDHEC

##### Ex-Officio Members

Shelly Sherritt, SCDHEC  
Al Frazier, GADNR  
Robert Pope, EPA

##### DOE/Contractors

Yvette Collazo, DOE  
Gerri Flemming, DOE  
Howard Pope, DOE  
Rita Stubblefield, DOE  
Steve Baker, DOE  
Julie Petersen, DOE  
Doug Hintze, DOE  
Pat McGuire, DOE  
John Dickenson, WSRC  
Ed McNamee, BSRI  
Paul Sauerborn, WSRC  
Jim Moore, WSRC  
Teresa Haas, WSRC  
Dawn Haygood, WSRC  
Gerald Blount, BSRI  
Sonny Goldston, WSRC  
Frank England, WSRC  
Ginger Dickert, WSRC

#### Strategic and Legacy Management Committee

Jimmy Mackey, Chair, mentioned that at the last SLM Committee meeting, CAB recommendation # 165 – SRS National Pollution Discharge Elimination System Permit Revision – was closed. This recommendation had to do with ephemeral streams on site.

Mr. Mackey explained that he had been working with Barbara Morningstar Paul and the site on the archeological inventory of Native American Remains, meaning bones of Native Americans from many years ago. The site has been working with the Federal agencies and the State to try to get these remains to the right source for reburial. Barbara Morningstar Paul is with the State Commission for Minority

Affairs and is the Program Coordinator for Native American Affairs. Ms. Paul and Mr. Mackey had a meeting with site representatives and the Savannah River Archaeological Research Program (SRARP) representatives to discuss reburial efforts and review the SRARP program. The meeting was very informative and beneficial and Ms. Paul felt that she can make some headway with the reburial efforts.

## SRS Budget Update

Jimmy Mackey explained that a presentation on the budget has been requested for some time. The last time the CAB heard about the 2007 budget was at the March Columbia CAB meeting. Since that time, the CAB has issued two recommendations on the budget, Recommendation 228 – President’s Fiscal Year (FY) 2007 SRS Budget Update – and Recommendation 234 – SRS Budget Participation. In both cases, the purpose was to get the site to give more information on the budget. Hanford and Idaho have had public meetings on both the 2007 and 2008 budget. At SRS, the CAB has had problems trying to get information. Mr. Mackey introduced Steve Baker, DOE Finance Division.

Mr. Baker explained there were four phases to the budget cycle: planning, budget formulation, and budget evaluation (see attachment). The planning phase includes the various plans such as the Performance Management Plan (PMP), now changed to the Performance Execution Plan (PEP), mission plans, State agreements and program guidance to name a few. The planning heavily influences the budget. The budget formulation is consistent with the plans and aligns priorities with the funding availability. The budget formulation is two years out, i.e. the 2008 budget is being developed this year, 2006. The budget execution includes change control and the authorization of work. The budget evaluation is the performance evaluation. There are many customers that need to be considered. They include the various programs, employees, contractors, the public, DOE-Headquarters, the Office of Management and Budget, and Congress.

Inputs to the budget process include Congressional mandates, programmatic guidance, legal/regulatory requirements/commitments, stakeholder input and emergent facility and program needs.

The budget is set up by priority. The priorities are safety and security/maintain facilities, Resource Conservation and Recovery Act commitments to the State, Liquid Waste commitments to the State, Nuclear Materials maintenance and disposition, Comprehensive Environmental Response, Compensation, and Liability Act commitments, Transuranic disposition, Spent Nuclear Fuel receipts and Deactivation and Decommissioning.

It is important to remember that all budget information is embargoed until after the President submits the budget request to Congress in February of the following year. The opportunities for CAB and public involvement on the budget include the review and comment on the various plans. Some examples include the review of the PMP, comments during the periodic briefings on the planning, budget and execution, CAB recommendations and both formal and informal interactions at the various meetings and documents. The schedule for the budget process is as follows:

- February – DOE-Headquarters Chief Financial Officer issues a Unicall for the Outyear Budget development.
- April – Field Offices submit the budget request to DOE-Headquarters
- May – Field Office Manager presents the budget request to DOE-Headquarters

- September – The Department submits the Outyear budget request to the Office of Management and Budget
- November – The Office of Management and Budget sends the passback to the Department in November
- February – The President submits the budget request to Congress and it is no longer embargoed.

Mr. Baker also reviewed the Field budget process and the Congressional budget cycle. During discussions there was concern that the budget numbers were not available as soon as they are developed and sent to DOE-Headquarters. Mr. Baker explained that the budget procedures from the Office of Management and Budget require that the budget numbers be embargoed until the Presidents budget is released in February.

