

**Meeting Minutes**  
**Savannah River Site Citizens Advisory Board – Combined Committees Meeting**  
**Augusta, GA**  
**March 25, 2013**

**Monday, March 25, 2013 Attendance:**

**CAB**

Thomas Barnes  
Artisha Bolding  
Dr. Donald Bridges  
Ed Burke-*Absent*  
William Calhoun  
Louie Chavis  
Robert Doerr  
Kathe Golden-*Absent*  
Jessica Grainger  
Dr. Rose Hayes  
Nina Hazen  
Dr. Virginia Jones- *Absent*  
Cleveland Latimore  
Clint Nangle  
Dr. Marolyn Parson  
Larry Powell  
Dr. William Rhoten  
Earl Sheppard  
Harold Simon  
John Snedeker-*Absent*  
George Snyder  
James Streeter  
Ed Sturken  
Christopher Timmers

**Agency Liaisons/Regulators**

Kim Brinkley, SCDHEC  
Van Keisler, SCDHEC  
Heather Cathcart, SCDHEC  
Rob Pope, EPA  
Kyle Bryant, EPA

**Contractors**

Shelia McFalls, SRNS  
Ginger Dickert, SRR  
Steve Thomas, SRR  
Ashley Whitaker, NOVA  
James Tanner, NOVA  
Jesslyn Anderson, NOVA

**DOE**

Dr. David Moody, DOE-SR  
Terry Spears, DOE-SR  
Patrick McGuire, DOE-SR  
Angelia Adams, DOE-SR  
Maxcine Maxted, DOE-SR  
Rich Olsen, DOE-SR  
Soni Blanco, DOE-SR  
Gerri Flemming, DOE-SR  
Bill Taylor, DOE-SR  
Avery Hammett, DOE-SR  
Doug Hintze, DOE-SR  
Jennifer Nelson, DOE-SR  
Jean Ridley, DOE-SR  
Karen Hooker, DOE-SR  
Patrick Jackson, DOE-SR

**Stakeholders**

Tom Clements  
Jill O'Donnell  
Bobbie Paul  
Courtney Hanson

CAB Facilitator, Ashley Whitaker, NOVA, welcomed everyone to the meeting. She explained the day's agenda and quickly reviewed the Meeting Rules of Conduct. She reminded everyone of the CABNET meeting feature, which allows anyone with a wireless device to access electronic copies of meeting materials before she introduced CAB Chair Donald Bridges to open the meeting.

CAB Chair Donald Bridges welcomed everyone, including the new CAB members who were attending their first Full Board Meeting. He thanked Dr. David Moody, Site Manager, for allowing the CAB to have this meeting in Augusta, Georgia, instead of Savannah, due to budget issues.

**Administrative and Outreach (A&O) Committee Overview- Nina Hazen, Chair**

CAB member Nina Hazen welcomed the new CAB members. She stated the CAB Support Team was developing the spring 2013 Board Beat Newsletter and if anyone had ideas or wished to write an article, they should contact them by May 1, 2013. CAB member Hazen reminded CAB members that updated copies of the Internal Processes were placed at each of their seats. She encouraged CAB members to join the A&O Committee and reminded everyone, that at the back of the room, they could sign up for any of the issues-based committees; however, they needed to sign up by the end of the next day. She explained ways to learn more information about the CAB. She mentioned that the 2014 Membership Campaign was underway and encouraged CAB members to reach out to find potential members.

## **Nuclear Materials (NM) Committee Overview- Rose Hayes, Chair**

CAB member Rose Hayes listed the previous NM Committee members, and encouraged CAB members to join the NM Committee. She reviewed the mission of the NM Committee and announced the next NM Committee meeting would be held on April 23, 2013, at the Department of Energy (DOE) Meeting Center in Aiken, South Carolina. She provided a recommendation status update, stating that the NM Committee had 10 open recommendations. She explained the status of recommendations that contain pending information would now be classified as “closed with exception” until each pending item was fulfilled. She said she would discuss each open recommendation that day and planned to finalize the status of each recommendation the next day.

### **Recommendation Work Time**

#### “Concern for Receipt and Planning for Disposition of Research Reactor Spent Nuclear Fuel at SRS”

CAB member Hayes discussed recommendation 280, stating that a response was received on November 16, 2012.

CAB member Marolyn Parson questioned the accuracy in DOE’s response since the recommendation was written so long ago. She asked Dr. Moody if the cost of “40 million per year” was accurate, which Dr. Moody replied, “Yes it is.”

CAB member Hayes asked Dr. Moody if the new strategy indicated that planning would involve a holistic view of the process. Dr. Moody replied that as a Department, DOE was still looking for a pilot storage facility and it was not clear if the available facility that was scheduled for 2021 would include any of the research reactor spent nuclear fuel (RRSNF) because the bulk of that fuel was aluminum-clad. He explained that DOE had not established long-term dry storage for aluminum-clad used fuel; however, DOE had developed a research and development (R&D) program aimed to establish that type of storage facility. He explained until DOE developed a facility to store RRSNF that contained aluminum-clad fuel for long periods of time, DOE would not be shipping that material to a pilot facility. Dr. Moody mentioned that DOE-SR was proceeding to obtain the funds that would allow the material from L-Basin to be “worked off.” He explained that part of the holistic view would not be only shipping the material out, but it included blending the material down and providing more low enriched uranium (LEU) to the Tennessee Valley Authority (TVA). He explained that DOE-SR was negotiating with TVA for the next group of materials to be “worked off” and blended down. He stated that whether DOE-SR found the funds to allow dry storage, DOE-SR would seek alternatives to disposition and blending down the material. Dr. Moody explained that he was not sure if the RRSNF would be part of the pilot storage program, but the 3600 High-Level Waste canisters were currently being considered as part of the pilot. He explained that DOE-SR did not have a fully holistic approach for all of the materials, but there were multiple disposition paths for some of the material being evaluated. CAB member Hayes thanked Dr. Moody. She stated she wished for recommendation 280 to be considered as “closed with exception” until a holistic approach for dispositioning used nuclear fuel (UNF) and High-Level Waste from Savannah River Site (SRS) had been developed.

CAB Chair Bridges stated that the DOE policy, at the Headquarters level, had not been established yet; therefore, the department was unable to answer any questions within the recommendation. He stated the local office was unable to answer any questions that were relative to processing. CAB member Hayes agreed with his statements.

Mr. Pat McGuire, DOE-SR, asked if the CAB was only concerned about the policy of the ultimate disposition path and not processing the material for non-proliferation purposes. CAB member Hayes replied, “I do not think this committee has discussed the issue of whether or not we agree or disagree on the policy of receipt; however, I do not believe the CAB could disagree with that policy, since DOE has stated several times that they must continue receipt of foreign materials for purposes of non-proliferation.”

Mr. Tom Clements, Friends of the Earth, asked CAB member Hayes if she was talking about solid research reactor fuel. He mentioned there was consideration to bring liquid High-Level Waste, which contained some HEU, from Canada. Mr. Clements stated there were gas reactor materials from an experimental reactor in Germany that were being looked at to potentially bring to the United States. He stated that strange forms of HEU exist. He asked CAB member Hayes if she was addressing those non-fuel forms within her recommendation. CAB member Hayes replied that she did not have any information on what he mentioned, but the CAB would be concerned if that type of material was coming to SRS. Mr. Clements replied that he could provide more information about it at a more appropriate time. CAB member Hayes proposed to move this recommendation from “open” to “closed with exception” because it related to the strategic plan to develop an alternative to Yucca Mountain.

“Disposition Costs for SRS Research Reactor Spent Nuclear Fuel”

CAB member Hayes discussed recommendation 281, which received a response on December 1, 2011. She read and explained DOE’s response to each recommendation item before she proposed to change the status of the recommendation from “open” to “closed with exception.”

“Impact of Blue Ribbon Commission Recommendations on SRS Programs”

She discussed recommendation 282, stating the response was received on December 1, 2011. She proposed to change the status of this recommendation from “open” to “closed” after reading through the response.

“Yucca Mountain as Interim Storage Site”

CAB member Hayes read each item of recommendation 286, stating that DOE responded on June 19, 2012. She proposed to change the status of this recommendation from “open” to “closed with exception” since the CAB was still waiting to receive a briefing about the Administration’s strategy in response to the Blue Ribbon Commission (BRC). Mr. Pat McGuire, DOE-SR, stated that the CAB would receive a briefing on the BRC Report at the June Committee meetings and at the Full Board Meeting in July.

“Disposition Planning and Dry Storage of Spent Nuclear Fuel”

CAB member Hayes read each of the items for recommendation 287, before stating the dry storage plan was being reviewed and the CAB looked forward to receiving more information. CAB Chair Bridges stated the recommendation should be “closed with exception” until a decision was made regarding the disposition of RRSNF. She proposed changing the status of the recommendation to “closed with exception.”

Mr. Pat McGuire, DOE-SR, stated that the Oak Ridge report that CAB member Hayes addressed earlier did not address RRSNF, which was HEU that had value. He explained that the report conveyed that there was no economic value of processing commercial SNF with the low enriched uranium (LEU); however, he felt that the report was not addressing the HEU RRSNF found at SRS. CAB member Hayes thanked him and stated that she would like to have the report in order to better understand the differences of the fuel types and since the 2013 DOE strategy for disposal of UNF and High-Level Waste discussed the purpose of developing a method to dispose of or disposition all of this material. Mr. McGuire said he agreed and whenever the CAB received a briefing in June from the BRC, they should take the opportunity to point out the differences between commercial SNF and RRSNF.

“Development of Defense Waste Processing Facility Canisters and Research Reactor Spent Nuclear Fuel Shipping Facility and Shipping Cask”

CAB member Hayes discussed recommendation 291, stating that a response was received on August 27, 2012. She read the response to each of the four items the CAB requested within the recommendation to DOE. She proposed to change the status of recommendation 291 to “closed with exception.”

“Implementation of Spent Nuclear Fuel Exchange Program with Idaho”

CAB member Hayes moved on to discuss recommendation 295 entitled “Implementation of Spent Nuclear Fuel Exchange Program with Idaho.” She stated, “I have been informed, but I have never seen it in writing, that this plan is cancelled.” Mr. Pat McGuire, DOE-SR, explained the program was suspended since there was no funding at either SRS or Idaho. He explained it was still a potential option; however, there was no funding at either location to begin the program. She explained that DOE responded that they could not accept that recommendation because a decision had not been made regarding the processing of UNF in H-Canyon; however, once a decision was made, DOE intended to brief the CAB and reconsider the recommendation. CAB member Hayes discussed each element of the recommendation and decided to change the status of recommendation 295 to “closed with exception” until the CAB had an opportunity to understand the difference between commercial and research reactor grade fuel throughout the DOE complex.

### “Spent Nuclear Fuel Processing Credit for H-Canyon Operations”

CAB member Hayes discussed recommendation 296. She expressed her desire to see the study that compared the differences between commercial reactor grade fuel and research reactor grade fuel; however, she explained that the committee could not address recommendation items one through three until the committee reviewed the study to see if RRSNF would be a viable material for converting into fuel for commercial reactors.

Dr. Moody stated there had been progress on the third item number. He explained that DOE-SR was able to begin invoicing the funds to defer some of the costs associated with blending down and processing HEU to LEU in H-Canyon. Dr. Moody said that those funds were going to the Treasury in a holding account that DOE-SR could invoice to offset some of the costs to process the fuel. CAB member Hayes replied, “That is good news, now all we have to do is find a report that says the RRSNF has economical value as a fuel form for commercial reactors.” Dr. Moody replied to CAB member Hayes explaining the economic value of the HEU that would be processed through H-Canyon.

Dr. Moody asked Mr. Pat McGuire, DOE-SR, how long it took to complete the previous processing of the HEU materials in H-Canyon. Mr. McGuire replied, “We started the main blend down program in the early 2000 timeframe and finished up in 2010 and produced a little over 300 metric tons of LEU.” Mr. McGuire explained that depending upon the material and fuel types, some of the material could be processed at a faster rate than others. Mr. McGuire mentioned that the LEU that had been produced at SRS was used in the TVA reactors and was performing very well, which meant that TVA desired to continue the program and sustain that disposition path for that final product. He stated that SRS had been blending down HEU surplus materials for several years and agreed with Dr. Moody’s comment that there was a big difference in HEU and LEU with regard to beneficial reuse.

Dr. Moody stated that processing the material was “cost neutral.” He explained that within the last processing campaign, which lasted for 10 years, it cost approximately 20 million dollars a year to process the material. He explained that the ultimate revenue that was returned to the Treasury was several hundred million dollars. He stated, “20 million dollars for 10 years is 200 million and the same amount of revenue was returned to the Treasury. At a minimum you can disposition this material in a revenue neutral mode versus fairly expensive disposition paths for repositories or reprocessing of commercial used fuel.”

CAB member Hayes asked if H-Canyon was capable of processing this fuel and generating revenue to help pay its own costs, why did the CAB have to argue with the government to keep that facility from being closed. Dr. Moody replied that it had only been a few months since an agreement was reached that DOE-SR could invoice those funds. CAB member Hayes stated that she understood and asked if there were any current interests being generated from commercial reactors in the United States to proceed with using the fuel. Mr. Pat McGuire answered that DOE-SR had an agreement with the TVA that was working very well. He explained that he felt that the country would benefit if the energy continued either through the power grid or in the TVA reactors. Mr. McGuire stated that in the future DOE-SR could consider extending the fuel to other utilities; however, DOE-SR’s relationship with TVA was working very well.

He stated, while there were positive aspects of recovering inherent energy value in the RRSNF, there were two important aspects to consider. He explained the waste generated would go to the Liquid Waste (LW) Program; however, the Liquid Waste system plan accounted for the waste that could be generated by the processing of the RRSNF. Mr. McGuire explained that if DOE-SR embarked upon the program to recover the energy value in the RRSNF, the Liquid Waste Program would be able complete its campaign according to schedule. He mentioned the other side of recovering the energy value in the RRSNF meant that plutonium could be retrieved while the SNF was being processed. He explained the United States was concerned about beginning a program that could encourage other countries to process fuel and recover the plutonium for weapon development. He stated that DOE-SR did not separate plutonium while processing the RRSNF, which demonstrated that H-Canyon operations were very proliferation-resistant. Mr. McGuire explained that he thought DOE-SR had provided the CAB supporting evidence to show how the United States benefited from continuing to recovering materials in SNF. CAB member Hayes asked Mr. McGuire if TVA had been using all the material from SRS or only a portion. Mr. Pat McGuire replied that TVA had been using the material in its reactors since SRS began producing the LEU back around the year 2000. He said since the fuel had performed very well in their reactors, he did not see any reason why continuing to produce LEU in H-Canyon would be an issue. CAB member Hayes thanked Mr. McGuire and proposed to change the status of recommendation 296 from “open” to “closed.”

“Contingency Budget Planning Input for Severe Budget Cases”

CAB member Hayes moved on to recommendation 302, which was a joint recommendation with the S&LM Committee. She explained that she would like to discuss the recommendation with CAB member Nangle before making any decision; therefore, she decided to leave the recommendation status as “open.”

“Disposition of Spent/Used Nuclear Fuel (SNF/UNF) from L-Basin through H-Canyon Considering the Plutonium Processing Impacts Likely to be Encountered”

She read recommendation 303 to DOE, and explained that a response was received on December 6, 2012, that stated DOE accepted all five subparts; however, the CAB should receive a presentation that addresses specific elements of what was asked for in the recommendation. CAB member Hayes requested that if any significant material regarding the significance of RRSNF and its economic value was released, that the CAB receive a presentation and copy of the report. She decided to change the status of this recommendation from “open” to “closed with exception” and wait for the briefing from DOE.

A copy of each of these recommendations can be found on the CAB website at: [cab.srs.gov](http://cab.srs.gov)

**Strategic & Legacy Management (S&LM) Committee Overview- Clint Nangle, Chair**

CAB member Clint Nangle welcomed the new CAB members before he reviewed the purpose of the S&LM Committee. He introduced the Committees Co-Vice Chairs, CAB member Robert Doerr and CAB member James Streeter and encouraged CAB members to join the S&LM Committee. He began a recommendation status update, stating that recommendation 288 was open, while joint recommendation 302 was pending. He explained that the next S&LM Committee meeting was scheduled for April 9, 2013 from 4:00- 5:00 P.M. at the DOE Meeting Center in Aiken, South Carolina. He introduced Mr. Rich Olsen, DOE-SR, to begin his presentation on the Integrated Priority List (IPL).