### **Facility Disposition & Site Remediation Committee**

#### **Proposed Plan for the MIPS L Operable Unit**

Rita Stubblefield provided a presentation on the Proposed Plan for the M-Area Inactive Process Sewer Line (MIPSL) Operable Unit (OU) at SRS (see attachment). The public comment period for the proposed plan will conclude July 29, 2006. The operable unit is located in the northwest corner of SRS. Ms. Stubblefield identified the components of the operable unit as the following:

- Portions of the MIPSL to Manhole 1, including the southern portion of the 313-M Inactive Clay Process Sewer Lines to Tims Branch
- Portions of the 320-M Inactive Clay Process Sewer Lines from the building slab out to the former security fence, passing through Manholes 3A, 2A, 1N, 1A and 1
- The segments of pipeline starting adjacent of the 322-M building slab (starting just south of the sewer line between 322-M and Manhole 6A) and extending to the A-014 Outfall, passing through Manholes 8, 9, 10, 11, 12, 13 and 14

The sampling strategy consisted of inspection of the manholes; soil-gas sampling 50' apart and if above threshold limit additional sampling would be conducted. Ms. Stubblefield stated the following regarding the sampling and analysis plan:

- Manholes were opened and visually inspected
- Shallow soil-gas samples were collected approximately 50' apart along those sections of pipe not previously investigated or that had no feeder line tie-ins. Results were used to establish soil sample locations (where soil-gas VOCs, specifically tetrachloroethylene (PCE) and trichloroethylene (PCE) where concentrations exceeded 5,000 part per billion by volume (ppbv)
- Soil sample stations were established adjacent to manholes, junctions of feeder lines with the main sewer pipe, and at locations where total soil-gas VOC (TCE and PCE) concentrations exceeded 5000 ppbv. Samples were collected from 0-2, 3-5, 8-10, and 18-20 foot intervals below the base of the pipe
- Soil samples were analyzed for VOCs, gross alpha, non-volatile beta, and target analyte list of inorganic constituents including mercury and total uranium

Ed McNamee addressed the results - no surface contamination (human health or ecological risk identified); No radiological contamination encountered within the pipeline or in adjacent soils; and VOCs, specifically TCE and PCE, are present in the soils adjacent to the pipeline at concentrations that represent a threat to groundwater at four discrete locations with the remedial goal objectives based upon contaminant migration. Mr. McNamee addressed a new remedy component of alternatives S-2, S-6, and S-7 because in some instances the VOCs are trapped in the low permeability soils of the Upland Unit. Soil fracturing uses a mixture of sand and a viscous fluid which is injected at high pressure to create sand-filled fractures, thus enhancing the permeability of the formation. The test pilot adjacent to 320-M showed that fracturing in the Upland Unit increased flow rate and VOC mass removal by at least one order of magnitude over soil vapor extraction alone. Mr. McNamee stated the preferred remedial

alternative found in the proposed plan is phased soil vapor extraction enhanced with soil fracturing, and institutional controls. The Record of Decision is scheduled for January of 2007 and Remedial Action starts in July of 2007.

Manuel Bettencourt asked if SCDHEC had any concerns with soil fracturing technology in this remediation effort. Both Shelly Sherritt and Chuck Gorman from SCDHEC stated they had no concerns with the technology and are very interested in the performance of the deployment. Joe Ortaldo asked how you will know when the deployment is complete. Mr. McNamee responded that the end point will be addressed in the Record of Decision; also, when there is evidence of decreases in concentrations of VOCs.

Mary Drye presented a draft motion (see attachment) supporting the use of phased soil vapor extraction enhanced with soil fracturing, and institutional controls as the proposed remedial alternative for the M-Area Inactive Process Sewer Lines. The motion asked that DOE provide annual updates on the potential spread of contaminants and asked DOE to conduct an investigation into the likelihood that pockets of low permeability soils with contamination may exist after the remedial technology is deployed and report the findings to the SRS CAB during the annual updates. There was very little discussion regarding the motion.

### **Nuclear Materials Committee**

Manuel Bettencourt presented a draft motion (see attachment) reaffirming its stance on the importance and continued operation of H-Canyon recommending that DOE aggressively pursue alternatives to keep the H-Area assets (people and equipment) actively conducting risk reduction, such as stabilizing and dispositioning legacy nuclear materials. It also requested DOE to provide timely updates on potential missions for H-Canyon and HB-Line. There was brief discussion and a few minor changes to the draft motion.

### **Waste Management Committee**

Bob Meisenheimer, Chair, turned the meeting over to Joe Ortaldo, Vice Chair, since Mr. Meisenheimer had been out of the country prior to the meeting. Mr. Ortaldo commented that two presentations had been presented at the last WMC meeting. The Low Level Waste Disposal Performance Assessment and Composite Analysis by Elmer Wilhite that would be presented today and the Tank Waste Management Update that would be presented tomorrow by Doug Hintze.