**PRESENTATION: Integrated Priority List- Rich Olsen, DOE-SR**

Mr. Rich Olsen, DOE-SR, stated the purposes of his presentation was to fulfill a 2013 S&LM Work Plan requirement while also allowing the CAB to provide input on the development of the DOE-SR budget for Fiscal Year (FY) 2015. He explained that he would provide an overview of the Integrated Priority List (IPL). He mentioned that the S&LM Committee asked to have time at the conclusion of his presentation to discuss their response to the IPL. He explained that the Principal Deputy Assistant Secretary for Environmental Management (EM) at Headquarters (HQ) requested that all DOE sites provide an opportunity for stakeholders to give input on the sites’ prioritized activities for FY 2015 as part of budget development. Mr. Olsen said that prioritizing the types of cleanup work being done at SRS was known as the Integrated Priority List (IPL) process; however, the process was commonly referred to as the IPL. He explained that the CAB’s IPL recommendations and comments would be included when DOE-SR sends its budget submission to DOE-HQ. Mr. Olsen stated the submission would occur around May and DOE-SR needed the CAB’s input by April 15, 2013.

Mr. Olsen listed the seven “functional areas of cleanup,” known as Program Baseline Summaries (PBS), which included: 1.) Nuclear Materials (NM) Stabilization and Disposition, 2.) Used (Spent) Nuclear Fuels Stabilization and Disposition, 3.) Solid Waste Stabilization and Disposition, 4.) Radioactive Liquid Tank Waste Stabilization and Disposition, 5.) Soil and Water Remediation and Facility Deactivation and Decommissioning (D&D), 6.) Safeguards and Security, and 7.) Mission Support Activities. He stated that the total budget for SRS was broken down between those seven PBSs or “buckets” of work. He explained that when DOE-SR sends the budget submission to HQ, the necessary funding should already be in the correct PBS bucket; however, HQ would also evaluate each category in three additional dimensions. He explained that the three major categories of the IPL are support minimum safe operations and essential site services, meet regulatory milestones and commitments, and make progress in cleanup activities. He continued by saying that for each PBS bucket, DOE-SR must explain how much funding set aside to assist with the major categories.

Mr. Olsen explained the first category of “min safe” applied to supporting minimum safe operations and essential site services that were necessary to keep facilities or systems in a state of operational readiness known as a “hot standby” so they could produce if necessary. He stated that funding to support Safeguards and Security operations, as well as community and regulatory support, were included within this category.

He then explained how the second category of “meet regulatory compliance” dealt with meeting regulatory milestones and commitments involved in activities pertaining to the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA). He said those regulations focused on cleanup and monitoring activities that were associated with Solid Waste Stabilization and Disposition and Soil and Water Remediation and Facility Deactivation and Decommissioning (D&D).

Mr. Olsen explained the third category, labeled “make progress,” involved the necessary activities to progress towards compliance with the Federal Facility Agreement (FFA), Site Treatment Plan, or other mission goals. He mentioned that the category applied mostly to Nuclear Materials Stabilization and Disposition and Radioactive Liquid Tank Waste Stabilization and Disposition.

He provided a chart within his presentation that represented the IPL of cleanup activities DOE-SR proposed to DOE-HQ for FY 2015. The chart provided each PBS, a description of the cleanup activity, and the categories of “min safe,” “meet regulatory compliance”, and “making progress.” Mr. Olsen said approximately 60 percent of the budget for SRS fell in the “min safe” category and the other 40 percent was broken into the other two categories. He said even though SRS was operating under budget constraints, work would still take place; however, it was unclear when and the amount of work that would occur. Mr. Olsen stated again that when DOE-SR submitted the IPL to HQ it meant that the budget must be broken down by the seven PBSs, including the amount of funding that would be spent for each category of work. He stated that DOE-SR asked the CAB to provide a letter of what the committee felt were the most important activities that should be done at SRS for FY 2015. He provided a copy of the CAB’s response to the IPL from the previous year. He mentioned that DOE-SR asked the CAB to either reaffirm the IPL response from the previous year or develop a new IPL recommendation. Mr. Olsen allowed the S&LM Committee to begin discussion and ask questions.

CAB Chair Bridges asked if DOE-HQ named the three categories of “min safe,” “meet regulatory compliance,” and “making progress.” Mr. Olsen stated they were named from HQ definitions. CAB Chair Bridges told CAB member Nangle that the information submitted by the CAB last year was still current and suggested no making any changes. CAB member Nangle agreed with CAB Chair Bridges and suggested to reaffirm the three items from the year before.

CAB member Parson asked if the items on the chart were listed in order of DOE’s priorities or if the PBSs were listed by budget totals. Mr. Doug Hintze, DOE-SR, stated that PBSs on the chart were not correlated in any order; however, the “min safe” activities had the highest priority. She asked if in the past DOE provided the CAB with a list that stated what activities would be done depending on the amount of the budget DOE-SR received. Mr. Hintze said the CAB received that in the past, and explained that the easiest way for the CAB to determine activities that might occur was to prioritize the PBS items from highest to lowest. He then mentioned the amount of funding DOE-SR received would determine the amount of activities that could occur. CAB member Parson asked Mr. Hintze if it would be helpful for the CAB to include a list of the least important activities. Mr. Hintze stated that the CAB could attach their prioritized chart to their official IPL letter. Mr. Rich Olsen explained that the chart he provided within his presentation was what DOE-SR would plan to propose to DOE-HQ. He explained that HQ might not agree with the budget DOE-SR proposed; however, DOE-SR planned to propose the entire list of priorities.

CAB member Hayes asked if the CAB could prioritize the list by which activities are “absolutely necessary.” Mr. Olsen replied, “Min safe is absolutely necessary” and DOE-SR already extracted out activities that might not occur. Mr. Doug Hintze explained that DOE-SR focused on receiving funding for “min safe” followed by “meet regulatory requirements” activities; however, the main concern was the amount of the “making progress” activities that might be funded to happen for the year.

CAB member Nangle felt that the CAB should not attempt to change the IPL in order to prevent confusion when the letter arrived to HQ. Mr. Nangle thanked Mr. Olsen and Mr. Hintze for providing their suggestions and said the CAB would vote on the IPL letter for FY 2015 the next day.

### **Waste Management (WM) Committee Overview- Earl Sheppard, Vice Chair**

CAB member Earl Sheppard welcomed the new CAB members, and provided a recommendation status update, stating that recommendations 269, 290, 297, 298, 299, 300, and 301 were open. He mentioned that the next WM Committee meeting was scheduled for April 23, 2013, and reviewed the presentation topics scheduled for that meeting. CAB

member Sheppard encouraged the CAB members to join the WM Committee before he introduced CAB Chair Bridges to finish the committee overview.

CAB Chair Bridges reviewed the WM Committee's purpose before he discussed the committee's concerns with the tank cleanout program. CAB Chair Bridges asked Dr. Moody how many tanks had been cleaned at SRS. Dr. Moody replied that six tanks had been cleaned in compliance with the necessary agreements and four tanks had been closed. CAB Chair Bridges reviewed the WM Committee Work Plan. He addressed the Solid Waste Program and asked Dr. Moody for an update on the amount of transuranic (TRU) waste that needed to be processed. Dr. Moody explained that only 60 cubic meters of the "really hard stuff" needed to be processed and everything else had already been certified for shipment. CAB Chair Bridges discussed the CAB's concern with DOE's response to the Blue Ribbon Commission's Report on America's Nuclear Fuel and the Liquid Waste Program. He mentioned issues that were recently discussed in the news. He pointed out the leaking tanks at the Hanford Site and asked Mr. Terry Spears, DOE-SR, to elaborate on the issue.

Mr. Terry Spears stated, "There are six tanks that are leaking actively out at Hanford. I do not think any of the material has reached the water table, but I know that some of the liquids are suspected to have leaked outside of the containment of the tank and into the soil." CAB Chair Bridges stated there were similarities between the tanks at Hanford and SRS and asked Mr. Spears how many tanks had leaked at SRS. Mr. Spears said that 14 "old-style" tanks had leaked at SRS; however, two of those tanks were closed. Mr. Spears said the other tanks experienced "salt leaks" within the partial secondary containment of the tank. Mr. Spears explained that salt leaks usually sealed themselves, but DOE typically drained those tanks below active leak sites to manage the waste levels. He explained that for waste removal reasons, sometimes the tank liquid levels were lowered, but DOE always contacted SCDHEC to notify them of the process. He explained that once the waste removal processes were finished, waste levels were lowered down below the leak sites.

CAB member Hayes stated that she recently read a report regarding a double-shell tank that leaked at the Hanford site. She asked Mr. Spears if that tank was similar to the tanks that were being designed for the Salt Waste Processing Facility (SWPF) at SRS. Mr. Spears confirmed that the leak at Hanford occurred from a double-shell tank, and it was the first double-shell tank to leak within the DOE Complex; however, the tanks being constructed for the SWPF were stainless steel. He explained that all sites within the DOE complex, including SRS, have "robust tank inspection programs," that routinely manage tank leaks. He stated that the double-shell tank that leaked at Hanford was similar to tanks found at SRS, but the tank at Hanford was constructed and inspected differently than at SRS. CAB member Sheppard asked if a tank leaked, was the tank designer responsible or did everything "stick with DOE." Mr. Spears replied, "It sticks with DOE."

CAB Chair Bridges continued by asking Mr. Terry Spears to address the issue of Hanford shipping TRU waste to the Waste Isolation Pilot Plant (WIPP). Mr. Spears explained that Hanford began evaluating the material within their tanks to determine if any of the waste could be categorized as TRU waste. He explained if the tanks at Hanford contained TRU waste, it might be appropriate to send the material to a TRU waste repository such as WIPP.

CAB Chair Bridges addressed the strategy document released by DOE in January saying that a facility for interim storage may be available around 2020, with an ultimate disposition facility sometime around 2050. He explained that the CAB was concerned that SRS might be a viable candidate as an interim storage facility; however, CAB Chair Bridges stated, "DOE has made no such decision and I do not know if such a decision is under active consideration." He mentioned the SRS Community Reuse Organization (CRO) and Don't Waste Aiken, a stakeholder group that was opposed to using SRS as an interim storage site.

### **Facilities Disposition & Site Remediation (FD&SR) Committee Overview- Marolyn Parson, Chair**

CAB member Parson welcomed the new CAB members before she encouraged everyone to join the FD&SR Committee. She stated that CAB member Tom Barnes would be Vice Chair of the committee and then she listed the previous committee members. She reviewed the committee's focus. She provided a recommendation status update, stating that recommendations 293 and 294 were open. CAB member Parson reviewed the 2013 FD&SR Work Plan. She announced that the next FD&SR Committee meeting would be held on April 9, 2013, and reviewed presentation topics scheduled for that meeting. She welcomed Mr. Bill Taylor, DOE-SR, to begin his presentation.

**PRESENTATION: Environmental Management Website Improvement Status- Bill Taylor, DOE-SR**

Mr. Bill Taylor, DOE-SR, stated his presentation was in reference to the CAB's recommendation 283. He began his presentation by showing the current SRS external website, www.srs.gov. He commented that CAB members should have been able to see "an evolution of improvement." He explained that DOE-SR had become aware of their overuse of acronyms and lack of plain language on its website. Mr. Taylor stated that progress had been made, but DOE was doing their best to make additional improvements. He stated that he wanted to provide a tutorial of SRS's general website because it represented all the SRS contractors and a majority of the work that was underway at the site. He mentioned that a tab labeled "Documents and Publications" had been added in response to the CAB's recommendation. Mr. Taylor said the tab allowed for various pieces of information to be posted while also being a usable tool for the CAB and public. Mr. Taylor provided a tutorial of the website, pointing out items on the projected images of the website. He stated that DOE was doing their best to develop the page; however, the SRS general external website at www.srs.gov best represented SRS at that time. He asked the CAB to forward additional website concerns to the CAB Support Team so they could inform DOE. He hoped the CAB felt like DOE listened to their requests and explained that the website would still be going through improvements.

CAB member Parson expressed her difficulties in searching for certain documents under the "Documents and Publications" tab. She asked Mr. Taylor where on the website she should type in search requests. He explained that she should type her requests into the search bar that was located at the top right corner of the www.srs.gov homepage. She asked if search capabilities were available under the "Documents and Publications" tab. Mr. Taylor stated that capability was unavailable, but agreed to add that feature. CAB member Parson also addressed the size of different documents. Mr. Taylor commented that the file size of presentations and documents were reduced before they were uploaded to the computer. CAB member Parson asked if there was a way to have the option to "view" or "download" documents instead of the document automatically downloading to a device. She explained that this feature would allow people that visit the webpage to recognize the size of the document. Mr. Taylor stated that changes would continue to be made to the website until it evolved into a user-friendly and easily accessible tool. CAB member Parson thanked Mr. Taylor and DOE for the improvements that had been made.

**Public Comments**

Mr. Tom Clements discussed the issue of High-Level Waste from Canada, stating that he would provide copies of different memos to the CAB so the committee could know more about the issue. He stated approximately 15 stakeholder groups around the country had requested supplemental environmental impact statements regarding the material from Canada. Mr. Clements said that DOE's Office of NEPA Policy and Compliance said that a supplemental analysis was being prepared related to the material from Canada. He stated he would submit a question for Mr. Pat McGuire, regarding the shipment of items to Lawrence Livermore Laboratory. He thanked CAB Chair Bridges for mentioning the stakeholder group Don't Waste Aiken and mentioned that the group would be having a meeting that night.

A copy of Mr. Clements's memos and question has been attached to this document.

**~Meeting Adjourned**

**Meeting Minutes**  
**Savannah River Site Citizens Advisory Board – Full Board Meeting**  
**Augusta, GA**  
**March 26, 2013**

**Tuesday, March 26, 2013 Attendance:**

**CAB**  
Thomas Barnes  
Artisha Bolding  
Dr. Donald Bridges  
Ed Burke-*Absent*  
William Calhoun-*Absent*  
Louie Chavis  
Robert Doerr  
Kathe Golden-*Absent*  
Jessica Grainger  
Dr. Rose Hayes  
Nina Hazen  
Dr. Virginia Jones  
Cleveland Latimore  
Clint Nangle  
Dr. Marolyn Parson  
Larry Powell  
Dr. William Rhoten  
Earl Sheppard  
Harold Simon  
John Snedeker-*Absent*  
George Snyder  
James Streeter  
Ed Sturken  
Christopher Timmers

**Agency Liaisons/ Regulators**  
Van Keisler, SCDHEC  
Heather Cathcart, SCDHEC  
Kim Brinkley, SCDHEC  
Rob Pope, EPA  
Kyle Bryant, EPA

**Contractors**  
Susan Ferrara, SRNS  
Amy Meyer, SRNS  
Ginger Dickert, SRR  
Steve Thomas, SRR  
Kent Rosenberger, SRR  
Charles Hanson, Parsons  
Ashley Whitaker, NOVA  
James Tanner, NOVA  
Jesslyn Anderson, NOVA

**DOE**  
Dr. David Moody, DOE-SR  
Terry Spears, DOE-SR  
Patrick McGuire, DOE-SR  
Angelia Adams, DOE-SR  
Maxcine Maxted, DOE-SR  
Rich Olsen, DOE-SR  
Soni Blanco, DOE-SR  
Gerri Flemming, DOE-SR  
Bill Taylor, DOE-SR  
Avery Hammett, DOE-SR  
Karen Guevara, DOE-SR  
Doug Hintze, DOE-SR  
Jennifer Nelson, DOE-SR  
Jean Ridley, DOE-SR  
John Lopez, DOE-SR  
Dipak Jani, DOE-SR

**Stakeholders**  
Karen Patterson  
Tom Clements  
Bobbie Paul  
Courtney Hanson  
Jill O'Donnell  
Susan Corbett  
Nancy Bobbitt  
Dawn Gilles  
Clint Wolfe  
Murray Riley

CAB Chair Bridges opened the meeting. CAB Facilitator, Ashley Whitaker, NOVA, led everyone in the Pledge of Allegiance, and informed meeting attendees of the public comment periods planned throughout the day. She reviewed the Meeting Rules of Conduct and the agenda before inviting CAB Chair Bridges to begin his update.

**CAB Chair Opening and Update- Donald N. Bridges, CAB**

CAB Chair Bridges called for discussion of the January Full Board meeting minutes. There were no suggestions or comments regarding the minutes. He opened the floor for a vote; the CAB, with no opposition and no abstentions, approved the meeting minutes with 18 votes.

CAB Chair Bridges welcomed everyone to Augusta and acknowledged the CAB Support Team and DOE for the meeting arrangements. He briefly discussed CAB membership and welcomed each new committee member to say a few words about themselves. CAB Chair Bridges discussed how CAB membership was a way to impact the community while directly communicating with the Department of Energy (DOE). He stated that there were no committee meetings since the January Full Board; however, this year the CAB would begin having combined committee meetings, which meant that one committee would meet from 4:00-5:50 p.m. and another from 6:00-7:50 p.m. He mentioned the Work Plan Meeting and Education Process Session (EPS) on February 13-14, 2013 were very productive. He mentioned that CAB member Earl Sheppard was able to attend the Environmental Justice (EJ) Meeting in Beaufort, South Carolina on

March 7, 2013. He continued by speaking about the Site Specific Advisory Boards (SSABs), stating that the April meeting in Hanford, Washington was cancelled; however, a webinar would be offered on April 25, 2013.