Mr. Ortaldo mentioned that he had been invited to the dedication of the Glass Waste Storage Building #2. The Glass Waste Storage Building was constructed ahead of schedule and below budget. Mr. Ortaldo also attended the Nuclear Regulatory Commission (NRC) meeting on June 8 on the Request for Additional Information. 41 of the 61 questions were discussed. They had two major concerns, one was on the point of compliance and the other was on the amount of material that should be removed from the tanks. A meeting was also held on June 29<sup>th</sup> to continue discussing the areas of concern. Doug Hintze, DOE, explained that both of these issues could affect the schedule for closure of

the tanks. There was discussion on the amount of curies in Tank 41 - 1,500 million curies - and that this was a reduction to Saltstone versus the 3 - 5,000 million curies that was originally planned to go to Saltstone.

#### High Level Waste Risk Reduction Efforts

Mr. Ortaldo read the draft High Level Waste (HLW) Risk Reduction Efforts recommendation (see attachment). Discussions centered around the stalemate between DOE and SCDHEC on the issuance of a Salt Process permit. Shelly Sherritt, SCDHEC, explained that the letter from Secretary Bodman on July 6 did not give the assurances that SCDHEC needs to issue the permit. Until Secretary Bodman's letter was issued, SCDHEC was not told that there would be a day-by-day delay. SCDHEC was looking for assurances on the boundaries of curies to be placed in Saltstone by the interim treatment facilities and DOE commitment for funding to support both the interim salt process and the Salt Waste Processing Facility (SWPF). Ms. Sherritt explained that Governor Sanford responded to Secretary Bodman with a letter on July 24. This letter expressed the disappointment that a commitment was not made by DOE.

It was discussed that changes in the recommendation needed to be made before the full CAB meeting. Rick McLeod, Bob Meisenehimer, Joe Ortaldo, and Bill Lawless were to meet separately to discuss changes to the letter before the full Board meeting on Tuesday.

#### Low-Level Waste Disposal Performance Assessment and Composite Analysis

Elmer Wilhite, WSRC Savannah River National Laboratory (SRNL), explained that CAB recommendation #220 called for an annual update on the waste disposal system performance assessment (PA) that was provided on May 16, 2006 to the WMC. Subsequently, the WMC Chair requested a briefing of the CAB combined committees on the PA and the composite analysis (CA) to familiarize all CAB members with these processes because of their importance to the SRS waste management program.

SRS has two active low-level waste (LLW) disposal facilities. They are the E-Area LLW Facility (ELLWF) and the Saltstone Disposal Facility. The ELLWF disposes of low-level solid radioactive waste by the way of vaults, trenches and pads. The Saltstone Disposal Facility disposes of low-level salt waste from the high-level waste tanks using concrete vaults.

The PA and CA processes are used to provide reasonable expectation of compliance with performance objectives. Those performance objectives require that disposed LLW must be protective of human health and the environment. Radiation protection procedures set individual dose limits that are expressed as performance objectives. Since the effects of LLW disposal and migration of radionuclides from the waste into assessable environment will take tens to hundreds of years, computer models must be used to project the effects over time. The results of the PA and CA support the design, operation and closure features of the disposal facilities.

The performance objectives are specified in DOE Waste Management Order, DOE 435.1. For the PA, the point of compliance is 100 meters from the facility, and includes the following:

- Dose to a member of the public - less or equal to 25 milirem/year from all pathways
- Dose to a member of the public - less or equal to 10 milirem/year from air pathways
- Radon emanation - less or equal to 20 Pico curies/square meter per second
- Water Resource Protection: Radionuclide concentrations in groundwater and/or surface water - less or equal to Drinking Water Standards

- Dose to a hypothetical inadvertent intruder – less or equal to 100 milirem/year for chronic exposures and less or equal to 500 milirem for an acute exposure.

For the CA, the point of contact at mouth of streams at the Savannah River, and include

- Dose to a member of the public – less or equal to 100 milirem per year.

The PA and CA are required to provide reasonable expectation that performance objectives for LLW disposal facilities will be met over 1,000 years after disposal facility closure. They are reviewed by DOE personnel and approved by the Site Manager and Deputy Assistant Secretary.

The PA is an analysis of a single radioactive waste disposal facility. It is conducted to demonstrate there is a reasonable expectation that performance objectives established for the long-term protection of the public and the environment will not be exceeded following closure of the facility. The Composite Analysis accounts for all sources of radioactive material that may contribute to the long-term dose projected to a hypothetical member of the public from an active or planned LLW disposal facility.

The computer models for the PA and CA are used to simulate the migration of radionuclides from the disposed waste and through the environment. They consider the concentrations in ground or surface water, air, soils and crops. They calculate the dose received by a receptor for ingestion and inhalation of radionuclides and external radiation. The process uses preliminary assessments and then more detailed calculations yielding results. The process allows integration and interpretation of all the data at all the stages. A report is issued and then reviewed yearly. Periodically it is updated.

Mr. Wilhite reviewed the conceptual model showing the contamination pathways considered. The model output is the concentration of environmental media from the radionuclides released from the waste and transported to the environment. Exposure scenarios are then considered. For the inadvertent intruder scenarios there are three, a resident building a home on the land, drilling into the waste area and post-drilling or an intruder living off the land. The PA for the Saltstone Disposal Facility was first completed in 1992. A special analysis was done in 2005 and the PA is being revised with the expected completion date of fiscal year 2007. The PA for the ELLWF was first completed in 1994. The first revision was completed in 2000. A second revision is expected in fiscal year 2007. The CA was first completed in 1997. The first revision is anticipated in fiscal year 2008.

The PA and CA ensure the LLW disposal is protective of the public health and the environment. The independent oversight review by DOE-HQ adds credibility. They have also supported more cost-effective disposal methods, saving \$63 million by disposing of more LLW in trenches instead of vaults. The PA and CA establish the technical basis for DOE authorization of LLW disposal.

The meeting adjourned at 4:30 p.m.

## **Tuesday, January 25, 2006, Attendance**

### SRS CAB Members

Meryl Alalof  
Donna Antonucci  
Manuel Bettencourt  
Tracy Carroll  
Leon Chavous  
David Dawson  
Gerald Devitt  
Art Domy  
Mary Drye  
Mercredi Giles  
Cynthia Gilliard

### Stakeholders

Perry Holcomb  
Jack Roberts  
Jim Gaver  
Rick Ford  
Charlie Hanson  
Mike French  
Ron Schroder

Judy Greene-McLeod  
Kuppuswamy Jayaraman  
Bill Lawless  
Wendell Lyon  
Jimmy Mackey  
Robert Meisenheimer  
Joe Ortaldo  
Karen Patterson  
Wade Waters  
Alex Williams  
Gloria Williams-Way

### Regulators

Kim Newell, SCDHEC  
Chuck Gorman, SCDHEC  
Turpin Ballard, EPA  
Ted Millings, SCDHEC  
Bob Adams, SCDHEC

### Ex-Officio Members

Shelly Sherritt, SCDHEC  
Al Frazier, GADNR  
Robert Pope, EPA  
Kevin Smith, DOE

### DOE/Contractors

Yvette Collazo, DOE  
Gerri Flemming, DOE  
Amy Poston, DOE  
Julie Petersen, DOE  
Doug Hintze, DOE  
Bob Pedde, WSRC  
Leo Sain, WSRC  
Teresa Haas, WSRC  
Jim Moore, WSRC  
Dawn Haygood, WSRC  
Paul Sauerborn, WSRC  
Sonny Goldston, WSRC  
Frank England, WSRC  
Ginger Dickert, WSRC  
Mark Schmitz, WSRC  
Whit Gibbons, SREL  
Paul Bertsch, SREL  
Palmer Bowen, USFS  
Keith Lawrence, USFS

SRS CAB members Ranowul Jzar, Madeleine Marshall, and Barbara Paul were unable to attend. The meeting opened with Kevin Smith, DOE, serving as Deputy Designated Federal Official. Mike Schoener served as facilitator and Rick McLeod, Board Technical Advisor was present as well. The meeting was open to the public and posted in the *Federal Register* in accordance with the Federal Advisory Committee Act.

### Approval of the Minutes

The meeting minutes of May 22-23, 2006, were approved with no changes.

## Agency Update

Al Frazier, GADNR, noted they had responded to a reported oil spill in the Savannah River last week. Initial estimates were upward of 6000 gallons between Elba Island and Tybee Island and upwards of 22,000 gallons on the Georgia side of the river. This estimate was derived from the appearance of vegetation in the marsh. The suspected vessel has not been positively identified, however it was being kept in the New York harbor by the Coast Guard. Samples were being pulled from the vessel and matched up chemically to make sure it was the same oil. Mr. Frazier also noted that the Governor's office was kicking off a new customer service initiative with the goal of Georgia being one of best managed states in country. Mr. Frazier also reported that GADNR continues to pursue funding for radiological monitoring of Savannah River.