CAB Chair Bridges reminded everyone that all Full Board Meetings would be held locally along with other cost cutting measures. He stated that there would be no overnight provisions, lunches, or reimbursement for attending meetings such as the EJ and Governor's Nuclear Advisory Council (GNAC) meetings.

CAB member Hayes asked if the requirements for CAB membership were going to be altered since several aspects of attending meetings were changing. Ms. Gerri Flemming, DOE-SR, answered that nothing had changed since the CAB members had the option to attend meetings online. Ms. Flemming stated that CAB members are considered present at a meeting whether they physically attend or use the online option.

CAB Chair Bridges continued his update by discussing a public outreach initiative. He explained that he hoped the initiative would reach out to the community and allow various stakeholder groups to provide input to the CAB about the cleanup program at SRS. He stated beginning that day and at each Full Board meeting, different organizations would be allowed to provide input about cleanup at SRS. He listed the general guidelines that were established that stakeholders should follow when presenting to the CAB. CAB Chair Bridges mentioned that in January the Blue Ribbon Commission (BRC) responded to DOE with a strategy document. He stated that the CAB should receive a presentation at the NM and WM Committee meetings in June and at the July Full Board. He stated he hoped to continue sending recommendations to DOE, while receiving more input from each CAB member and the community.

## **Agency Updates**

### **Dr. David Moody, SRS Manager-Department of Energy-Savannah River (DOE-SR)**

Dr. Dave Moody, DOE-SR, began his update by welcoming the new CAB members to their first Full Board meeting before saying how much he appreciated the dedication of all the CAB members during such a budget-sensitive time. He discussed the sequestration and how SRS was affected. He said that DOE asked Congress to reprogram funds; however, work would be deferred and possibly terminated. He mentioned that beginning on April 1, 2013, approximately 2,000 to 2,500 Savannah River Nuclear Solutions (SRNS) employees would be furloughed and begin working 32 hours per week instead of 40 hours per week; however, he did not anticipate the federal workforce being furloughed. Dr. Moody explained that if DOE-SR did not receive funding relief by the summer, several other employees could be furloughed for the remainder of the year. He stated that DOE-SR had reduced spending and travel, and were only allowing essential training for federal employees. He explained that even though there was an eight percent cut across SRS, federal funding was cut by 13 percent, which made things very tight; however, he said that DOE-SR would strive to meet its regulatory commitments and milestones.

Dr. Moody stated that DOE-SR continued to focus on its future with Enterprise SRS as the strategic vision of SRS. He explained that several entities had renewed interest in siting a Small Modular Reactor (SMR) at SRS. He mentioned that efforts were developing to examine more innovative reactors that met DOE criteria and explained that there were three vendors, who had reactors meeting DOE criteria, expressed interest to move forward with the process.

Dr. Moody discussed the announcement from the state about partnering with Holtec, which was an SMR manufacturer. He explained that Holtec wanted to build an SMR and irradiate targets in the SMR so the entire tritium mission for the weapons program would be located at SRS. Dr. Moody explained that the targets were being processed at SRS. Dr. Moody stated that Holtec was looking to partner with Nuclear Energy in a cost-shared manner, so that the Office of Nuclear Energy could help finalize the design and licensing of an SMR through the Nuclear Regulatory Commission (NRC).

CAB member Hayes asked if the reactor would be an "irradiating" SMR and in what ways the Holtec partnership applied to EM cleanup. Dr. Moody replied that the SMR would produce steam and electricity, but would provide the opportunity to irradiate targets for the tritium mission. He explained that the partnership would be funded by Nuclear Energy and that DOE-SR was not spending, or planned to spend, EM funds on anything related to the Holtec partnership. He stated that one of the benefits of the partnership was that one third of the fuel required for the Holtec reactor could be MOX fuel. He explained that the Holtec reactors required one third of MOX fuel to function, which was why Holtec expressed interest in using MOX fuel within its reactors. He stated that the partnership would additionally provide an alternative disposition method for some of the consolidated plutonium at SRS.

Dr. Moody continued with his agency update, stating that SRS was dispositioning off-spec plutonium to WIPP and planned to continue processing used nuclear fuel (UNF). He stated DOE agreed with the CAB's recommendations for dispositioning research reactor spent nuclear fuel (RRSNF) and looked forward to policy decisions that would allow the material to be dispositioned. He stated the AMERESCO plant had been running successfully for more than a year. He explained that four biomass plants were responsible for producing all the steam and one third of the electricity at SRS. He stated that DOE continued to support national security through nuclear non-proliferation efforts and clean energy programs. He stated that AMERESCO was only one element of clean energy and the potential use of a future SMR would provide another.

Dr. Moody continued by stating that there had been several communications in the press about the storage of commercial used fuel at SRS. He said that DOE-SR was not soliciting that mission; however, DOE-SR was evaluating the necessary measures if there were such a move on the part of the local communities and state. He explained that DOE had made progress on the pilot facility that was proposed for 2021. He said, "I have gotten the commitment that the 3,600 High-Level Waste glass canisters currently stored at SRS will be part of that pilot facility, wherever it goes."

CAB member Hayes asked if the pilot facility would be similar to the glass waste storage buildings at SRS. Dr. Moody replied that he thought it would be similar to a pad and above ground storage because those canisters were not too radioactively hot; however, the interested states would propose whatever they felt was appropriate. CAB member Hayes asked if the pilot facility would be a storage site where the material would be consolidated rather than onsite where it was currently stored. Dr. Moody replied, "That is correct." CAB Chair Bridges asked what the purpose of the pilot facility was. Dr. Moody answered that it would store materials while waiting for a repository to become available.

#### **Mr. Rob Pope, Environmental Protection Agency (EPA)**

Mr. Rob Pope, EPA, began his agency update by welcoming the new CAB members. He provided a brief background overview of the EPA and explained how the agency was a federal regulator for cleanup at SRS. He listed the various individuals who worked for EPA at SRS. He stated that EPA would not be hiring new employees due to sequestration budget restrictions before inviting Mr. Kyle Bryant, EPA, to discuss the March 7, 2013 Environmental Justice (EJ) meeting that was held in Beaufort, South Carolina. Mr. Bryant explained that most EJ meetings involved discussions of impacts that SRS had on the environment's natural resources. Mr. Bryant explained that a presentation on Environmental Monitoring from DOE was supposed to be given at the EJ meeting; however, the presenter was unable to travel due to sequestration cuts. He announced that the next EJ meeting would be held in June in the Shell Bluff community before he asked CAB member Earl Sheppard to share his experience of the EJ meeting.

CAB member Sheppard commented to DOE and other CAB members that it was a wonderful opportunity to be a member of the CAB. He stated that he was able to "kill common myths" because he shared information about SRS that he learned while being a CAB member. He stated that several individuals were interested in the water quality of the Savannah River. He said that members of the public understood everything he had to say, but he felt like they wanted more CAB representation at EJ meetings. He encouraged the CAB members to attend the next EJ meeting so they could reach as many people as possible.

Mr. Rob Pope explained that closure modules for tanks five and six were currently being reviewed. He explained that when tanks meet permit requirements, each tank moves out of the SC permit and into Federal Facilities Agreement (FFA) space, which is regulated by SCDHEC and EPA. He stated that within the next 60 days the CAB should anticipate the release of a final record of decision (ROD) for tanks 17 and 20 to be moved into FFA space. He stated an "Explanation for Significant Difference" for tanks 18 and 19 would soon be released, which would also move those tanks from the SC permit into FFA space. Mr. Pope mentioned that another ROD would be released for the Heavy Water Components Test Reactor (HWCTR) in B-Area. He stated that this summer EPA hoped to release the "Explanation of Significant Difference" for the TNX operable unit, which would shut down the treatment system for ground water and change the remedy to allow oil to be injected so the solvents could break down more naturally.