Shelly Sherritt, SCDHEC, noted her continual updates on high level waste tank closure. SCDHEC is closely watching the schedules. It is imperative the schedules be met so waste can be removed and treated and the tanks closed. Ms. Sherritt noted work on the salt waste strategy and stated SCDHEC does believe the technical elements are good. She commented on Deliquification, Dissolution and Adjustment (DDA), the near term disposal of salt waste with less treatment and the fact that it is no good without the other elements of the strategy all working together. In order for the strategy to work, it has to work in tandem, she said. The trade off for SCDHEC, DDA is most curious, so in order for DHEC to be assured of maximum treatment, they are seeking commitment assurances from DOE for the whole package to feel more comfortable moving forward with DDA. SCDHEC wants extra commitment to support the whole strategy and the permit application for Saltstone. Ms. Sherritt stated the agencies had been working these issues since December and there are ongoing discussions. Ms. Sherritt responded to questions from CAB members noting that DOE sent a letter indicative of its plans but not a commitment. SCDHEC is continuing to evaluate other mechanisms to assure commitment. SCDHEC is concerned about the tank closure schedules and registered some concerns with the Nuclear Regulatory Commission (NRC) under the consultation process. Ms. Sherritt noted that SCDHEC was glad to get input from NRC and they are not unhappy with the consultation process, but wanted to make sure consultation did not derail FFA schedule. She said the good news is that SCDHEC has been in a series of discussions with NRC and DOE to figure out more innovative ways on how consultation can still take place but not get in the way of the FFA schedule.

Robert Pope, EPA, noted EPA continued support of SCDHEC's position on the high level waste tanks. He introduced Turpin Ballard, the HLW lead and lead for P and R area. Mr. Pope commented that M Area and L Area southern groundwater issues are being resolved and provided an update of personnel issues at EPA.

Kevin Smith, DOE, noted that DOE gave a presentation on Options for Administration of the CAB to the Administrative Committee on June 7. After receiving comments from the CAB, DOE agreed to make a selection of the options by July 1. DOE informed the CAB on June 30 of our decision to go with the Federal Administration option. Under this option, DOE will receive some assistance from an 8(a) small contractor, however, this contractor will be fully managed by Federal staff. The CAB's main point of contact will be Federal. DOE contacted the CAB chair to request a point of contact to work with DOE in the preparation of the statement of work.

In June, SRS made its first ever shipment of mixed low-level waste (MLLW) to Nevada Test Site (NTS) for disposition. There were 321 drum equivalents (about 67.5 cubic meters) of previously classified as TRU waste shipped in sealed stainless steel boxes. Earlier in FY06, NTS opened for MLLW disposition from other DOE sites and will remain open for five years. SRS plans to dispose of MLLW at NTS periodically over the five year period. Mr. Smith also provided a status of FB-Line, where deactivation was completed June 15, 2006. It is now cold, dark, and dry. The DOE validation was completed July 11, 2006, and there is no routine access to the facility except for periodic surveillance. Overall, in F Area, the 804 Underground Tank Cleaning has been safely completed; FAMS deinventory and security downgrade is to be complete by August 31, 2006, and deactivation and decommissioning of A-Line has begun

In response to questions, Yvette Collazo expounded on CAB administration noting DOE is working on the scope of work. She would not commit to Board member requests for the continued support of WSRC public involvement personnel. Board members reiterated concerns regarding the loss of independence and filtering of information. Board members commented that DOE is shooting itself in the foot and reducing the strength of the board. Bill Lawless stated he feared the CAB is being compromised and will not be in a position to assist DOE in the face of potential lawsuits.

### **Public Comments**

#### **Perry Holcomb, North Augusta, S.C.**

Mr. Holcomb stated he has lived here 46 years and retired following 36 years at SRS. He is a six-year veteran of the CAB. He thanked the CAB for addressing the real nitty gritty of what public is concerned with. He stated he was somewhat taken aback that we heard about the Secretary of Energy not making a commitment and Ms. Collazo just used those same words in not making a commitment to the CAB. Mr. Holcomb thanked SCDHEC, stating he thinks they are doing a fine job of protecting the interests of citizens of South Carolina. If it takes a little longer to do the right thing then let's not rush things, said Holcomb. If it means closing tanks correctly then that's good, he said. Mr Holcomb also commented on the Monday presentation on the budget, which lists SRS priorities from safety and security to D&D as the last thing. He said

it bothered him that CERCLA commitments and area completion were somewhere in the middle and that you can't have these without D&D. Mr. Holcomb also quoted the Executive Committee meeting minutes of May 22, 2006, noting Ms. Patterson's comment that FACA boards are not watchdogs and EM issues do not include MOX, GNEP and Yucca Mountain. He asked the CAB if they should quit and hand in resignations, stating that anything DOE does that affects SCDHEC- that they have an interest in or permit process for- then this CAB should be interested and involved in. Mr. Holcomb encouraged the CAB to state their position and how they feel about these things. Mr. Holcomb also asked for an update on the status of legacy purex wastes.

### **Chair Update**

Karen Patterson discussed the June 7 meeting regarding CAB administration that was attended by eight CAB members. She reiterated the issues the Board is most concerned about- loss of efficiency and noting the CAB members were not willing to give up volunteer time on technical issues to bring an 8A contractor up to speed.

She stated she, Donna Antonucci and Meryl Alalof had met with DOE and told them the CAB wanted to go DOE direct. She stated they had made their concerns clear. Regarding the loss of independence, she noted that perception will likely go away, however the CAB's ability to access people is of dire concern. Ms. Patterson noted the CAB is very comfortable using Paul Sauerborn and Jim Moore and the CAB needs access to contractors directly. Ms. Patterson stated that DOE understands the CAB does not want to go through an 8A, but they are going to use an 8A to do some things. Ms. Patterson stated that Assistant Secretary Rispoli said the issue was perceived conflict of interest and she had talked with ex DOE managers and attorneys on the board and came up with a way to manage perceived conflicts of interest. She provided a letter the first week of May to Mr. Rispoli and has received no response, nothing even acknowledging he got the letter. Ms. Patterson stated that when DOE tells her this is the problem and she presents solution and they ignore here, then there must be something else on the agenda. Ms. Patterson commented that DOE is shooting themselves in the foot by not being honest and telling us what they want to gain by these administration changes.

Board members questioned why DOE is doing this, what was wrong with what they've done in the past and requested an explanation for what is prompting this major change.

### **Facilitator Update**

Mike Schoener provided a recommendation status. There are five recommendations pending, 21 open and 208 closed.

## *Nuclear Materials Committee Report*

Manuel Bettencourt presented the draft final recommendation (see attachment) that reaffirmed the CAB's stance on the importance and continued operation of H-Canyon recommending that DOE aggressively pursue alternatives to keep the H-Area assets (people and equipment) actively conducting risk reduction, such as stabilizing and dispositioning legacy nuclear materials. It also requested DOE to provide timely updates on potential missions for H-Canyon and HB-Line. Bill Lawless called the motion and Mary Drye seconded. The motion passed by a unanimous vote of 22 in favor.

## Defense Nuclear Facilities Safety Board

John Contardi, DNFSB, provided an overview on the DNFSB perspective on nuclear material stabilization and storage (see attachment). The DNFSB was formed in the late 1980s due to erosion of Congressional confidence in DOE's ability to ensure the safety of operations in the Nuclear Weapons Complex through self regulation along. DNFSB provides independent oversight. The Board provides advice and recommendations to the Secretary of Energy to ensure adequate health and safety protection for the public and workers. There are five board members, recognized nuclear safety experts and no more than three members from the same political party. DNFSB reviews and evaluates standards; conducts investigations; analyzes designs and construction and makes recommendations. DNFSB has approximately 100 employees, sixty of whom represent a wide range of technical disciplines.

DNFSB has recently conducted approximately 25 reviews of SRS Spent Nuclear Fuel, Pu Storage, and Separations and provided several letters regarding nuclear material stabilization and storage at SRS, which include three reports to Congress on plutonium storage; electrical and lightning systems in K Area and FAMS; safety basis; old HB Line ventilation upgrades; and canyon utilization. Mr. Contardi further discussed spent nuclear fuel noting that storage in L Basin is adequate, however longterm wet storage is not the answer. DOE needs to develop and implement a disposition path. Pu storage in K Area is safe for the interim, and the DNFSB agrees with the decision to consolidate existing Pu in K Area. Pu disposition and spent fuel disposal require major development, design and construction efforts. DOE has a poor recent track record for new disposition paths and facilities. Canyon utilization offers near term risk reduction, a known safety envelope and known costs.

Wade Waters thanked Mr. Contardi for bringing his perspective to help give the board a better understanding of the various issues. Karen Patterson suggested an update from Charlie Anderson on his Congressional testimony regarding plutonium disposition. Another question revolved around the Waste Treatment Plant coming under NRC regulation and was DNFSB approached regarding the plant. Mr. Contardi noted that no one is looking at DNFSB to take on

regulation. One CAB member commented that Congress thinks the DNFSB is not doing all it should, while DOE thinks they're doing more than they should. Mr. Contardi commented on the recent letter from Bodman that said DOE should make their decisions, defend them and stand behind them. It was noted the federal government is taking too long to make decisions.

Further discussion revolved around criticality concerns, funding, integration of safety into design, interim storage at K Area, risk and aborted disposition paths.