#### **Mr. Van Keisler, South Carolina Department of Health & Environmental Control (SCDHEC)**

Mr. Van Keisler, SCDHEC, began his update by welcoming the new CAB members. He said Ms. Shelly Wilson, SCDHEC, was unable to attend because she was working on a new customer service initiative. He explained how the new initiative, titled Permit Central, would simplify the permit process. He stated the main component for the initiative

was a web application, which asked individuals various questions to direct them towards the permits they would need. He stated the web application provided permit applications, a time estimate for how long the permit process would take, and contained a database that showed each permit's completion status. Mr. Keisler provided the website, [scdhec.gov/permitcentral](http://scdhec.gov/permitcentral), for interested individuals and stated SCDHEC attended six meetings since the January Full Board meeting. He stated a public meeting was held on March 12, 2013 to discuss the closure module for tanks five and six before stating that SCDHEC recently reviewed 16 documents. He introduced Ms. Kim Brinkley, SCDHEC, who stated she provided copies of the 2011 Environmental Surveillance and Oversight Plan (ESOP) to the CAB.

### **Public Comments**

Ms. Karen Patterson, Governor's Nuclear Advisory Council (GNAC), stated that CAB Chair Bridges asked her to provide an update of what the GNAC was looking at relative to SRS. She welcomed the new CAB members before she provided a brief overview of the GNAC. She said the H-Tank farm 3116 Determination draft basis document was available for public comment. She stated there had been several discussions about the BRC idea on a Consolidated Storage Facility (CSF). She stated that representatives from AREVA attended a GNAC meeting to discuss their concept for interim storage and spent fuel management issues, while at the last GNAC meeting there was a discussion about the downsides of reprocessing. She stated that a community study was released about supporting a consent-based discussion and not to support an interim storage facility at SRS.

Mr. Tom Clements, Friends of the Earth, encouraged the CAB to keep anything that pertained to High-Level Waste at the top of the Integrated Priority List (IPL) they would vote on later that day. He mentioned that the SRS Community Reuse Organization (CRO) released a report on March 14, 2013, that discussed the possibility of a spent fuel storage facility coming to SRS. He mentioned a report was released on February 14, 2013 by Mr. Bob Alvarez who looked at the impact of bringing a huge additional radioactive waste burden to SRS. Mr. Clements mentioned he turned in a recommendation to the CAB that if there were any presentations done relating to spent fuel storage, Mr. Alvarez be invited to speak. He also turned in a statement requesting that the CAB invite someone to discuss the Department of Labor (DOL) Energy Employees Occupational Illness Compensation Program (EEOICP).

A copy of Mr. Clements's statements has been attached to this document.

### **Waste Management (WM) Committee Overview- Earl Sheppard, Vice Chair**

CAB member Sheppard reviewed his presentation from the day before. He provided a recommendation status update stating that the committee had seven open recommendations. He encouraged CAB members to sign up for the WM Committee before he mentioned that the next meeting would be on April 23, 2013, at the Department of Energy (DOE) Meeting Center. He welcomed Ms. Sherri Ross, DOE-SR, to present a performance assessment of H-Tank Farm.

### **PRESENTATION: H-Tank Farm Performance Assessment- Sherri Ross, DOE-SR**

Ms. Sherri Ross, DOE-SR, said the purpose of her presentation was to fulfill a 2013 WM Work Plan requirement and provide an update of the closure of H-Tank Farm. She listed the topics she would address during her presentation before displaying a diagram to point out the location of H-Tank Farm at SRS. The next diagram within her presentation showed the regulatory drivers for closure. Ms. Ross explained how DOE, EPA, SCDHEC, and NRC were involved with the tank closure process. She provided a flow chart that represented the review process for the National Defense Authorization Act (NDAA) Section 3116. She said that in February, DOE issued the draft basis and performance assessment documents for the NDAA Section 3116 Determination for closure of H-Tank Farm at SRS. She said the performance assessment supported the basis document, which was available for public comments until May 1, 2013. She said the Technical Evaluation Report (TER) was anticipated for spring 2014 while DOE anticipated finishing the basic document in the second quarter of calendar year (CY) 2014. She provided the outline of the draft H-Tank Farm NDAA Section 3116 basis document and explained the schedule for DOE and NRC consultation.

CAB Chair Bridges asked Ms. Ross if the draft basis document showed how DOE-SR was following the law. Ms. Ross said that was correct. CAB Chair Bridges asked what type of public comments were usually provided. She stated that comments vary, but usually comments were supportive of the cleanup.

Ms. Ross provided maps to show H-Tank Farm's location at SRS. She said there were four different types of tanks, but 29 tanks total. She provided an interior view of the four different tanks before saying that H-Tank Farm contained four Type I tanks, four Type II tanks, 17 Type III/IIIA tanks, and four Type IV Tanks. Ms. Ross explained the multiple requirements that have to be done before a tank could be closed. She stated that four tanks had been closed and eight were in progress.

CAB member Hayes asked how old each type of tank was. Ms. Ross explained that the Type I tanks were completed in 1953, Type II tanks in the mid to late 1950's, the Type IV tanks in the early 1960's, and Type III/IIIA tanks in the 1970's and early 1980's.

Ms. Ross provided a brief overview of the first revision to the H-Tank Farm performance assessment. She explained that the performance assessment was a risk-measuring tool that all regulatory agencies used to facilitate decisions. She said the performance assessment also evaluated potential human impacts associated with the residual chemical and radioactive constituents in H-Tank Farm at the time of closure. Ms. Ross mentioned that the performance assessment was a living document that contained calculations that were based on assumptions over several thousands of years.

Ms. Ross explained that the deterministic model calculated different scenarios and assumptions of how humans may encounter residuals from tank closures. She explained different assumption scenarios and charts that calculated the dose to members of the public 10,000 years after H-Tank Farm was closed. She described a scenario where a member of the public used well water 100 meters away from the tank farm as the primary source of drinking water. She stated that the 10,000 year requirement was used by NRC; however, DOE-SR provided modeling results to the NRC calculated to 100,000 years. She provided another scenario where an intruder used well water that was one meter away from the tank farm. She explained the results, stating over a period of 20,000 years, the scenario concluded that an intruder would be well below the performance measure dosage of 500 millirem per year. Ms. Ross explained a chart that showed the results of the uncertainty analysis for all cases. She said that the chart showed that the uncertainty level was well below the performance measure of 25 millirem. She explained that sensitivity analysis showed the model was very sensitive to solubility. She stated that DOE knew the levels of solubility were low for residuals left behind, but DOE was unsure how slow the residuals would leach out. She said DOE welcomed public comments on the H-Tank Farm draft basis and performance assessment and would be consulting publically with the NRC. She said the TER was anticipated for spring 2014 and DOE's determination for H-Tank Farm closure was anticipated for the second quarter of CY 2014.

### **Strategic & Legacy Management (S&LM) Committee Overview- Clint Nangle, Chair**

CAB member Nangle reviewed his presentation from the day before. He welcomed the CAB members who had signed up for the S&LM Committee. He provided a recommendation status update, stating that recommendations 288 and 302 were open. He welcomed Mr. Doug Hintze, DOE-SR, to begin his presentation.

### **PRESENTATION: Environmental Management Cleanup Program Integrated Lifecycle Estimate Update- Doug Hintze, DOE-SR**

Mr. Doug Hintze, DOE-SR, stated he would provide a brief budget update before he began his presentation. He stated that the House and the Senate both passed the Continuing Resolution (CR); however, it still needed to be signed by the President. He said the CR, as agreed to by the House and Senate, was that DOE-SR would operate at the 2012 enacted numbers with the sequestration taking effect. He said that on March 18, 2013, the Department actually sent over the reprogramming request that would allow money to be moved into the correct "buckets" because the way the money from 2012 was not in the correct "buckets" for the upcoming year. He explained that the reprogramming request would take some time to go through the Office of Management and Budget (OMB). He explained that even though DOE-SR had submitted the request, OMB could not do anything until appropriations were assigned for the rest of the year.

He stated the purpose of his presentation was to fulfill an S&LM Committee Work Plan topic. He said his presentation would focus on the development and updating of the Integrated Lifecycle Cost Estimate (ILCE), before saying that the ILCE was an integrated plan that described the remaining cleanup programs at SRS. He said the four functional areas of the ILCE were Nuclear Materials, Waste Disposition, Area Completion, and Site Support. He listed the four main components as: scope, cost, schedule, and risk. He discussed each component but mainly focused on risk. He said there was less risk involved with activities that were scheduled for a long time; however, more risk with shorter activities. He stated as the budgets become reduced, the costs of deferred scope become more expensive.

CAB member Hayes asked where the completed SNF would be placed if a repository would not be available until 2048. Mr. Hintze replied that the ILCE was updated to incorporate what had changed at the national, agency, or program levels this past fall before all the agencies responded to the BRC Report in January. He stated that necessary changes would be incorporated into the future schedule; however, it normally took six months to complete the ILCE revision.