### **Administrative Committee Report**

Meryl Alalof, Committee Chair, presented a draft proposal (see attachment) to amend the bylaws in order to bring the CAB Bylaws into compliance with the DOE SSAB charter signed April 11, 2006. There was a great deal of discussion regarding the DOE decision to limit board members to a total of six years on the board. Board members did not like this idea, noting that it would limit institutional knowledge. They stated that the SRS CAB's membership selection process allowed the CAB members to determine if individuals would make worthy contributions. The following was the agreed upon language to be brought for a vote in September:

#### **Section 3.2 Terms of Appointment**

*The standard term for Board members is two years, and members are to serve no more than three two-year terms for a total of six years. In areas where the member pool is limited, a request for an exception may be made by the affected Field Office Manager to the Assistant Secretary. Current Board members will be subject to all selection criteria and re-elected by the full Board as set forth in Section 3.3.*

#### **Public Comment**

Perry Holcomb, North Augusta, S.C.

Mr. Holcomb noted the *Augusta Chronicle* article on plutonium management and requested it be distributed to CAB members. He stated he does not relish DOE's job in developing new administration for this body. He urged them to examine and see what has been the success since this body was chartered 11 years ago, noting the relationship between the administrative staff and the CAB and the knowledgeable resources the CAB has so sorely needed and provided through this staff. He recognized Dawn Haygood's contribution to the Board, as well as Jim Moore and Paul Sauerborn for their significant contributions.

Jimmy Mackey, Beaufort, S.C.

Mr. Mackey commented that he had served 34 years ago in Vietnam and recently received the Vietnam Cross of Galantry.

Rob Pope, EPA

Mr. Pope noted changes to exposure rates for deer hunting. In the past the limit for hunters to be exposed was 99 mrem and that rate is dropping to 30 mrem. Mr. Pope commented that this is still an interim number and the agencies are working to develop a final number.

**Strategic & Legacy Management Committee**

Jimmy Mackey presented an outline for a draft letter to DOE regarding the SRS budget and asked for any feedback from CAB members.

Savannah River Ecology Laboratory

Paul Bertsch, Director, Savannah River Ecology Laboratory (SREL), provided an overview of SREL (see attachment). SREL was founded by Eugene P. Odum of the University of Georgia in 1951 with Atomic Energy Commission funding. The mission of SREL is to provide an independent evaluation of the ecological effects of SRS operations through a program of ecological research, education, and outreach. SREL's vision is to be recognized internationally for integrated multidisciplinary research in the ecological and environmental sciences. SREL implements the mission and vision through an interdisciplinary program of field and laboratory research conducted largely on SRS and published in peer-reviewed scientific literature; education and research training for undergraduate and graduate students; and service to the community through environmental outreach activities. SREL is a research unit of the University of Georgia. There are currently 105 employees and funding is through a cooperative agreement between DOE and the University. SREL has contracts and grants with over 20 federal, state and local agencies, foundations and organizations. Mr. Bertsch discussed activities and functions that were reduced or eliminated in FY06 due to budget shortfalls.

Dr. Bertsch discussed the University of Georgia investment in SREL and external grants. He also discussed SREL responsibilities under the cooperative agreement and SREL's integration into SRS operations. SREL products have significantly improved remediation and land

management activities, such as the GIS-based habitat map and GIS based maps of wildlife receptor species for ER use. SREL peer-reviewed publications are also valuable resources to SRS personnel and SREL scientists interface with site personnel to influence management decisions. Dr. Bertsch discussed ongoing environmental remediation research at SREL, the SREL education program and the SREL environmental outreach program.

Discussion revolved around the Par Pond Dam; examples of ecological impacts at SRS; the designation of the site as a National Environmental Research Park and any progress regarding legislation.; DNA damage to Par Pond alligators; and the availability of GIS based maps.

Whit Gibbons, SREL, provided a presentation regarding the wildlife at SRS. He was assisted by Tony Mills. They presented various species of salamanders, frogs, snakes, turtles, and even an armadillo. Mr. Gibbons discussed the importance of SREL as a learning environment for students and the fact that the site is protected land unlike any you can find elsewhere.

#### **Facility Disposition & Site Remediation Committee**

Mary Drye presented a draft motion supporting the use of phased soil vapor extraction enhanced with soil fracturing, and institutional controls as the proposed remedial alternative for the M-Area Inactive Process Sewer Lines (see attachment). It asked that DOE provide annual updates on the potential spread of contaminants and asked DOE to conduct an investigation into the likelihood that pockets of low permeability soils with contamination may exist after the remedial technology is deployed and report the findings to the SRS CAB during the annual updates. Bill Lawless moved the Board adopt the motion and Wendell Lyon seconded. The motion passed by a unanimous vote of 21 members in favor.