Mr. Hintze addressed the significant changes that shifted the schedule from FY 2011 to FY 2012. He stated that DOE-SR would consider the new DOE strategies when updating the ILCE, but it could mean that programs continue being stretched out. Mr. Hintze said that the schedule usually assumed a certain funding stream of approximately \$1.4 billion a year, which until this year was in line with what DOE-SR discussed with EM, the Department, and OMB. He explained the DOE-SR budget was at \$1.2 billion because of sequestration. He continued that DOE-SR always considered the necessary changes to programs and incorporated them into the schedule. He explained the primary drivers, interdependencies, and schedule logic for the ILCE, stating that the Liquid Waste Program was the most important risk reduction operation at SRS. He stated that the second driver was new technological opportunities that could possibly accelerate the Liquid Waste completion schedule. He listed other programs and explained how extending the completion of one program affected another. He stated that K-Area de-inventory, community, and regulatory support affected other support programs such as Safeguards and Security.

Mr. Hintze continued by stating he was going to discuss the programmatic changes that caused the schedule and program lifecycle to change from FY 11 to FY 12. He provided two graphs of the FY 2011 and FY 2012 EM Program Lifecycle Roadmap schedules within his presentation. He explained that the red line on each of the charts was very important because it represented the critical path of activities that were extending the schedule. He said that if the critical path activities were completed sooner, the schedule would shift back to the left. Mr. Hintze explained the basis for completing the EM lifecycle update for FY 2012, stating that the ILCE was a key component to the annual updates of the DOE-SR Federal Risk Management Plan and EM Environmental Liability Review. He stated the FY 2012 ILCE incorporated the site approved FY 2012-2016 contractor performance baseline for Savannah River Nuclear Solutions (SRNS), the approved Savannah River Remediation (SRR) Liquid Waste System Plan Revision 17, and the Salt Waste Processing line item project. He explained that each of those items extended the EM lifecycle completion schedule by eight years with a cost increase of \$13.6 billion. He explained the primary sources of the cost increase included: 1.) Nuclear Materials stabilization and disposition, 2.) SNF stabilization and disposition, 3.) Solid Waste disposition, 4.) Liquid Waste system plan 17 strategy extension, 5.) Safeguards and Security seven year extension, 6.) Soil & Groundwater and facility D&D 7.) Community and regulatory support, and 8.) Pension and other indirect costs for the extended eight years. Mr. Hintze explained that due to the extension of Program Baseline Summary (PBS) 30, there was a cost reduction because the previous maintenance and surveillance activities were now listed in the out years. He said that the FY 2012 ILCE reflected current "point-in-time" strategies, defined the remaining scope at SRS, and resulted in a high confidence estimate for the remaining lifecycle. Mr. Hintze mentioned that because of the strong ILCE process, SRS gained confidence with the EM liability auditors, which resulted in no findings and reduced the amount of emphasis on SRS for the last two years.

CAB member Artisha Bolding thanked Mr. Hintze for his thorough presentation and asked if funding for the American Recovery and Reinvestment Act (ARRA) helped identify all the scope at SRS. Mr. Hintze replied that defining the scope began before the Recovery Act was passed. He stated in 2008 DOE-SR composed a certified baseline; however, once the baseline was complete, DOE-SR realized they needed to collect all the scope at SRS because there were so many gaps in the baseline. He said for three years, 42 employees collected all the scope at SRS. CAB member Bolding asked if inflation was considered when budgeting for out-year activities. Mr. Hintze replied that assumptions change yearly, so when DOE-SR assumed a budget of \$1.4 billion, an escalation amount of 2.3 percent was also included.

CAB member Hayes asked why the Idaho fuel exchange program was incorporated into the ILCE if the operation was postponed. She asked if the program was canceled, how much money would be involved and would those funds go towards other high priority programs at SRS. Mr. Hintze stated that he could not provide an answer on the impact of the Idaho fuel exchange program because of the "waterfall effect" that would involve other programs. He said he could find out what the total costs were for the program and provide her with a summary sheet for the cost of out-year activities.

CAB member Parson asked if there was an annual implication to extend the ILCE for eight years. Mr. Hintze explained that incomplete scope from FY 2011 and additional program changes would be distributed throughout the FY 2012 lifecycle plan. He stated that there were near term, within the five year period, and out year implications to extending the lifecycle. CAB member Parson asked where the extra money was going for scope that had been deferred. Mr. Hintze replied that when scope was moved to another year, there was about a 30 second windfall when extra funds were

available; however, the money was quickly used to fund deferred scope. Dr. Moody explained that additional funds usually pay for maintenance that had been deferred on various facilities. Mr. Hintze said some of the activities that were planned to be done later become pulled forward. He mentioned in the 10 year site plan, DOE-SR had approximately \$350 to \$400 million in deferred maintenance, and when there are 50 to 60 year old facilities, deferring maintenance could cause things to break.

CAB Chair Bridges asked if there had been any significant effort to shorten the plutonium operations in H-Canyon. Dr. Moody stated that DOE was searching alternatives to dispose plutonium, rather than running it through H-Canyon. He stated that DOE was both going to store the HEU until there was a repository in 2048 or work it off between now and 2030. He stated that DOE-SR would love to trim years off H-Canyon so DOE could effectively utilize the \$150 million dollar mortgage that supports H-Canyon operations. Mr. Pat McGuire stated that Mr. Hintze's presentation captured the impacts of delaying Nuclear Materials decisions from DOE. He stated that the updated ILCE was a valuable tool that would help decision makers understand the impact for delaying operations. Mr. Rob Pope, EPA, stated that the regulators become concerned when small pieces of the lifecycle were not completed because as 2032 and 2042 approach, those activities would not be done because there would not be additional money coming to SRS to complete those activities. Mr. Pope stated that EPA asked DOE to find small activities that could be done if extra money becomes available because those projects would not have to wait until 2042.

### **Voting on the Integrated Priority List**

CAB Chair Bridges called for a motion to vote on the Integrated Priority List (IPL) since there was no additional discussion. The CAB voted to approve the IPL letter with 19 votes of approval, with no oppositions or abstentions.

### **Public Comments**

Ms. Karen Patterson, GNAC, offered herself as a resource to the new CAB members since it could be difficult to understand all the information within the meetings.

Ms. Susan Corbett, Sierra Club, welcomed all the new CAB members and offered herself as a resource to the committee.

### **Facilities Disposition & Site Remediation (FD&SR) Committee Overview- Marolyn Parson, Chair**

CAB member Parson reviewed her presentation from the day before. She began a recommendation status update stating that recommendations 293 and 294 were open. She asked the CAB Support Team to include the Environmental Roadmap on the agenda for the April 9, 2013 FD&SR Committee meeting.

CAB member Parson clarified that CAB members would be reimbursed for mileage but not overnight stay to committee meetings. Mr. Pat McGuire, DOE-SR, replied, "That is correct." CAB member Parson asked if CAB members shared a ride, so only one person would receive the mileage reimbursement, could that savings be used to allow another individual to stay overnight instead. Mr. McGuire stated that DOE must follow the Federal Travel Regulations (FTR), but he would check to see what flexibilities were allowed.

CAB member Parson asked to remove the topic "Natural Resource Management Update" from the FD&SR Work Plan since it was on the S&LM Work Plan also. She then welcomed Mr. Pat McGuire, DOE-SR, to begin the presentation.

### **PRESENTATION: Update on Building 235-F- Pat McGuire, DOE-SR**

Mr. Pat McGuire, DOE-SR, stated he would be presenting the presentation for Ms. Vickie Wheeler, DOE-SR, since she was not feeling well. Mr. McGuire stated the purpose of the presentation was to update recommendation 293 in accordance with the 2013 FD&SR Work Plan by providing information regarding ongoing risk reduction activities in building 235-F. He discussed the construction, historical missions, and process areas within building 235-F. He stated the old metallurgical lab, plutonium experimental facility, and the plutonium fuel form cells were the main process areas within the facility; however, the plutonium fuel form cells were the areas of concern that were included within recommendations from the Defense Nuclear Facilities Safety Board (DNFSB) and the CAB. He said the facility was placed in standby mode in 1984 because the materials were no longer needed once the Plutonium Fuel Form (PUFF)

mission ended. He displayed a picture of the Remote Operations Area within the facility before he described the current state of the facility. He explained that the main section of the Remote Operations Area was clean with low radiation levels; however, the other side of the heavily shielded walls was heavily contaminated. He explained that since no one had been into the “hot cells” since 1984, if an earthquake triggered a fire, “The fire would burn the entire facility, provide a mode of force for the plutonium to get out of the facility, and get out to the areas within SRS and potentially offsite to the public.” Mr. McGuire said measurements of the residual plutonium 238 within the “hot cells” were collected in 2004 and 2006, but drills and plans have been developed. He explained that due to lack of funding there has not been much progress. He provided various pictures to show the inside of the “hot cells.”