#### **Waste Management Committee Report**

Bob Meisenheimer provided an update on the salt disposition strategy. Joe Ortaldo presented the draft motion entitled High Level Waste Risk Reduction Efforts (see attachment). Frustrated by the lack of progress with the High Level Waste Disposition Process Plan, the motion recommended that DOE and SCDHEC work to resolve the existing stalemate so that the draft permits for the first stage of the process, DDA, can be issued by August 15, 2006, with a final issuance date of October 15, 2006. In order to maintain the high level waste schedule, DDA should have started by July 1, 2006. To date, regulatory permits from SCDHEC have not been received and neither has DOE commitment for funding to proceed. The motion requested a status of the actions taken to resolve the stalemate by August 15, 2006. There was a great deal of discussion regarding the aggressive dates in the motion. Following much discussion and minor wordsmith changes, Bill Lawless

moved the Board adopt the motion and Manuel Bettencourt seconded. The motion carried by a unanimous vote of 20 members in favor.

### Tank Waste Management Update

Doug Hintze, DOE, provided a Tank Waste Management Update (see attachment). He discussed tank farm history. Construction of tanks began in early 1950 and continued through 1981. Over 140 million gallons of nuclear waste is generated and concentrated by evaporation to a present volume of about 36 million gallons. Two tanks were closed in 1997. There are four tank types in two tank farms. The composite inventory includes 33.6 million gallons and 424 million curies. Salt is stored in three forms in the waste tanks, including supernate, concentrated supernate and salt cake. The salt is primarily Cesium-137. Sludge in the tanks is the consistency of peanut butter and makes up 8% of the volume of waste and 55% of the radioactivity. There are three evaporator systems that generated 3.4 million gallons of space in FY05. Mr. Hintze discussed total waste volumes in all the tanks; the tank inventory; and how SRS is optimizing tank working space through evaporation and DWPF recycle.

Mr. Hintze discussed the tank inspection program, the goals of which are to ensure tanks are capable of performing their function safely; that degradation mechanisms are known and follow predictive models; and that early detection of degradation is recognized and effectively mitigated. Mr. Hintze discussed tank history of the various tank types, 13 of which have known leak sites. He discussed the anatomy of a wall crack and noted the primary tank inspection methods to discover cracks. He noted the results of the past year tank inspections, in which 7541 photographs were taken and 1370 video inspections performed.

Mr. Hintze also discussed Waste on Wheels (WOW), a new approach to performing bulk sludge removal from SRS waste tanks as part of the tank closure program. Submersible short shaft mixer pumps are inserted into the waste tanks to aid in the removal of sludge. WOW was used to suspend and remove sludge from Tank 5 with good results, except where significant cooling coils obstructed flow. Future tanks may require more pumps to handle obstruction problems.

Mr. Hintze concluded by noting that tank space remains a concern and is closely monitored and maintained. The tank inspection program continues to employ new technology and is a viable and active program and the WOW project is beginning to show tangible benefits.

Questions revolved around tank closure and projected tank closure dates; 24 non compliant tanks by 2022; why DOE changed the term of high level waste to liquid waste; waste removal; what is the total number of leak sites; how leaks are handled and are humans involved. Board members further questioned adequate evaporator capacity and the need to put a tank in service to receive evaporated materials.

### Handouts

July 24-25 CAB Meeting Agenda

SR Budget Overview, Steve Baker, DOE

Proposed Plan for the MIPSLS Operable Unit, Rita Stubblefield, DOE

Soil Vapor Extraction with Soil Fracturing, FD&SR Working Draft, Mary Drye, CAB

Nuclear Materials Stabilization H Canyon and HB Line, NM Working Draft, Manuel Bettencourt, CAB

HLW Risk Reduction Efforts, WM Working Draft, Joe Ortaldo, CAB

Low Level Waste Performance Assessment & Composite Analysis, Elmer Wilhite, WSRC

SRS Gold Metrics

Letter from State of South Carolina, dated July 24, 2006

SRS CAB Recommendation Summary

Nuclear Materials Stabilization H Canyon and HB Line, NM Final Draft, Manuel Bettencourt, CAB

Defense Nuclear Facilities Safety Board, John Contardi, DNFSB

Savannah River Ecology Laboratory, Paul Bertsch, SREL

Soil Vapor Extraction with Soil Fracturing, FD&SR Final Draft, Mary Drye, CAB

HLW Risk Reduction Efforts, WM Final Draft, Joe Ortaldo, CAB

SRS Tank Waste Management Update, Doug Hintze, DOE

DOE Response to Recommendation 232, dated July 14, 2006

EPA Response to Recommendation 233, dated July 19, 2006

SCDHEC Response to Recommendation 233, dated July 14, 2006

SRS CAB Calendar

NEPA EIS Report