Mr. McGuire said the facility was currently in surveillance and maintenance mode, pending deactivation, and a core agreement with regulators. He mentioned that the DNFSB and the CAB both wrote recommendations regarding the safety and cleanup of building 235-F last year. He explained that DOE released an Implementation Plan to the DNFSB on December 5, 2012, stating they were currently in the process of removing fixed combustibles, de-energizing electrical equipment, upgrading fire detection and alarm systems, decontaminating the hot cells while protecting the workers and area personnel. He stated that the cost and schedule range should be finalized by June 2013 and right now DOE-SR was developing a project deactivation plan. He stated that DOE adopted a phased approach and planned to begin the project by starting with lower risk areas to gain knowledge and experience in order to restore the services necessary to safely perform the work, establish safety requirements, and use of advanced technologies.

CAB member Hayes asked why it took so long for the DNFSB to issue a recommendation for cleanup if the facility was shut down in 1984. She also asked what events besides a seismic fire could trigger a release to the environment. Mr. McGuire answered that the building had programmatic benefit for new missions. He also explained that DOE was aware of everything the DNFSB pointed out; however, funding was never consistent enough to make the facility a main priority. He stated that a seismic fire was the only natural event that could cause the material to escape into the environment. CAB member Hayes asked what area would be in danger if there were a full release. Mr. McGuire said the MOX facility, Waste Solidification Building, F-Tank farm personnel, and F/H laboratories would be affected.

CAB Chair Bridges asked what percentage of contamination would be cleaned up. Mr. McGuire answered that he hoped 95 percent of the material was successfully cleaned, but the success rate depended on the amount of residual material within each hot cell.

CAB member William Rhoten asked what would be used to clean the cells since the manipulators were broken. Mr. McGuire answered that people would be replacing the manipulator arms.

CAB member Parson asked if workers would receive lethal contamination doses if there were a release. Mr. McGuire stated, “If people did not evacuate or get out of the way of the plume, yes large doses.” She asked if drills were planned. Mr. McGuire explained that in June there would be a drill for all the facilities in close proximity to building 235-F. CAB member Parson asked if the plutonium would be considered as a waste once it was removed. Mr. McGuire stated that it would be waste sent to WIPP. She asked if contractors at SRS had the capability to add this scope to their current scope. He replied that there were individuals who had plutonium 238 experience and felt confident they could perform the work.

### **Administrative & Outreach (A&O) Committee Overview- Nina Hazen, Chair**

CAB member Hazen began her update stating the A&O Committee purpose before she listed the CAB members who signed up to be a part of the A&O committee. She encouraged the CAB members to send the CAB Support Team any ideas for the spring newsletter by May 1, 2013. She introduced Mr. Jeffrey Patterson to begin his presentation.

### **PRESENTATION: by Dr. Jeffrey Patterson- Physicians for Social Responsibility**

Mr. Patterson stated the purpose of his presentation was to discuss the hazards of radiation, long term issues of monitoring nuclear waste, issues with monitoring the nuclear fuel cycle, and to heighten awareness of the importance of citizen input into the monitoring process. He listed the fundamental issues of radiation, which included “no safe dose of radiation, medical effects of radiation, and what was the reality of the nuclear waste problem.” He discussed a study and report done in 2005 by the Biologic Effects of Ionizing Radiation (BEIR) Commission and National Academy of Science that found “there was no safe dose of radiation.” He stated that in order to understand radiation risks, he studied

the impact of radiation through x-rays. He stated, "If we give 1000 people a Computed Tomography (CT) scan, we know that out of those individuals, we will produce one cancer."

Mr. Patterson provided a diagram of the nuclear fuel cycle, which he stated, "creates the possibility for radiation to the populous and the environment all along the fuel cycle" He provided an example of a tailings pond in New Mexico, that leaked 100 million gallons of radioactive waste in 1979. He stated that a "state of the art dam leaked into the Rio Puerco River contaminating 50 miles down the river." He explained that it was very difficult to communicate with the Navajo Indians who lived in the area because they did not speak English. Mr. Patterson said several individuals experienced health affects from the leak before stating that there would always be accidents, even when they were engineered not to occur.

He provided an image of tanks at Hanford, Washington stating, "67 of these tanks were leaking." He applauded SRS because four of the tanks at SRS were similar to those at Hanford and were already emptied. He explained the environmental pathways of how radiation moved from different levels of the soil, into animals, and humans. He listed various radiation disasters, explosions, and leaks from around the world. He explained that there were still areas of radioactive exposure that were unknown; however, work with nuclear weapons helped teach about radioactive effects because we contaminated several areas with those weapons. He stated that after the Bikini Atoll, part of the Republic of Marshall Islands, was irradiated after the 1954 explosion, and the people from the region were studied. He provided an image of a young man who was affected by the explosion. He stated that a majority of what was known about radiation was from Dr. Alice Stewart, who studied the effects of x-rays on unborn fetuses. Mr. Patterson stated that results of her Oxford study found that "one pelvic x-ray increased a child's chance of developing leukemia by one and a half to two times." He stated that her theory was ridiculed but later found to be correct, which was why pregnant women are no longer allowed to get x-rays. He stated that the amount of unknown information about radiation exceeded what had been learned. He listed and discussed various radiation exposures methods, which included external or internal exposure, constant or single exposure, epigenetics, bystander affect, and long term genetic affects. He provided images of environmental elements such as trees grown in the Chernobyl ecosystem and a pumpkin grown on the Bikini Atoll, stating that the health effects of radiation also effect the environment. He explained that even after the environment was treated, half of Chernobyl's radiation zone was covered with trees that had grown through the contamination and would continue to affect the environment for thousands of years. Mr. Patterson recommended that the CAB prescribe radiation monitoring on and off site, establish short and long-term epidemiological studies of workers and the public, and establish a long term environmental monitoring of SRS.

CAB member Hayes asked if he had ever discussed transmutation. Mr. Patterson replied that he had not been a part of any discussion regarding that topic.

CAB Chair Bridges asked if he had an opportunity to review the Environmental Reports that SRS released. Mr. Patterson stated that SRS was doing a very good job of monitoring, but that he had not extensively looked at the reports.

CAB member Parson asked if there were any epidemiological reports available to the public, which he confirmed and recommended she find a report done by Dr. Steven Wing. Mr. McGuire thanked Mr. Patterson for giving the presentation.

### **Nuclear Materials (NM) Committee Overview- Rose Hayes, Chair**

CAB member Hayes reviewed her presentation from the day before. She listed the CAB members who signed up to be on the NM Committee before she stated that she hoped to finalize the status of the 10 recommendations she discussed the day before.

#### **Recommendation Work Time**

CAB member Hayes proposed changing the status from "open" to "closed with exception" for the following recommendations:

- 280: "Concern for Receipt and Planning for Disposition of Research Reactor Spent Nuclear Fuel at SRS"
- 281: "Disposition Costs for SRS Research Reactor Spent Nuclear Fuel"
- 286: "Yucca Mountain as Interim Storage Site"
- 287: "Disposition Planning and Dry Storage of Spent Nuclear Fuel"

- 291: “Development of Defense Waste Processing Facility Canisters and Research Reactor Spent Nuclear Fuel Shipping Facility and Shipping Cask”
- 295: “Implementation of Spent Nuclear Fuel Exchange Program with Idaho”
- 303: “Disposition of Spent/Used Nuclear Fuel from L-Basin through H-Canyon Considering the Plutonium Processing Impacts Likely to be Encountered”

CAB member Hayes proposed changing the status from “open” to “closed” for the following recommendations:

- 282: “Impact of Blue Ribbon Commission Recommendations on SRS Programs”
- 296: “Spent Nuclear Fuel Processing Credit for H-Canyon Operations”

CAB member Hayes stated that she would like to discuss recommendation 302, “Contingency Budget Planning Input for Severe Budget Cases” with CAB member Nangle before making any decision; therefore, she decided table the recommendation.

A copy of each of these recommendations has been attached to this document.

### **Public Comments**

There were no public comments made.

**~Meeting Adjourned**